DRAWINGS FOR:

WASTEWATER TREATMENT PLANT IMPROVEMENTS

FOR:

THE CITY OF AUMSVILLE, OREGON
595 Main Street
Aumsville, OR 97325

PROJECT LOCATION:
955 OLNEY ST SE
AUMSVILLE, OR 97325
TAXLOT 082W24-00900
MARION COUNTY, OREGON

UTILITY CONTACTS

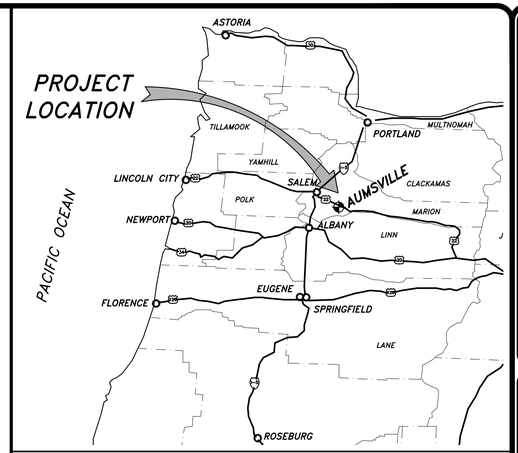
COMPANY	NAME	PHONE
(AUMSVILLE ENGINEER) WESTECH	CHRIS BRUGATO	503-931-3459
(WATER, SEWER, STREETS) AUMSVILLE P.W.	MATT ETZEL	503-507-4742
(POWER) PACIFIC POWER		
• JOURNEYMAN ESTIMATOR	KRISTI WHEELER	541-967-6195
• FIELD TECH	CURTIS KRELL	503-877-0692
(GAS) NW NATURAL		
• LEAD FIELD ENGINEER SUPPORT	DARRELL HAMMOND	503-610-7746
• AUMSVILLE AREA ENGINEER	ANDREW SCHURTER	503-610-7759
• FIELD ENGINEERING SUPPORT	RYAN DUVAL	971-808-7634
• INTERIM SALEM CONST. SUPERVISOR	JESSE APODACA	503-720-0837
MARION COUNTY	MATT FICEK	503-580-8564
ASTOUND BROADBAND (PREVIOUSLY WAVE)	DEREK ANDERSON	503-798-6651
STAYTON TELEPHONE COMPANY	JOHN EKIS	503-769-3754
(CABLE) ZIPLY FIBER (PREVIOUSLY FRONTIER)	JAMES ANDVIK	503-936-2021
(FIBER INTERNET) VISER	ANDY SUGG	(andy@viser.com)

811
Know what's **below.**
Call before you dig.

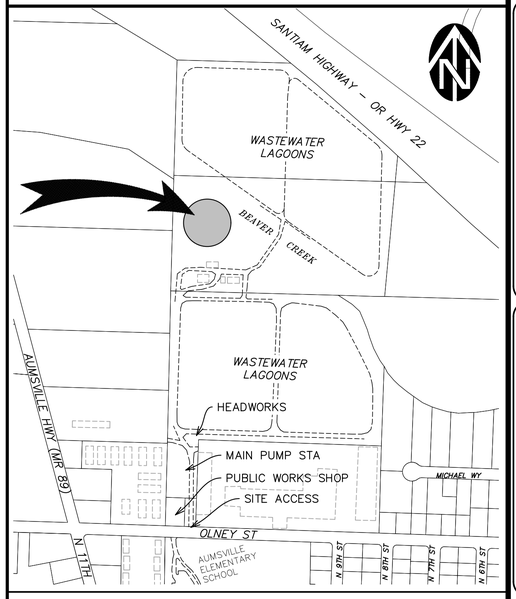
BENCHMARK UTILIZED:
CITY OF AUSMVILLE # 6

ELEV:347.155' NGVD 29

2" BRASS DISK IN TOP OF CURB ON NORTH SIDE OF OLNEY ST AT TOP OF DEPRESSED CURB AT EAST SIDE OF DRIVEWAY TO 795 OLNEY ST



VICINITY MAP



LOCATION MAP

NO.	DATE	REVISIONS	BY
2	6/5/2026	ELEC. CONDUITS	TMT
1	5/27/2026	REMOVEABLE BOLLARD DETAIL	TMT

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

DSN. CB
DRN. TMT
CKD. CB
DATE: MAY 2026

REGISTERED PROFESSIONAL ENGINEER
OREGON JULY 14, 2009
CHRISTOPHER T. BRUGATO
56473PE
RENEWS: 12/31/2027

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
3841 Fairview Industrial Dr. S.E. Suite 100, Salem, OR 97302
Phone: (503) 585-2474 Fax: (503) 585-3986
E-mail: westech@westech-eng.com

CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

COVER SHEET, VICINITY MAPS

DRAWING
G001
1 OF 223

JOB NUMBER
2599.3220.0

6/8/2026 10:00:21 AM
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NO.	DATE	DESCRIPTION	BY
1		REVISIONS	

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING
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IF NOT ONE INCH ON THIS SHEET, ADJUST SCALE ACCORDINGLY

DSN. CB
DRN. TMT
CKD. CB
DATE: MAY 2026

REGISTERED PROFESSIONAL ENGINEER
56473PE
OREGON
JAN. 14, 2005
CHRISTOPHER M. BUSCATO
RENEWS: 12/31/2027

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

DRAWING INDEX

DRAWING
G002
2 OF 223

JOB NUMBER
2599.3220.0

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GENERAL NOTES:

1. Contractor shall procure, and conform to all construction permits required by the City of Aumsville and (Marion) County.

2. Owner to pay all project permit costs. The Contractor shall coordinate with the governing jurisdiction to determine appropriate fees and provide the Owner with 48 hours notice prior to the required payment of fees or costs.

3. Contractor to notify City, County, ODOT and all utility companies a minimum of 48 business hours (2 business days) prior to start of construction, and comply with all other notice and marking requirements of agencies with jurisdiction over the work, including requirements of OAR 952 (Oregon Utility Notification Center) as applicable (excavation work shall not commence until at least the third business day after providing such notice).

4. A copy of final approved construction drawings and any required permits shall be kept on–site at all times, for review by inspectors upon request.

5. Contractor shall provide all bonds and insurance required by public and/or private agencies having jurisdiction.

6. Any permit or authorization to procced with construction issued by the Owner is considered to be a "written contract" for purposes of triggering "additional insured" coverage of the Owner and Owner's Engineer under the Contractor's required insurance policy(s) (including insurance certificates provided by subcontractors), and for bonding purposes if applicable.

7. Working hours for noise producing construction activities shall be from 7:00 a.m. to 6:00 p.m. Monday through Friday excluding Federal, State and local holidays, unless longer hours are approved by the City, or unless shorter hours are dictated under any permit issued by the agency with jurisdiction.

8. The Contractor shall perform all work necessary to complete the project in accordance with the approved construction drawings including such incidentals as may be necessary to meet applicable agency requirements and provide a completed project.

9. Any inspection by the City, County or other agencies shall not, in any way, relieve the Contractor from any obligation to perform the work in strict compliance with the contract documents, applicable codes, and agency requirements.

10. Contractor shall maintain one complete set of approved drawings on the construction site at all times whereon he will record all approved deviations in construction from the approved drawings, as well as the station locations and depths of all existing utilities encountered. These field record drawings shall be kept up to date at all times and shall be available for inspection by the City or Owner's Representative upon request. Failure to conform to this requirement may result in delay in payment and/or final acceptance of the project.

11. Upon completion of construction of all new facilities, Contractor shall submit a clean set of field record drawings containing all as–built information to the Engineer. All information shown on the Contractor's field record drawings shall be subject to verification. If significant errors or deviations are noted, an as–built survey prepared and stamped by a registered professional Land Surveyor shall be completed at the Contractor's expense.

12. 1200–C Erosion Control Permit & Inspection Responsibilities: After contract award and prior to construction, the Contractor shall formally transfer (into Contractor's name) the 1200–C permit and the responsibility for erosion control inspection under the permit. The Contractor shall notify the Owner's Representative in writing when the transfer is complete. No ground disturbing work shall be performed on the project until the 1200–C permit has been transferred and DEQ has been notified of the change in inspector responsibility.

13. Elevations shown on the drawings are based from City of Aumsville Benchmark #6, Elevation 347.155 feet(NGVD 1929 datum), consisting of a 2 inch brass disk in top of curb on north side of Olney Street at top of Depressed curb at east side of driveway to 795 Olney Street.

14. Topographic surveying for design was completed by Barker Surveying, Inc. at (503) 588–8800.

15. Construction Staking. Contractor shall ensure that surveying services are provided necessary to stake the project prior to and during construction, in conformance with construction standards & specifications. Construction staking shall be adequate to ensure that all roadways, structures, sidewalks, pipelines, water, sewer, storm drainage and other improvements & utilities are properly installed to design alignments & grades, as well as with respect to easements, right–of–ways and property lines. All construction staking shall be all be clearly marked (with elevations, offsets, etc.) on lathe in the field (or painted on the surface in the case of PK nails in asphalt) for reference by the Contractor, inspectors, etc. during construction. Staking for buildings, structures, curbs, gravity drainage pipes/structures and other critical improvements shall be completed using equipment accurate to 0.04 feet horizontally and 0.02 feet vertically, or better. Use of GPS equipment for final construction staking of these critical improvements is prohibited. Even when GPS is allowed to be used during construction, adequate field staking shall be provided to allow verification of locations, alignments, depths, etc. during construction and inspection.

16. Contractor is solely responsible for assuring that any site, street or utility work meets or exceeds any and all legal requirements and any and all industry best practices in the design, construction and/or performance of such site, street or utility work (including compliance with all federal, state and local safety requirements, which remains the sole responsibility of the Contractor without reservation). Contractor is solely responsible for payment of any assessment, fine, penalty, claim, damages or costs that result from Contractor's (a) performing site, street or utility work or (b) failing to perform site, street or utility work that meets or exceeds any and all legal requirements and industry best practices. The City may require (and Contractor shall provide the City if requested) copies of confined space entry plans conforming with the requirements of OR–OSHA, traffic control plans, or other plans or performance descriptions necessary or desirable for Public Works to assure that these requirements can be met in performing the work. The City's acceptance, review, or comments on or about the adequacy of any such plan shall not remove or reduce Contractor's sole responsibility to meet any and all legal requirements, administrative requirements, or industry best practices, and Contractor specially assumes, will defend, and will indemnify the City for any liability, damages, fines, fees or assessments related in any manner to Contractor's site, street or utility work.

17. Notice to Property Owners, Contractor Responsibility. When work performed by Contractor will impact or interrupt water/sewer/storm drainage utility service or interrupt vehicular or pedestrian access to any public or private property, Contractor shall notify all the affected parties prior to the anticipated impact a minimum of 48 hours in advance. Contractor shall provide door hangers or equivalent a minimum of 24 hours (and a maximum of 48 hours) before such interruption of utility service (or vehicular/pedestrian access) to all residences, structures or businesses impacted by work (Contractor is responsible to coordinate with the City staff a minimum of 1 week prior in order to verify area of impact or interruption). In addition to the written notice, a representative of the Contractor shall knock on the front door of all affected residences or businesses on the morning that the work will commence, and attempt to notify the residents or businesses regarding the start of the work.

TESTING AND INSPECTION:

18. The Contractor shall be responsible to ensure that all required or necessary inspections are completed by authorized inspectors prior to proceeding with subsequent work which covers or that is dependent on the work to be inspected. Failure to obtain necessary inspection(s) and approval(s) shall result in the Contractor being fully responsible for all problems and/or corrective measures arising from uninspected work. Inspections shall include inspection and/or special inspection of concrete reinforcing steel prior to concrete placement.

19. Unless otherwise specified, the attached "Required Testing and Frequency" table outlines the minimum testing schedule for the project. This testing schedule is not complete, and does not relieve the Contractor of the responsibility of obtaining all necessary inspections or observations for all work performed, regardless of who is responsible for payment. Cost for retesting shall be borne by the Contractor.

CONNECTIONS, TIMING & COORDINATION:

20. Timing of Connections to Public Utilities. Unless otherwise approved in writing by the Owner and the jurisdiction with authority, connections to existing in–service water, sewer or storm drain mainlines (or installation of fittings on or in such pipelines) shall not occur on a weekend, on a Friday or on any day that precedes a holiday.

21. Coordination of Connections, Contractor Availability. The Contractor shall coordinate to ensure that the Owner's inspectors or operators are notified and have the opportunity to be present during connection operations. After completing the connection work to existing in–service water, sewer or storm drain mainlines, the Contractor shall ensure that a work crew remains at the site and is immediately available to the Owner's Representative until after all in–service mainlines have been returned to service AND have been verified to be fully operational by the agency with jurisdiction.

EXISTING UTILITIES & FACILITIES:

22. Utility Locate Requirements. ATTENTION: Oregon law requires you to follow rules adopted by the Oregon Utility Notification Center. Those rules are set forth in OAR 952–001–0001 through OAR 952–001–0100. You may obtain copies of the rules by calling the center. (Note: the telephone number for the Oregon Utility Notification Center is 503–232–1987 or 811). These requirements include, but are not limited to, responsibility for pre–marking by excavator, responsibility for notice to Oregon Utility Notification Center by excavator, responsibility of contractor to wait the specified time before starting excavation, responsibility of excavator to maintain marks during the excavation period to ensure that the original marks remain effective for the life of the project or the locate ticket life (ticket life as defined under OAR 952–001–0010), whichever is the shorter period.

23. Potholing Requirements. Contractor shall field verify location and depth of all existing utilities where new utilities or facilities cross or are closely parallel to the existing utilities (or which are otherwise in close proximity to new utilities). All existing utilities which are either (A) marked in the field or (B) which are shown on the drawings, shall be potholed using hand tools or other non–invasive methods prior to excavating or boring to determine the exact location and depth of the existing utility (see OAR 952–001–0090 for State required potholing limits & depths). Persistent failure (as determined by the Owner's Representative) to follow these drawing requirements & State rules regarding exposing & determining the exact location and depth of existing utilities shall be grounds for suspension or cancellation of the permit, or termination of the contract (at the sole discretion of the Owner's Representative).

24. The location and descriptions of existing utilities shown on the drawings are compiled from available records and/or field surveys. The Engineer or utility companies do not guarantee the accuracy or the completeness of such records. Contractor shall field verify locations and sizes of all existing utilities prior to construction.

25. Existing Survey Monument Location & Marking. The Contractor shall retain a surveyor to research, locate and mark all existing property and street monuments within or adjacent to the work areas prior to construction. Any survey monuments that will be disturbed during construction of the project shall be referenced (prior to construction) and replaced (following construction) by a Registered Land Surveyor at the Contractor's expense. The monuments shall be replaced within a maximum of 90 days, and the County Surveyor shall be notified in writing and/or a survey document recorded as required by ORS 209 140, ORS 209.150 and/or ORS 209.155 as applicable.

26. Contractor shall be responsible for exposing potential utility and other conflicts far enough ahead of construction to determine necessary grade, alignment or depth modifications without delaying the work or requiring otherwise unnecessary materials, fittings or structures. If grade, alignment or depth modification is necessary, Contractor shall notify the Design Engineer, and the Design Engineer or the Owner's Representative shall obtain approval from the City prior to construction.

27. All facilities shall be maintained in–place by the Contractor unless otherwise shown or directed. Contractor shall take all precautions necessary to support, maintain, or otherwise protect existing utilities and other facilities at all times during construction. Contractor to leave existing facilities in an equal or better–than–original condition and to the satisfaction of the City and Owner's Representative.

28. Utilities that are abandoned in place, or interfering portions of utilities, shall be removed by the Contractor to the extent necessary to accomplish the work. The Contractor shall plug the remaining exposed ends of abandoned utilities after appropriate verification procedures have taken place (grout or concrete plugs, if used, shall be installed to fill the full pipe diameter for a distance of two times the pipe diameter back from the pipe end).

29. Contractor shall remove all existing signs, mailboxes, fences, landscaping, etc., as required to avoid damage during construction and replace them to existing or better condition.

30. The Contractor shall be responsible for managing construction activities to ensure that public streets and right–of–ways are kept clean of mud, dust or debris. Dust abatement shall be maintained by adequate watering of the site by the Contractor.

GRADING, PAVING & DRAINAGE:

31. Contractor to review the geotechnical report prepared by Central Geotechnical Services as well as the SBR Discharge Pipe Horizontal Bore Design Services Report, and conform to all recommendations listed in these reports. Both reports are included as Appendices to the Project Manual.

32. Engineered Fill Compaction Standard. Engineered fills shall be constructed and compacted in 6" lifts over approved subgrade. All fills shall be engineered, with each lift compacted to 95% of the maximum dry density per AASHTO T–180 test method (Modified Proctor, ASTM D1557) unless otherwise noted.

33. Subgrade & Baserock Proof–Rolls. Contractor is responsible for coordinating with the City for the following proof–rolls (witnessed by the City, with a fully loaded 10–yard rock truck). Performance of a proof–roll does not replace the requirement for density testing where specified or where required by City standards.
––Subgrade proof–roll: prior to separation geotextile fabric or baserock placement.
––Finished rock proof–roll: prior to paving.
If the subgrade is disturbed after the subgrade proof–roll, or if inclement weather (ie. significant rain) occurs between the time any proof–roll is performed and baserock placement, curb placement or paving, another proof–roll may be required by the City.

34. Baserock Compaction Standard. Compact granular baserock to 95% of the maximum dry density per AASHTO T–180 test method (Modified Proctor, ASTM D1557), based on nuclear density testing.

35. Granular Baserock Compaction Testing & Proof Roll Prior to Paving. Written baserock compaction test results from an independent testing laboratory must be received by the Owner's authorized representative before placing AC pavement, and a finished rock grade proof–roll (witnessed by the City) must be performed.

36. Subgrade Over–Excavation & Backfill. If subgrade fails a proof–roll (witnessed by the City, with a fully loaded 10–yard rock truck), subgrade shall be over–excavated to undisturbed soil and backfilled with baserock over the specified geotextile fabric (**) as required to allow compaction of upper (design) baserock section and to maintain structural integrity of native subgrade soils. Typical minimum over–excavation required is 12–inches unless a site specific geotechnical report is submitted and approved by the City Engineer. No rubber tired equipment allowed on subgrade following over–excavation.
**Geotextile Embankment / Reinforcement Fabric under roadways and curbs shall be included on the current ODOT QPL list for OSSC 02320–5 table (for non–woven or woven fabric). Slit Film fabrics are not allowed.

37. Subgrade Separation Fabric. If subgrade passes a proof–roll with no deflection but cannot be compacted to 95% optimum density per AASHTO T–180 (Modified Proctor, ASTM D1557), or if the contractor chooses not to have subgrade compaction density testing performed, geotextile separation fabric (from the current ODOT QPL for OSSC 02320–4 table) shall be placed on the subgrade prior to placement of the baserock.

38. Pavement Compaction Standard. AC Pavement shall be compacted to a minimum of 91% of maximum density as determined by the Rice standard method. Written AC pavement compaction test results from an independent testing laboratory must be received by the Owner's authorized representative before final payment.

39. Pavement Joint Locations & Offsets. Per OSSC 744.44, place ACP in panel widths to minimize the number of transverse and longitudinal joints to a minimum. For multi–lift paving, offset the longitudinal joints and transverse (end) joints in one panel by at least 6–inches from the joints in the panel immediately below (OSSC 744.44.a). Longitudinal pavement panel joints/seams shall be at or within 6 inches of the centerline of the street unless otherwise approved by Public Works Public Works Director and agency with jurisdiction. Where approved, joints offset from centerline shall be installed at or within 6 inches of lane lines or fog lines. In no case shall longitudinal pavement joints be allowed in travel lanes or adjacent to travel lane wheel paths.

40. Pavement surface shall be a smooth, well–sealed, tight mat without depressions or bird baths. Bony or open graded pavement surfaces shall be repaired to the satisfaction of the Owner's Representative, prior to final acceptance of the work.

41. ACP mixtures shall be placed only when the surface is dry and weather conditions are such that proper handling, finishing and compaction can be accomplished. In no case shall bituminous mixtures be placed when the surface temperature is below the minimum established under 2015 OSSC (ODOT/APWA) 00744.40 (AC – Season and Temperature Limitations) or the project specifications, whichever is more stringent.

42. Contractor shall protect new pavement against traffic as required, until it has cooled sufficiently to avoid tracking.

43. The final lift of AC pavement shall not be placed until after all heavy construction work is complete, unless otherwise approved by the Owner's authorized representative.

44. Unless otherwise shown on the drawings or details, straight grades shall be run between all finish grade elevations and/or finish contour lines shown (exception: where grades shown cross sidewalks, slopes shall be adjusted to ensure that maximum allowable sidewalk cross slopes are not exceeded).

45. Finish pavement grades at transition to existing pavement shall match existing pavement grades or be feathered past joints with existing pavement as required to provide a smooth, free draining surface.

46. All existing or constructed manholes, cleanouts, monument boxes, gas valves, water valves and similar structures shall be adjusted to match finish grade of the pavement, sidewalk, landscaped area or median strip wherein they lie. Verify that all valve boxes and risers are clean and centered over the operating nut.

47. Contractor shall seed and mulch all exposed slopes and disturbed areas which are not scheduled to be landscaped, including trench restoration areas. Mulch shall be either hydromulch or finely chopped fescue or rygrass mulch conforming with OSSC (ODOT/APWA) Section 01030.15 Per the OSSC, CEREAL GRAIN STRAW (wheat or similar) IS NOT AN ACCEPTABLE SUBSTITUTE without specific written approval.

CURBS, SIDEWALKS, ETC.:

48. Curb & sidewalk concrete shall be placed only during periods when it will not be damaged by rain (protect unhardened concrete from precipitation). Concrete shall not be placed on frozen baserock. Do not begin concrete placement until temperature in the shade is a minimum of 35° and rising, and stop placement if air temperature falls below 35°. Protect concrete from freezing for a minimum of 5 days after placement per OSSC (ODOT/APWA) 0000440.40.d & 00756.40 or the project specifications, whichever is more stringent.

49. Contraction joints shall be installed directly over any pipes that cross under the sidewalk, to control cracking. In general, cracks in new curbs or sidewalks (at locations other than contraction joints) are not acceptable, and cracked panels shall be removed & replaced unless otherwise approved by the City and the design engineer.

PIPED UTILITIES:

50. Root Protection. Where trees are located adjacent to trench lines and are not scheduled or noted for removal, protect all roots two inches in diameter or larger, unless otherwise approved in writing by the Owner's Representative on a case–by–case basis.

51. Smooth Bottom Trenches. The Contractor shall have appropriate equipment on site to produce a firm, smooth, undisturbed subgrade at the trench bottom, true to grade. The bottom of the trench excavation shall be shall be smooth, free of loose materials or tooth grooves for the entire width of the trench prior to placing the granular bedding material.

52. Trench Foundation Stabilization. If trenches are over– excavated for any reason, over–excavation shall be filled to the design trench subgrade (ie. to the bottom of the 6" thick pipe bedding layer) with compacted, well–graded granular backfill as specified (the use of open graded rock for trench foundation stabilization is prohibited unless it is completely encapsulated in geotextile fabric & approved in writing by the AHJ).

53. Pipe Bedding and Trench Backfill. Unless otherwise shown (e.g., trenches in Lagoon Dikes), all pipes shall be bedded with minimum 6–inches of 3/4"–0 granular backfill (crushed rock) bedding and backfilled with compacted 3/4"–0 granular backfill in the pipe zone (granular backfill shall extend a minimum of 12–inches over the top of the pipe in all cases). Unless CLSM, CDF or other backfill is shown or noted on the drawings, granular trench backfill shall be used under all improved areas, including pavement, sidewalks, foundation slabs, buildings, etc.

54. Granular Trench Backfill Moisture Control. Granular trench backfill shall be moisture controlled (prior to or during placement) prior to compaction. Compaction of dry granular backfill without adequate moisture is not acceptable.

55. Granular Trench Backfill Compaction. Granular trench bedding and granular backfill in the pipe zone shall be compacted to be firm and unyielding, even though compaction testing is not required in this zone. Unless otherwise shown on the drawings, Granular trench backfill above the pipe zone shall be compacted in lifts to 92% of the maximum dry density per AASHTO T–180 test method (Modified Proctor, ASTM D1557).

56. Trench Backfill Compaction Testing in Lifts. Trench backfill shall tested in lifts for trenches deeper than 4 foot to top of pipe, as well as at the finish rock grade. As a minimum for deeper trenches, compaction testing shall occur at half the trench depth (to a maximum of 4 feet down in the trench), based on the same compaction methodology being used for the deeper portions of the trench as at the tested depths.

57. Submittal of Trench Backfill Compaction Test Results. Prior to placing AC pavement or concrete trench surfacing, written compaction test results for trench backfill must be received by the City or agency with jurisdiction.

58. Temporary thrust restraint on pressure pipelines shall be provided at all locations where necessary due to construction sequencing shown on the drawings, required by City standards or chosen by the Contractor. The adequacy of the temporary thrust restraint shall be the Contractor's sole responsibility, but shall be acceptable to the City and any other agency with jurisdiction. Any movement of the pipe or fittings during preparation of the pipeline or connection shall be considered evidence that the temporary thrust restraint is not adequate, and the pipeline or connection shall be depressurized and the thrust restraint increased as necessary.

59. All piped utilities abandoned in place shall have all openings closed with concrete plugs with a minimum length equal to 2 times the diameter of the abandoned pipe.

60. All pipelines shall have an electrically conductive insulated 12 gauge solid core copper tracer wire the full length of the installed pipe using blue wire for water and green wire for storm and sanitary piping. Tracer wire shall be extended up into all valve boxes, catch basins, manholes and lateral cleanout boxes. Tracer wire penetrations into manholes shall be within 18 inches of the rim elevation and adjacent to manhole steps. The tracer wire shall be tied to the top manhole step or otherwise supported to allow retrieval from the outside of the manhole. All tracer wire splices shall be made with waterproof splices or waterproof/corrosion resistant wire nuts.

61. Warning Tape. All underground pipelines shall have a 6–inch wide warning tape installed in the upper reaches of the trench as shown on details (color & "Caution: Buried ____ Below" wording as required for water, sewer, storm drain, etc.).

62. No trenches in sidewalks, roads, or driveways shall be left in an open condition overnight. All such trenches shall be closed before the end of each workday and normal traffic and pedestrian flows restored.

63. Before mandrel testing, TV inspection or final acceptance of gravity pipelines, all trench compaction shall be completed and all sewers and storm drains flushed & cleaned to remove all mud, debris & foreign material from the pipelines, manholes and/or catch basins.

WATER SYSTEM:

64. Interruption of Water Service. All work shall be performed in a manner designated to maintain water service to buildings supplied from existing waterlines, and to maintain fire flows to existing hydrants & fire service lines. In no case shall service to any main line or building be interrupted for more than four (4) hours in any one day, subject to prior written authorization by the City (authorized a minimum of 1 week prior to the work), as well as notifying the fire department/district of any interruption to hydrants or fire service lines a minimum of 1 week prior to the work. In addition, Contractor shall notify the City and all affected residents and businesses (and the fire department/district if applicable) a minimum of 24 business hours (1 business day) prior to any actual interruption of service.

65. City forces to operate all valves, including fire hydrants, on existing public mains.

BY	DESCRIPTION	NO.	DATE
	REVISIONS	1	

VERIFY SCALE
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0 1"
IF NOT ONE INCH ON THIS SHEET ADJUST SCALE ACCORDINGLY

DSN. CB
DRN. TMT
CKD. CB
DATE: MAY 2026

REGISTERED PROFESSIONAL ENGINEER
OREGON JULY 14, 2006
CHRISTOPHER B. CROCKETT
56473PE
RENEWS: 12/31/2027

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

GENERAL CONSTRUCTION NOTES

DRAWING
G003
3 OF 223

JOB NUMBER
2599.3220.0

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66. Unless otherwise shown or approved by the Engineer, all valves shall be flange connected to adjacent tees or crosses. In-line valves shall be MJ x MJ.

67. All buried valves (except for corporation stop ball valves) shall be provided with new valve boxes, including new valves installed by the Contractor, or existing valves which are excavated around as part of the work, and existing valves which are located within newly paved, newly concreted or newly graveled surfaces. Valve boxes shall conform to Standard Details. Reuse of existing valve boxes will only be allowed is they fully conform with current standard details, are accurately centered on the valve nut, are clean of excess rock or debris around the valve nut, and are approved in writing by the City on a case-by-case basis.

68. Unless otherwise shown on the Drawings, thrust restraint shall be provided on all bends, tees and other direction changes per local jurisdiction requirements and as specified or shown on the drawings.

69. Where concrete thrust blocks/straddle blocks are required, concrete shall conform to the requirements of OSSC (ODOT/APWA) 00440, Commercial Grade Concrete, 3300 psi (5"slump or stiffer). Concrete mix design shall be submitted to the City for review and approval prior to use. If hand mixed sack-crete type concrete is proposed (and approved by the City prior to use on a case-by-case basis for each location proposed), it shall be a 4000 psi minimum crack-resistant mix (Quikrete 1006 or equal QPL listed mix must be approved by the Owner's Representative prior to use), mixed with the minimum amount of water necessary for workability (5"slump or stiffer). In no case will dry sack-crete mix (either in bags or as loose mix) be considered as an acceptable substitute for an approved mixed concrete.

70. It shall be the Contractor's responsibility to coordinate for visual inspection and verification of all thrust restraint and thrust blocking prior to covering or backfilling (by the agency with jurisdiction).

71. Where approved by the Owner's Representative prior to construction, temporary thrust restraint may be used at mainline connections where it is not possible (prior to pressurization of the connection and placing the waterline in service) to install permanent concrete thrust blocks, straddle blocks or other permanent thrust restraint as required or shown/noted on the drawings. Trenches at the temporary thrust restraint location shall be left open and not backfilled (but plated as necessary or required) until the permanent thrust restraint is installed and approved by the Owner's Representative. Unless otherwise approved in writing by the Owner's Representative, permanent thrust restraint shall be installed by the end of the next working day after installation of the temporary thrust restraint, but in no case later than the calendar third day following installation of the temporary thrust restraint.

72. Primer Required. For all PVC pipe with all solvent cement joints, use of purple primer (IPS Weld-On P70 Industrial Grade or equal) is mandatory (see also OPSC 605.12.2), with gray medium body PVC cement (IPS Weld-On 711 Industrial Grade or equal).

73. The Contractor shall be responsible for having backflow devices tested and certified (and copies test/certification reports submitted to the City) prior to final acceptance of the work.

74. Fire Hydrant Orientation. The Contractor shall coordinate and orient the hydrant steamer/pumper port as directed and approved in writing by the local Fire District/Fire Dept. Hydrants installed in advance of such coordination and written direction shall be adjusted and reoriented without additional cost to the Owner.

75. Contaminated water pipelines including raw sewage, sludge, or treated effluent and potable waterline crossings. Where pipelines that convey contaminated water, including but not limited to raw sewage, sludge, treated wastewater effluent, etc., cross above or within 18-inches vertical separation of a potable water pipeline, the contaminated water pipeline shall be constructed with one full length of pipe centered at the waterline crossing.

76. Temporary Appurtenances. Contractor shall provide all necessary equipment and materials to provide temporary appurtenances and install temporary chlorination & sample taps, restrained caps/plugs and blowoffs on new waterlines as required for flushing, pressure testing, chlorination and bacteriological testing (configuration to be acceptable to the City or other agency with jurisdiction). Chlorination and sample taps shall be located within 12-inches of the end of each mainline segment to be chlorinated & tested, and configured to ensure that all portions of the pipelines are adequately disinfected. All temporary appurtenances shall be removed by the Contractor prior to final surface restoration, unless otherwise approved in writing by the agency with jurisdiction.

77. Pressure Testing. All waterlines, services and appurtenances shall be pressure tested for leakage. All testing shall conform to requirements as outlined in the specifications, City standards and/or testing forms. The hydrostatic test shall be performed with all service line corporation stops open and meter stops closed, and with all hydrant line valves open. Prior to the start of each pressure test, the position of all mainline valves, hydrant line valves and service line corporation stops in the test segment shall be verified.

78. Cleaning & Flushing. After the pressure test and prior to disinfecting, the water lines shall be thoroughly flushed through hydrants, blow offs or by other approved means.

79. Disinfection & Bacteriological Testing. All water mains and service lines shall be chlorine disinfected per local jurisdiction requirements, AWWA C-651 or OAR 333-061 (25 mg/L minimum chlorine solution, 24 hours contact time), whichever is more stringent. Unless otherwise approved by the City, a City representative shall witness the application of the chlorine solution and the chlorine testing at the end of the 24 hour contact period. After the 24 hour chlorine contact period, the free chlorine concentration shall be checked, and if it is found to be 10 mg/L or more, the chlorine solution shall be drained (otherwise the line shall be rechlorinated), the waterline flushed with potable water, and a minimum of two consecutive samples taken at least 24 hours apart shall be collected from the waterline for microbiological analysis (ie. one sample immediately after flushing, and another sample 24 hours later). Contractor to pay for laboratory analysis of water samples taken under the supervision of the City. If the results of both analyses indicate that the water is free of coliform organisms, the waterline may be placed in service. Should the initial treatment prove ineffective, the flushing & chlorination shall be repeated until confirmed tests show acceptable results.

80. Disinfection of Connections. For connections which cannot be disinfected with the waterline mainlines as noted above, all fittings, valves and appurtenances, including tool surfaces which will come in contact with potable water, shall be thoroughly cleaned by washing with potable water and then swabbed or sprayed with a one percent (1%) hypochlorite solution (10,000 mg/L) in accordance with the requirements of AWWA C-651 and OAR 333-061.

81. Capping of Chlorination Taps, Pressure Test Taps, Temporary Sample Taps, Abandoned Water Services, etc. Unless otherwise approved or required by the City, all extra pipe and fittings attached to chlorination, pressure test or temporary sampling taps (or existing water services required to be abandoned) shall be removed and a brass corporation cap (Ford CAP-x-x-NL) installed on the corporation stop at the mainline tap or saddle (to avoid depressurizing the mainline after disinfection) after the new waterline is placed in service where applicable. Wrap each capped corporation stop in plastic prior to backfilling. The location of all such capped corporation stops shall be shown on the Contractor's record drawings (ie. horizontal ties to two permanent landmarks, and depth below grade).

82. Disconnection of Abandoned Water Facilities. Unless otherwise shown on the drawings AND explicitly approved in writing by the City, any existing waterlines abandoned in place shall be physically disconnected from valves and other connection points to the existing water system. A blind flange or restrained MJ plug (as applicable) shall be installed on the back side of all valves from which abandoned waterlines are disconnected. Remove valve boxes from abandoned valves.

SEWER & STORM MANHOLES:

83. All precast manholes shall be provided with integral rubber boots.

84. Core-Hole Separation from Manhole Barrel Joints. The standard minimum separation between the edge of a core-hole and the nearest manhole barrel joint is 6 inches for manholes 48 to 72 inch in diameter. For manholes greater than 72 inch diameter, the minimum separation shall increase to 8 inches.

85. Manhole channels depths (sewer & storm) shall be to the heights shown on the drawings, but in no case shall be the channel depth be less than 2/3 of the pipe diameter. Flow channels in manholes shall be of such shape (semi-circular bottoms) and slope to provide smooth transition between inlet and outlet sewer size/ invert to minimize turbulence and to ensure that the manhole channels are self-cleaning. Channels, as well as shelves between the channels and the manhole walls, shall be sloped to drain per plan details.

86. Grouting & Channels to be Smooth. All interior joints, penetrations and any exposed lifting holes shall be grouted following manhole assembly. The grouting and channels of all manholes shall be smooth and uniform, and shall not retain water or debris. Any grout or concrete splatters (in channels, on channel benches, on walls or on steps) shall be removed by the Contractor.

87. All concrete for manhole channeling shall conform to the requirements of OSSC (ODOT/APWA) 00440, Commercial Grade Concrete, 3300 psi min @ 28 days, max 5"slump, 4.5% air (±1.5%). Concrete mix design shall be submitted for review and approval prior to use.

88. Manholes constructed over existing sanitary sewers shall conform to the requirements of OSSC (ODOT/APWA) 490.41, Manholes over Existing Sewers. The existing pipe shall not be broken out until after the completion of the manhole test.

89. MH Rim Elevations. Contractor shall be responsible to verify manhole finish rim elevations match with finish grade or are set above finish grade as required to conform with City standard details. Manhole rim elevations shall be adjusted as required to conform with this requirement.

90. All manholes shall be thoroughly cleaned prior to being placed in service and/or accepted by the City, including removal of any debris, excess grout in manhole channels or on manhole steps, etc.

SANITARY SEWER SYSTEM:

91. Gravity Sewer Cleaning. After manhole channeling and prior to mandrel testing and/or TV inspection, flush and clean all sewers, and remove all foreign material from mainlines and manholes. Failure to clean all dirt, rock and debris from pipelines prior to TV inspection will result in the need to re-clean and re-TV the sewer lines.

92. Gravity Sewer Pipe Leakage Testing (Air Test). Contractor shall provide all necessary materials, equipment and facilities to test gravity sanitary sewer pipe and appurtenances for leakage in accordance with testing schedule herein or the City's construction standards, whichever are more stringent. Gravity sanitary sewer pipe and appurtenances shall be tested for leakage. Leakage tests for gravity sewers shall include an air test of all sewer mains and laterals and vacuum testing of the manholes. Manhole testing shall be performed after completion of AC pavement and final surface restoration.

93. Gravity Sewer Mandrel Testing. Contractor shall conduct deflection test of flexible sanitary sewer pipes by pulling an approved mandrel through the completed pipeline following trench compaction. The diameter of the mandrel shall be 95% of the initial pipe diameter. Test shall be conducted after the trench backfilling and compaction is completed and tested, unless otherwise approved or required by the City Engineer.

94. Gravity Sewer TV Inspection. Upon completion of all sanitary sewer construction, testing and repair (including channeling of sanitary sewer manholes), the Contractor shall conduct a color TV acceptance inspection of all mainlines in accordance with OSSC (ODOT/APWA) 445.74 to determine compliance with grade requirements of OSSC (ODOT/APWA) 445.40.b (no deviation greater than 1/32-inch per inch of pipe diameter [1/2-inch max for pipes >16-inch diameter], AND that there is no reverse sloping pipe) AND to verify pipelines are adequately cleaned. The TV inspection shall be conducted by an approved technical service, using a track or wheel propelled self-leveling auto-focus pan-head camera which is equipped to make audio-visual recordings of the TV inspections on a USB storage device. Unless otherwise required by the agency with jurisdiction, a standard 1-inch diameter ball shall be suspended in front of the camera during the inspection (with the ball in contact with the pipe invert) to determine the depth of any standing water. Sufficient water to reveal low areas or reverse grades shall be discharged into the pipe immediately prior to initiation of the TV inspection. The USB storage device and written report (or download link and pdf report) shall be delivered to the City.

95. Sanitary Sewer Manhole Vacuum Testing & Witness. All manhole testing shall conform to requirements as outlined on City testing forms contained in the PWDS. Unless otherwise approved in writing by the Public Works Director, Public Works staff shall be present for all sanitary sewer manhole testing. Visible groundwater infiltration or leakage constitutes a failed sanitary sewer manhole test, whether or not the vacuum test is successful. Any sewer manholes which exhibit visible leakage after assembly shall be injection grouted by a qualified grouting subcontractor (retained by the Contractor) acceptable to the City (surface plugging of manhole leaks with non-shrink grout is not a permanent repair, and is not acceptable).

96. Vacuum Testing (New MHs). All sanitary sewer manholes shall be vacuum tested following completion of paving or final surface restoration.

97. Leakage Testing (Pressure Piping). All pressure piping and appurtenances shall be hydrostatic pressure tested for leakage. All testing shall conform to requirements as outlined in the specifications, City standards and/or testing forms. Prior to the start of each pressure test, the position of all mainline valves, ARV or other valves in the test segment shall be verified. Contractor shall be responsible to protect any permanently installed pressure gauges or diaphragm seals from damage.

STORM DRAIN SYSTEM:

98. Catch basins and junction boxes shall be set square with buildings or with the edge of the parking lot or street wherein they lie. Storm drain inlet structures and paving shall be adjusted so water flows into the structure without ponding water.

99. Unless otherwise approved by the Engineer, all storm drain connections shall be by manufactured tees or saddles.

100. Sweep (deflect) storm sewer pipe into catch basins and manholes as required. Maximum joint deflection shall not exceed 5 degrees or manufacturers recommendations, whichever is less.

101. CB Grouting to be Smooth. All joints, penetrations & any exposed pick-holes shall be grouted smooth, so as not to retain debris. Base/sump shall be smooth to facilitate cleaning.

102. Unless otherwise shown or directed, install storm sewer pipe in accordance with manufacturer installation guidelines.

103. Storm Cleaning. After manhole channeling and prior to mandrel testing or final acceptance, flush and clean all sewers, and remove all foreign material from the mainlines, manholes and catch basins.

104. Storm Mandrel Testing. Contractor shall conduct deflection test of flexible storm sewer pipes by pulling an approved mandrel through the completed pipeline following trench compaction. The diameter of the mandrel shall be 95% of the initial pipe diameter. Test shall be conducted not more than 30 days after the trench backfilling and compaction has been completed.

105. Prior to acceptance, the Owner's Representative may lamp storm lines upstream & downstream of structures to verify that the pipes are clean and there is no grout or concrete in the mainlines, and that there are no observable bellies in the line. When necessary, sufficient water to reveal low areas shall be discharged into the pipe by the Contractor prior to any such inspection by the Owner's Representative or the City.

FRANCHISE & PRIVATE UTILITIES:

106. Contractor shall coordinate with power, telephone, communication companies and/or applicable agencies as required for relocation of conduits, wires, pedestals, vaults, poles, etc., which are in conflict with new utilities shown on the drawings, as well as arranging for utility company inspectors to be present for critical crossings, work close to critical utilities, etc. as may be required utility company or agency standards.

107. Horizontal Separation: Unless otherwise approved by the local jurisdiction, installation of private utilities (including either franchise utilities or private water, sewer or storm services) in a common trench with public water, sanitary sewer or storm drains is prohibited. Unless otherwise approved by the jurisdiction with authority, any parallel utilities (including private or franchise utilities or private water, sewer or storm services) shall be installed with a minimum of 5 feet horizontal separation (ie. clear separation) from parallel public water, sanitary sewer or storm drains, except at crossings (all crossings to be as close to perpendicular as possible).

108. Power, telephone and TV trenching and conduits shall be installed per utility company requirements with pull wire. Contractor shall verify with utility company for size, location and type of conduit before construction, and shall ensure that trenches are adequately prepared for installation per utility company requirements. All changes in direction of utility conduit runs shall have long radius steel bends.

109. All franchise utility structures (vaults, pedestals, light poles, etc.) shall be set a minimum of 1 foot from any property corner or survey monument.

REQUIRED TESTING AND FREQUENCY TABLE *Contractor to notify Owner's Representative prior to all testing, to allow Owner's Representative to be present if desired.*		Party Responsible for payment		
			Contractor	Others (see note 1)
Streets, Fire Lanes, Common Driveways, Parking Lots, Pads, Fills, etc.				
Subgrade	1 Test/4000 S.F./Lift (4 min), locations acceptable to approving agency (typically alternate sides of road or access aisles)	✓	See note 2 & note 3	
Engineered Fills	1 Test/4000 S.F./Lift (4 min), locations acceptable to approving agency	✓	See note 2 & note 5	
Baserock	1 Test/4000 S.F./Lift (4 min), locations acceptable to approving agency (typically alternate sides of road or access aisles)	✓	See note 2 & note 3	
Asphalt	1 Test/6000 S.F./Lift (4 min), locations acceptable to AA (typ. alternate as above)	✓	See note 2	
Piped Utilities, All (including backfill in lifts & AC restoration at manholes, etc.)				
Trench Backfill	1 Test/200 Foot Trench/Lift (4 min)	✓	See note 2	
Trench AC Restoration	1 Test/300 Foot Trench (4 min)	✓	See note 2	
Water				
Pressure Test	(to be witnessed by Owner's Representative or approving agency)	✓	See note 4	
Bacterial Water Test	Per OHA-Drinking Water Services	✓	See note 2	
Chlorine Residual Test	Per City Requirements	✓		
Sanitary Sewer				
Air Test	Per City or APWA Requirements, whichever is more stringent	✓	See note 4	
Mandrel	95% of actual inside diameter	✓	See note 4	
TV Inspection	All. Lines must be cleaned prior to TV work	✓		
Manhole	Vacuum test each manhole, witnessed by Owner's Representative or approving agency	✓	See note 2	
Pressure Test (all pressure piping)	Hydrostatic pressure test, witnessed by Owner's Representative or approving agency	✓	See note 4	
Storm				
Mandrel	95% of actual inside diameter	✓	See note 4	
TV Inspection	All. Lines must be cleaned prior to TV work	✓		
Concrete, Block, etc.				
Slump, Air & Cylinders for structural & reinforced concrete, equipment slabs, curbs, sidewalks & PCC pavements. Unless otherwise specified, one set of cylinders per 100 cubic yards (or portion thereof) of each class of concrete placed per day. Slump & air tests required on same load as cylinders.		✓	See note 2	
Building permit inspection & Special Inspection for structural concrete, reinforced masonry, epoxy anchors, etc. as required by applicable State Building Codes.			See note 6	✓

Note 1: "Others" refers to Owner's authorized Representative or Approving Agency as applicable. Contractor responsible for scheduling testing. All testing must be completed prior to performing subsequent work.

Note 2: Testing must be performed by an approved independent testing laboratory/firm.

Note 3: In addition to in-place density testing, the subgrade and base rock shall be proof-rolled with a loaded 10 yard dump truck provided by the Contractor. Baserock proofroll shall take place immediately prior to (within 24 hours of) paving, and shall be witnessed by the Owner's authorized Representative or approving agency. Location and pattern of testing and proofroll to be as approved or directed by said Owner's authorized Representative or approving agency.

Note 4: To be witnessed by the Owner's Representative or approving agency. The Contractor shall perform pretests prior to scheduling witnessed waterline or sanitary sewer pressure tests, or pipeline mandrel test.

Note 5: The approved independent laboratory retained by the Contractor shall provide a certification (stamped by an engineer licensed in the State of Oregon) that the subgrade was prepared and all engineered fills were placed in accordance with the provisions of the construction drawings and the contract documents.

Note 6: Regardless of who is responsible for payment, the Contractor is responsible for scheduling and coordinating any and all required inspections and Special Inspections as required by applicable building codes or jurisdictions having authority.

Contractor to notify Owner's Representative prior to all testing, to allow Owner's Representative to be present if desired.

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

NO.	DATE	DESCRIPTION	BY
		REVISIONS	
1			

DSN. CB
DRN. TMT
CKD. CB
DATE: MAY 2026

REGISTERED PROFESSIONAL ENGINEER
56473PE
OREGON
JULY 14, 2006
CHRISTOPHER J. BADOLATO
RENEWS: 12/31/2027

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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

GENERAL CONSTRUCTION NOTES & TESTING TABLE

DRAWING
G004
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FLOWS AND LOADINGS

Design Year: 2045

Influent Flows	Existing	Projected (2045)
Population	4300	6250
Average Dry Weather Flow	0.40 mgd	0.58 mgd
Average Wet Weather Flow	0.75 mgd	1.12 mgd
Average Annual Flow	0.57 mgd	0.85 mgd
Maximum Month Dry Weather Flow	0.82 mgd	1.20 mgd
Maximum Month Wet Weather Flow	1.20 mgd	1.75 mgd
Peak Day Flow	2.40 mgd	3.13 mgd
Peak Hour Flow	4.80 mgd	5.24 mgd

Influent Loadings		
Average Annual Daily BOD	1000 ppd	1490 ppd
Maximum Month Daily BOD	1250 ppd	1860 ppd
Average Annual Daily TSS	800 ppd	1250 ppd
Maximum Month Daily TSS	1000 ppd	1560 ppd
Average Annual NH3-N	95 ppd	140 ppd
Maximum Month NH3-N	115 ppd	170 ppd
Septage	Not Allowed	

Anticipated Effluent Quality	
BOD	<10 mg/L
TSS	<10 mg/L
NH3-N	<1 mg/L

NPDES PERMIT REQUIREMENTS

Discharge Season: May 1 -October 31
Outfall: Beaver Creek

Parameter	Avg. Effluent Concentration (mg/L)		Avg. Effluent Mass Loads (ppd)		
	Monthly	Weekly	Monthly	Weekly	Daily
BOD	30	45	170	250	340
TSS	50	80	280	420	560

Ammonia: Monthly Average = 3.3 mg/L, Daily Maximum = 8.3 mg/L

pH: Range 6.5 -8.9

E.Coli: Monthly Geometric Mean 126 ct./100 mL; Maximum Single Sample 406 ct./100 mL

Cl2 Residual: Monthly Average = 0.01 mg/L, Daily Maximum 0.02 mg/L

Discharge Season: May 1 -October 31
Outfall: Land Application Site (in accordance with recycled water use plan)
Effluent Quality: Class C in accordance with OAR 340-55
Irrigation Rate: Agronomic rates to match crop uptake of water and nutrients.

Disinfection: Total Coliform < 240 ct./100 mL (two consecutive samples); Total Coliform < 23 ct./100 mL (7-day median)

MAIN PUMP STATION

Note: The main pump station is not being upgraded as part of this project. The following design criteria is based on the original design drawings from 2007 with the exception of the firm capacity and forcemain data.

Pump Station Type	Triplex Submersible
Peak Hour Influent Flow	5.24 mgd (3,640 gpm)
Pump Station Firm Capacity (2 pumps)	5.30 mgd (3,680 gpm)

Wet Well

Diameter	12 ft
Material	Concrete
Rim Elevation	347.00
100 Year Flood Plain Elevation	345.00
Inlet Invert Elevation	328.87
Inlet Pipe Diameter	24 inch
Bottom Elevation	322.10
Operational Storage	4,060 gallons (low water to inlet invert)
Overflow Point	Ditch approx. 110 feet northwest of wet well
Overflow Storage	16,850 gallons (does not include upstream pipes)
Time to Overflow	±28 minutes @ Design Year Average Annual Flow

Pumps

Pump Type	Non-Clog Submersible
Manufacturer and Model	Xylem Flygt NP-3202 (641)
Number	3 equal size pumps
Size	45 hp, 480 volt, 3 phase
Speed Control	Variable Frequency Drives

Valving & Forcemain

Isolation Valves	Plug valves in valve vault
Check Valves	Rubber flapper swing check in valve vault
Forcemain Size	20 inch (ID = 17.436 inches)
Forcemain Length	± 1,100 feet
Discharge Elevation	375.00 feet
Static Head	50.5 feet
Flow Conditions	Continuously ascending
Flow Velocity	± 2.0 feet per second with one pump running full speed

Hydrogen Sulfide Control: None

Standby Power System:

Type	Permanent diesel powered generator
Transfer Switch	Automatic Transfer Switch
Size	200 KW, 480 volt, 3 phase

Alarm Telemetry: Tied to Plant SCADA system

Pump Removal: Permanent jib crane mounted adjacent to the wetwell.

HEADWORKS

Influent Screen

Type	Fine screen with shaftless spiral auger
Number	1
Screen Size Opening	0.25 inches
Manufacturer	Parkson Helisieve
Capacity	6.5 mgd

Standby Manual Bar Screen

Number	1
Spacing Between Bars	1 inch
Capacity	7.5 mgd

Screenings Disposal: Landfill

Parshall Flume

Throat Width	12 inches
Flow Range	0.077-10.43 mgd (54 gpm -7,240 gpm)
Flow Depth in Flume @ 2,000 gpm	1.07 feet (1 pump on at full speed)
Flow Depth in Flume @ 3,680 gpm	1.60 feet (2 pumps on at full speed)
Flow Depth in Flume @ 4,750 gpm	2.10 feet (3 pumps on at full speed)

Flow Meter	Ultrasonic Level Transducer
Rain Gauge	Tipping Bucket

Influent Sampler

Type	Automatic Refrigerated Composite
Sample Pacing	Flow Proportional

SECONDARY TREATMENT

Type: Intermittent Cycle Extended Aeration System with Nitrogen Removal (ICEAS-NIT)

Number of Basins	2

Basin Design

Free Board	2.33 feet
Top Water Level	18 feet
Bottom Water Level	12.7 feet
Width of Each Basin	46 feet
Length of Each Basin	108.5 feet
Basin Volume at Top Water Level	672,000 gallons

Process Parameters

F:M Ratio	0.0481 BOD5/MLSS/day
SVI (after 30 min. settling)	150 ml/g
MLSS at Bottom Level	4,869 mg/L
Waste Sludge Produced	1,190 lb/day @ 80% Yield
Vol. of Sludge Produced (0.85% solids)	16,800 gal/day
Total HRT in SBR's	21.8 Hours at Max Month Dry Weather Flow
Sludge Age	27.9 days

Oxygen Requirements

lbs. O2 / lb. BOD Removed	1.20
lbs. O2 / lb. Ammonia Oxidized	4.6
Standard Oxygen Requirement	6,264 lb/day

Blower Design

Type of Blowers	Rotary, Positive Displacement
Total number of Blowers	3 (two active one standby)
Blower Horsepower	40 hp (each)
Blower Capacity	480 SCFM at 8.8 PSIG
Aerator Type	Fine bubble membrane disc
Aeration Control	VFD controlled by D.O. level in basin

Mixer Design

Type	Direct Drive Propeller
Number	One per Basin
Horsepower	15
Removal	Portable Davit Crane

Decanter Sizing

Normal Decant Rate	5.24 mgd (3,640 gpm)
Peak Decant Rate	10.48 mgd (7,280 gpm)
Decanter Length	35 feet
Decanter Horsepower	3/4 horsepower

Sludge Handling

Flow Control	Automatic
WAS Production Rate	Approx. 1,190 ppd 16,800 gpd (Approx. 0.85% solids)
WAS Pump Type	Submersible, solids handling
WAS Pump Number	2 (one per basin)
WAS Pump Capacity	110 gpm
WAS Pump Horsepower	2.4 hp
WAS Pump Removal	Portable Davit Crane
WAS Meter	Electromagnetic

EQUALIZATION BASIN

Volume	198,000 gallons
Length	93 ft 8 inches
Width	40 ft 6 inches
Maximum Depth	7 feet
Flow Control	Modulating Butterfly Valve

CHLORINE FEED EQUIPMENT

Type	Onsite chlorine generation
Dosage Control	Flow paced tied to effluent flow meter (winter) or irrigation flow meter (summer)
Application Points	Inlet to chlorine contact chamber (winter) Irrigation Pump Station Discharge Pipe (summer)

Chlorine Feed Equipment Capacities

Onsite Chlorine Generator	65 ppd
Chlorine Solution Strength	0.8%
Chlorine Dosing Pump Capacities	
Winter	70 gph
Summer	39 gph
Typical Feed Concentration	1.2 to 2 mg/L
Salt Consumption	3.1 pounds per pound of chlorine
Salt Brine Tank Size	500 gallons
Chlorine Solution Tank Size	1090 gallons

Summer Irrigation:

Average Summer Irrigation Rate	0.72 mgd
Peak Summer Irrigation Rate	1.0 mgd (requires additional land application area)
Typical Summer Chlorine Consumption	9 ppd
Peak Summer Chlorine Consumption	16 ppd
Typical Summer Salt Consumption	28 ppd
Peak Summer Salt Consumption	50 ppd

Winter Discharge

Average Winter Discharge Rate	1.55 mgd
Peak Winter Discharge Rate	3.56 mgd
Typical Winter Chlorine Usage	16 ppd
Peak Winter Chlorine Usage	36 ppd
Typical Winter Salt Usage	48 ppd
Peak Winter Salt Usage	110 ppd

Chlorine Mixing: Natural turbulence in pipes downstream of injection points.

CHLORINE CONTACT CHAMBER (WINTER DISCHARGE TO BEAVER CREEK)

Type	Baffled Concrete
Total Volume	75,000 gallons
Length to Width Ratio	40:1
Average Flow Rate	1.55 mgd
Peak Day Flow Rate	3.56 mgd
Contact Time at Average Flow Rate	69 minutes
Contact Time at Peak Flow Rate	30 minutes

DECHLORINATION SYSTEM

Type	Sulfur Dioxide Gas (SO2)
Dosage Control	Flow paced tied to effluent flow meter
Application Point	Downstream end of Chlorine Contact Chamber
Typical Feed Concentration	0.75 mg/L

Winter Discharge

Average Winter Discharge Rate	1.55 mgd
Peak Winter Discharge Rate	3.56 mgd
Typical Winter Sulfur Dioxide Usage	10 ppd
Peak Winter Sulfur Dioxide Usage	22 ppd
Rotameter Size:	50 ppd
Maximum SO2 Storage Provided	600 pounds (four 150-pound cylinders)
Typical SO2 Delivery Frequency	once every 2 months

Sulfur Dioxide Mixing: Natural turbulence from contact chamber outlet weir.

WINTER DISCHARGE EFFLUENT FLOW MEASUREMENT AND SAMPLING

Primary Device

Type	3 foot rectangular weir with end contractions
Primary Device Location	Chlorine contact chamber
Flow Measurement Range	0.5 to 6 mgd
Head Above Weir @ 1.55 mgd	0.4 feet
Head Above Weir @ 3.99 mgd	0.75 feet
Weir Crest Elevation	345.75 feet
Flow Meter	Ultrasonic Level Transducer

Effluent Sampler

Type	Automatic Refrigerated Composite
Sample Pacing	Flow Proportional

BEAVER CREEK OUTFALL

Configuration:	Single port outfall with High-water overflow
100 Year Flood WSE	344.00
Primary Outfall Pipe	
Invert	338.58
Size	12 inch
Backflow Prevention	Flapper style check valve
Overflow Design	
Overflow Crest Elevation	343.50

LAGOONS

	Cell 1	Cell 2	Cell 3	Cell 4
Use	Sludge Storage	Effluent Storage	Effluent Storage	Effluent Storage
Average Surface Area	7.3 Acres	6.2 Acres	7.1 Acres	6.2 Acres
Maximum Water Depth	6.0 feet	6.0 feet	8.5 feet	8.5 feet
Freeboard	2.0 feet	2.0 feet	2.0 feet	2.0 feet
Minimum Water Depth	NA	1.5 feet	1.5 feet	1.5 feet
Maximum Storage Volume	NA	29 Ac-ft	48 Ac-ft	41 Ac-ft

STORED EFFLUENT POLISHING SYSTEM

DAF Pump Station

Pump Type	Vertical turbine pumps in pump cans
Firm Capacity	300 gallons per minute at TBD feet TDH
Number	2 equal size pumps
Size	5 HP
Speed Control	Variable Frequency Drives
Isolation Valves	Plug valves mounted on pump discharge piping
Check Valves	Rubber flapper swing check valves mounted on pump discharge piping
Forcemain Size	6 inch
Forcemain Length	120'
Static Head	±12.5'
Flow Meter	Magnetic
Flow Meter Location	Inside DAF building
Meter Size	6 inch

Tube Flocculator

Capacity	300 gallons per minute
Type	6 inch PVC serpentine design
Retention Time	60 seconds at 300 gpm
Chemical Injection	Ports for alum and polymer and two spares

DAF Clarifier

Capacity	300 gallons per minute
Surface Area	150 square feet
Hydraulic Loading Rate	2.0 gpm/sf
Recycle Pump Type	End suction centrifugal
Recycle Pump Number	2 (one uninstalled spare)
Recycle Pump Size	10 HP
Sludge Pump Type	Air operated diaphragm
Sludge Pump Number	2 (one uninstalled spare)
Sludge Pump Size	2 inch

Chemical Feed Equipment

Alum Feed Rate	10-100 mg/L
Alum Storage	300 gallon totes of 48% alum solution
Alum Feed Pump Type	Diaphragm chemical metering
Alum Feed Pump Number	2 (including installed spare)
Alum Feed Pump Capacity	2.38 gph
Polymer Feed Rate	0.5 to 1 mg/L
Polymer Storage	55 gallon drums
Polymer Feed Pump Type	Diaphragm chemical metering
Polymer Feed Pump Number	2 (including installed spare)
Polymer Feed Pump Capacity	0.72 gph

IRRIGATION PUMP STATION

Pump Type	Vertical turbine pumps in pump cans
Firm Capacity	600 gpm @ 150 ft
Number	2 equal size pumps
Pump Size	40 HP
Speed Control	Variable Frequency Drives
Isolation Valves	Plug valves mounted on pump discharge piping
Check Valves	Swing check valves mounted on pump discharge piping
Forcemain Size & Length	See below
Flow Meter	Magnetic
Flow Meter Location	On filter inlet pipe
Meter Size	8 inch

IRRIGATION FORCEMAIN

Size	10 inch
Length	7,600 feet
Volume	31,000 gallons
Contact Time	60 minutes at 500 gallons per minute

IRRIGATION SITE

***As noted in the City's 2022 wastewater facilities plan, additional irrigation areas are needed and the City plans to expand the irrigation system in the coming years.

Location	South of the City on West Stayton Road
Size	75 acres total with 55 acres under irrigation
Sprinkler Type	Center Pivot
Typical Irrigation Rate	500 gallons per minute
Disposal Capacity	90 acre-feet at 20 inches of irrigation per year

SLUDGE STORAGE LAGOON

Lagoon Type	Facultative
Number	1
Surface Area	7.3 acres
Freeboard	2 feet
Maximum Sludge Storage Depth	3 feet
Sludge Storage Capacity	1250 dry tons at 4% solids
Design Year Average Loading Rate	950 ppd
Biosolids Removal Frequency	Every 7 years at design year loading rate
Lagoon Liner	Natural clay

PLANT PUMP STATION

Type	Submersible Duplex
Wet Well	6 foot diameter precast concrete
Wet Well Depth	11.8 feet
Firm Capacity	200 gpm at 60 ft TDH
Forcmain Size	4 inch
Forcemain Length	300 feet
Static Head	34.5 feet

STANDBY GENERATOR

Number:	2
Type:	Diesel
Capacity:	150 KW (SBR Area) 150 KW (DAF Area)
Transfer Switch:	Automatic
Fuel Supply:	24 Hours at full load

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VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING 1"
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IF NOT ONE INCH ON THIS SHEET, ADJUST SCALE ACCORDINGLY

DSN. CB
DRN. TMT
CKD. CB
DATE: MAY 2026

REGISTERED PROFESSIONAL ENGINEER
OREGON JULY 14, 2000
CHRISTOPHER J. SCHMIDT
65473PE
RENEWS: 12/31/2027

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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

DESIGN CRITERIA

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ABBREVIATIONS

ø	DIAMETER
±	APPROXIMATE
AC	ASPHALT CONCRETE
AFF	ABOVE FINISH FLOOR
ASPH	ASPHALT PAVEMENT
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
AWWA	AMERICAN WATER WORKS ASSOCIATION
BFV	BUTTERFLY VALVE
BH	BORE HOLE
BLDG	BUILDING
BTM	BOTTOM
BYP	BYPASS
CATV	CABLE TELEVISION
CB	CATCH BASIN
CF	CUBIC FEET
CFS	CUBIC FEET PER SECOND
CIRC	CIRCULAR
C/L	CENTERLINE
CL	CLASS
CL	CLEAR
CLR	CLEAR
CMP	CORRUGATED METAL PIPE
CMU	CONCRETE MASONRY UNIT
CO	CLEAN OUT
COAG	COAGULANT
CONC	CONCRETE
CS	CHLORINE SOLUTION
CW	CARRIER WATER
CY	CUBIC YARD
D	DISCHARGE
DAF	DISSOLVED AIR FLOATATION
DEMO	DEMOLITION
DF	DOUGLAS FIR
DI	DUCTILE IRON
DIA	DIAMETER
DR	DRAIN
DS	DOWN SPOUT
DTL	DETAIL
DWGS	DRAWINGS
E	EAST
EA	EACH
E/G	EDGE GRAVEL
EL	ELEVATION
ELEC	ELECTRICAL
ELEV	ELEVATION
E/P	EDGE PAVEMENT
EW	EACH WAY
EXTG	EXISTING
FCA	FLANGE COUPLING ADAPTOR
F	FEED
FE	FINAL EFFLUENT
FF	FINISHED FLOOR ELEVATION
FG	FINISHED GRADE
FH ASSY	FIRE HYDRANT ASSEMBLY
FL	FLANGE
FRP	FIBERGLASS REINFORCED PLASTIC
FT	FOOT
FTG	FOOTING
G	GAS
GAL	GALLON
GALV	GALVANIZED
GRAV	GRAVEL
GS	GRAVITY SEWER
GV	GATE VALVE
H	HORIZONTAL
HDPE	HIGH-DENSITY POLYETHYLENE PLASTIC
HPA	HIGH PRESSURE AIR
HVAC	HEATING VENTILATION AIR CONDITIONING
HWL	HIGH WATER LEVEL
HYPO	SODIUM HYPOCHLORITE
ID	INSIDE DIAMETER
IE	INVERT ELEVATION
INV	INVERT ELEVATION
IRR	IRRIGATION
JB	JUNCTION BOX
KSI	KIPS PER SQUARE INCH
LB	POUND
LBS	POUNDS
LPA	LOW PRESSURE AIR
MAX	MAXIMUM
MECH	MECHANICAL
MGD	MILLION GALLONS PER DAY
MH	MANHOLE
MIL	ONE-THOUSANDTH OF AN INCH
MIN	MINIMUM
MJ	MECHANICAL JOINT
N	NORTH
N.C.	NORMALLY CLOSED
N.O.	NORMALLY OPEN
NPW	NON POTABLE WATER
NSF	NATIONAL SANITATION FOUNDATION
NTS	NOT TO SCALE
OD	OUTSIDE DIAMETER
O/F	OVERFLOW
OG	ORIGINAL GROUND
O/H	OVERHEAD
OZ	OUNCE
PCC	PORTLAND CEMENT CONCRETE
PCF	POUNDS PER CUBIC FOOT
PE	PLAIN END
P/L	PROPERTY LINE
POLY	POLYMER
PSF	POUNDS PER SQUARE FOOT
PSI	POUND PER SQUARE INCH
PT	PRESSURE TREATED
PVC	POLYVINYL CHLORIDE PLASTIC
PW	POTABLE WATER
PWR	POWER
R	RADIUS
R	RIM ELEVATION
RD	ROOF DRAIN
RSFM	RAW SEWAGE FORCEMAIN
RT	RIGHT
S	SLOPE
S	SOLIDS
S	SOUTH
SBR	SEQUENCING BATCH REACTOR
SCH	SCHEDULE
SD	STORM DRAIN
SE	SECONDARY EFFLUENT
SEC	SECOND
SF	SQUARE FOOT
SHT	SHEET
SLFM	SLUDGE FORCEMAIN
SP	SPARE CONDUIT
SPD	SUMP PUMP DISCHARGE
SQ	SQUARE
SS	SANITARY SEWER
SS	SULFUR SOLUTION
SST	STAINLESS STEEL
ST. STEEL	STAINLESS STEEL
STA	STATION
STD	STANDARD
SW	SAMPLE WATER
TB	THRUST BLOCK
TEL	TELEPHONE
TEL PED	TELEPHONE PEDESTAL
TEMP	TEMPERATURE
TP	TEST PIT
TRANS	TRANSFORMER
TS	TOP OF SLAB
TYP	TYPICAL
U/G	UNDERGROUND
UW	UTILITY WATER
V	VERTICAL
W	WEST
W/	WITH
WAS	WASTE ACTIVATED SLUDGE
W/L	WATER LINE
WM	WATER METER
WSE	WATER SURFACE ELEVATION
W/TB	WITH THRUST BLOCK
WTR	WATER LINE
WV	WATER VALVE
WWF	WELDED WIRE FABRIC
YD	YARD

SUGGESTED SEQUENCE OF OPERATIONS

1. The following sequence of operations does not include all steps and is only intended to outline a suggested framework of construction. In addition to the conditions outlined herein, the Contractor shall conform to all City, County, State and Federal directives and requirements concerning the work.

2. The City must be able to provide continuous uninterrupted wastewater treatment and effluent disposal to the community throughout the construction process. The City must be able to operate the wastewater treatment plant, and perform the day to day tasks required by the public works department continuously through the construction process. The Contractor shall coordinate activities to minimize impacts to normal operation of the City's facilities, and shall conform to City notification requirements. Contractor shall provide the City with a written notice a minimum of one week prior to any interruption in access to the site or disturbance in the operation of the treatment facilities. Unless otherwise approved by the City, any interruption of localized service shall be limited to two (2) hours or less and shall be scheduled to occur during non-peak flow periods.

3. Since much of the work includes working within the existing wastewater lagoons, it is anticipated that the Contractor's work activities will be coordinated with the seasonal fluctuations of the lagoon levels. The Contractor shall include provisions to deal with fluctuating lagoon levels in his or her bid. Specifically, the Contractor shall consider the following.

   a. Seasonal Fluctuations of Lagoon Water Depths. During the winter months of November through April, the City discharges treated effluent to Beaver Creek. During the month of May and typically part of June, the City does not discharge any water and all water is stored in the lagoons. Therefore, the water levels in the lagoons are lowest at the end of April. At the end of April the water levels in Cells 1 & 2 are 4–6 feet in depth and the levels in Cells 3 & 4 are 2–3 feet in depth. During the months of May and June, the water levels rise to maximum depths of about 6 feet in Cells 1 & 2 and 8 to 9 feet in Cells 3 and 4. From late June through September, the City is able to discharge treated effluent at an irrigation site located south of the City. The existing effluent pump station is used to pump wastewater through the irrigation pipeline to the City's disposal fields. Therefore, the City is able to lower the water depths in the lagoons between late June through September. However, the City is limited on their ability to lower the water depths in the lagoons during the summer months. The amount of water that the City can be discharged during the summer months is limited by the needs of the farmer that farms the reuse field and weather conditions. So, the amount of water that can be discharged in the summer is variable. Generally, by the end of September, the water depths in the lagoons might be 5–6 feet in Cells 1 and 2 and 3 to 5 feet in Cells 3 and 4. From late September through October, the City is unable to discharge water and all water is again stored in the Lagoons. By the end of October, the water depths in Cells 1 and 2 typically rise to 6 feet and 8 to 9 feet in Cells 3 and 4. Starting in November, the City can again discharge treated effluent and the water depths are gradually lowered over the course of the winter months. However, large storm events do result in shorter-term increases in the lagoon water levels.

   b. Lagoon Cofferdams. In order to construct the project elements listed below, cofferdams will be required. Cofferdams shall be of the Contactor's design. For work elements that can be completed relatively quickly (i.e., items 2, 3, & 4 below), the Contractor is encouraged to schedule this work during low water level periods (as described above) to simplify cofferdamming requirements. If used, earthen coffer dams shall be completely removed in a manner that does not disturb the lagoon bottoms. For work elements that will extend over a longer time period, sheet pile or similar cofferdams should be anticipated and included in the contractor's schedule and bid prices. Unless otherwise approved, all cofferdam materials shall be removed upon completion of the work.
   1) Cell 1 outlet Structures (see drawing C101)
   2) Modifications to the existing transfer structures (see drawing C114)
   3) The new outlet pipe from Cell 4 to the new Irrigation Pump Station (see drawing C309)
   4) The new summer discharge and bypass pipes into Cell 2 (see drawing C113)
   5) The new Chlorine Contact Chamber (see drawing C304)

4. Connection to Existing Forecmain Pipe. The Contractor shall provide temporary bypass pumps to pump water from the existing influent pump station wet well to Lagoon Cell 1 in order to complete Connection Detail 1 on drawing C103.

5. Maintaining Flows Between Lagoons. The modifications to the transfer structures shown on drawing C114 will require temporary interruption of the flow between the lagoons. If this interruption exceeds three days, the Contractor shall provide a pump or similar means to transfer flow between lagoon cells.

6. Irrigation Forcemain Relocation (Drawing C111). The Contractor shall construct and pressure test the pipeline prior to connecting to the existing pipes. The contractor shall provide seven days advanced notice prior to making the connections to the existing pipes. While these connections are being completed, the City will not be able to irrigate treated effluent and the City must plan accordingly. These connections shall be completed in a single 8-hour work day.

7. New Effluent Pump Station Discharge Connection and Flow Meter. The City will be unable to irrigate treated effluent while the Contractor is completing the connection of the new irrigation pump discharge piping to the existing irrigation forcemain (see drawing C321) and the installation of the new irrigation flow meter on the existing irrigation filter (see drawing C313). Therefore, this work should be scheduled outside of the July through September irrigation season. This work may be scheduled during the irrigation season as long as it is completed in a single day and the contractor provides 7 days advanced notice to the City. The contractor shall install temporary MJ plugs, blind flanges, or a valve as required to enable the City to resume using the existing irrigation pump while the new irrigation pump station is being completed.

8. Power Supply to Existing Buildings. To the maximum extent possible, the power supplies to the existing buildings shall be maintained at all times. This includes the existing shop/lab building in the SBR area and the existing irrigation pump station building and the existing dechlorination building located on the Lagoon Cell 4 dike. Any interruption in the power supplies to the buildings on the Lagoon Cell 4 dike shall be scheduled for the non-discharging months of May and October. The City will consider power service interruptions to these buildings outside of the non-discharging period as long as the duration is limited to fewer than 2 days and 14 days advanced notice is provided by the Contractor. Power service interruptions for the existing shop/lab building in the SBR area may be scheduled any time of the year as long as it is limited to no more than 2 days with 14 days advanced notice. Should the Contractor prefer a longer-duration interruption of power to these building, then the Contractor shall provide temporary generators to power the buildings and supply all fuel and maintenance for the generators. The Contractor shall be responsible to pay all fines assessed by DEQ for any violations of the City's permit that result from a failure of the temporary generators.

9. Beaver Creek Waterline Crossing (Drawings C109 and C308). Any work that interrupts the flow of water through the existing 2 inch potable water pipe must be completed during non-discharging periods (i.e., May and October). It is envisioned that the contractor will install the new 2-inch pipe around the SBR area as needed to proceed with construction of the SBR tankage, connect to the exiting pipe, then complete the creek crossing during a non-discharging period in May or October.

10. Connection to Existing Outfall Pipe. The connection to the existing outfall pipe shown on drawing C310 shall be coordinated with the City. While this connection is being completed, the City will not have the ability to discharge to Beaver Creek. This connection can be completed at any time as long as it does not interrupt discharge to Beaver Creek for more than 1 day. Once this connection is completed, the Contractor shall install a temporary inflatable plug or other similar means to prevent water from flowing from the old contact chamber back up and through the new discharge pipe into the new contact chamber.

11. DAF Building Preload and Settlement Monitoring. Contractor shall review the preload notes on Drawing C307 and include the costs for placing the settlement plates, the preload fill, and monitoring the settlement in his or her bid. The settlement period shall also be included in the Contractor's schedule.

12. Lagoon Biosolids Removal Work. As described in the Contract Documents, the City has retained a contractor to remove and haul away the biosolids from Lagoon Cells 1 and 2. The areas noted on Drawing C201 will be used by the biosolids contractor for staging and sludge processing. The biosolids contractor will also be hauling approximately 5–10 loads of biosoilds from the plant per day. The treatment plant contractor shall not interfere with the biosolids removal contractor in any way during this work. Any work required in Lagoon Cells 1 or 2 or in the areas noted on Drawing C201 shall be scheduled after the completion of the biosolids removal contract. For bidding purposes, the treatment plant contactor shall assume that the biosolids contractor will be onsite until December 20, 2026.

13. Construction water. City will make construction water available to the Contractor from a metered hydrant located at the treatment plant. The City will not charge the contractor for water as long as the contractor does not use more than 5,000 gallons per week. The City also will not charge the contractor for the water needed to fill and leak test the new SBR and equalization basin tankage. If the tanks fail the leak test and must refilled for a second test, then the contractor will be charged for this water at the City's regular rates.

14. SBR Tank and Equalization Leakage Testing. These tanks shall be leakage tested prior to backfill as specified. City water shall be used for this purpose. The Contractor shall provide all pipes and hoses needed to convey water from the fire hydrant to the tanks. The City's water supplies are limited and the tanks must be filled over a period of several days. The rate at which water will be supplied shall be at the discretion of the City, but shall be at a rate that will not adversely impact the water system as a whole. Under no circumstances will water consumption for tank testing take precedence over the water consumption needs of the community. The water supply is very limited during dry weather conditions. During wet weather conditions the availability of water increases. Between June 15 and September 15, the Contractor shall assume that water is only available at a rate of 140,000 gallons per day. The rest of the year, the water availability will increase to approximately 350,000 gallons per day. Upon completion of the leakage testing, the water shall be left in the tank until backfill operations are completed. When approved by the City, the contractor shall remove the water from the tank and pump it into the storm drainage system. The Contractor shall provide dechlorination chemical and mixing equipment as needed. The City will test the chlorine residual of the water prior to discharge..

15. Chlorine Contact Chamber Leak Testing. The chlorine contact chamber shall be leak tested prior to backfill as specified. Lagoon water shall be used for this purpose. Contractor shall provide pumps and pipelines needed to convey water from Lagoon Cell 4 into the tank for testing purposes. Upon completion of the leakage testing, the water shall be left in the tank until backfill operations are completed. When approved by the City the contractor shall remove the water from the tank and pump it back into Lagoon Cell 4.

16. The work will likely be completed in five phases. The phases are:
   a. Phase 1 – Coordination and procurement of materials and equipment.
   b. Phase 2 – Construction of the fill in Lagoon Cell 4 and the preload for the DAF Building.
   c. Phase 3 – Construction of the remaining facilities.
   d. Phase 4 – Startup services, testing, and operator training for the new treatment facilities.
   e. Phase 5 – Final site improvements, clean up, and demobilization.

17. Phase 1 – Coordination and procurement of materials and equipment.

   a. Submit schedule, equipment submittals, shop drawings, color samples and sequence of operations if different than contained herein to City and Engineer for review and approval.

   b. Coordinate procurement of materials and equipment.

   c. Coordinate with the City's Integrator of Record to establish a schedule for the delivery of the equipment that is being supplied by the Integrator of Record and a timeline for the programming work and SCADA integration being provided by the City's Integrator of Record.

   d. Notify utilities and coordinate activities as required.

   e. Coordinate activities with the City.

   f. Obtain needed permits including transferring ownership of the DEQ 1200C Erosion Control Permit from the City to the Contactor as specified.

   g. Install erosion control measures.

   h. Pothole existing utilities. Notify Engineer of any conflicts or discrepancies

18. Phase 2 – Construction of the fill in Lagoon Cell 4 and the preload for the DAF Building,

   a. Construct the fill for the DAF building in Lagoon Cell 4, place settlement plates and preload fill and monitor settlement.

   b. After completion of the settlement and when approved by the Engineer, the preload fill may be removed and used for other purposes onsite such as backfill and base rock.

19. Phase 3 – Construct the remaining facilities.

   a. Relocate utilities as required for the SBR tankage foundation construction.

   b. Install the rammed aggregate pier foundation system as specified including all testing.

   c. Construct all baserock sections including all compaction testing.

   d. Construct all pipelines including all testing, pressure testing, and disinfection of potable waterlines.

   e. Construct new tankage and complete leakage testing as specified.

   f. Complete construction of all remaining treatment facilities.

20. Phase 4 – Startup services, testing, and operator training for the new treatment facilities

   a. Startup services shall not comment prior to completion of all specified testing for all tankage and pipelines as well as the completion of all electrical testing, manufacturer's startup services for all equipment, and completion of the system integration by the City's system integrator.

   b. Perform startup services in accordance with Specification Section 01650.

   c. Use clean drinking water from the onsite fire hydrant to supply water to the plant pump station for startup testing. Contractor shall provide all pipes and hoses to convey water from the hydrant to the plant pump station wet well.

   d. Coordinate with the City to place the system into service. During the dry weather months (May 1 – October 31), it is anticipated that only 1 SBR basin will be placed into service. During the wet weather months (November 1 – April 30), it is anticipated that both SBR basins will be placed into service. Coordinate with the City to determine the number of SBR basins that will be placed into service and schedule a date for placing the new treatment facilities into operation.

   e. Route raw sewage through the new forcemain to the new headworks. Adjust the gates on the outlet of the equalization basin effluent channel to route all flow to Lagoon Cell 2 regardless of the time of year. Complete all startup work, calibration, and system checks that require a flow of sewage to complete.

   f. Startup of the new irrigation pumps can only occur during the irrigation season. Startup of the DAF pump station and DAF equipment can occur anytime as long as the DAF equipment is ready to receive water and the valves and gates on the downstream side of the DAF system are set to discharge DAF effluent into Lagoon Cell 4.

   g. Prior to placing the system into service, coordinate with the equipment suppliers and the City to schedule the required training sessions. Where specified, the equipment suppliers shall have previously inspected the facilities for proper operation. The Contractor shall ensure that all systems are properly operating before scheduling the manufacturer's training sessions. The training sessions shall not be scheduled for the same day as the manufacturer's startup inspections.

21. Phase 5 – Final site improvements, clean up, and demobilization.

   a. Install all remaining yard piping. Complete fine grading and place final rock surfacing and paving. Complete landscaping and all punchlist work.

   b. Clean up WWTP site, perform remaining surface restoration, and demobilize.

NO.	DATE	DESCRIPTION	BY
		REVISIONS	
1			

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
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DSN. CB
DRN. TMT
CKD. CB
DATE: MAY 2026

REGISTERED PROFESSIONAL ENGINEER
OREGON
JULY 14, 2006
CHRISTOPHER L. BROCKTO
RENEWS: 12/31/2027

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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

SEQUENCE OF OPERATIONS & ABBREVIATIONS

DRAWING
G006
6 OF 223

JOB NUMBER
2599.3220.0

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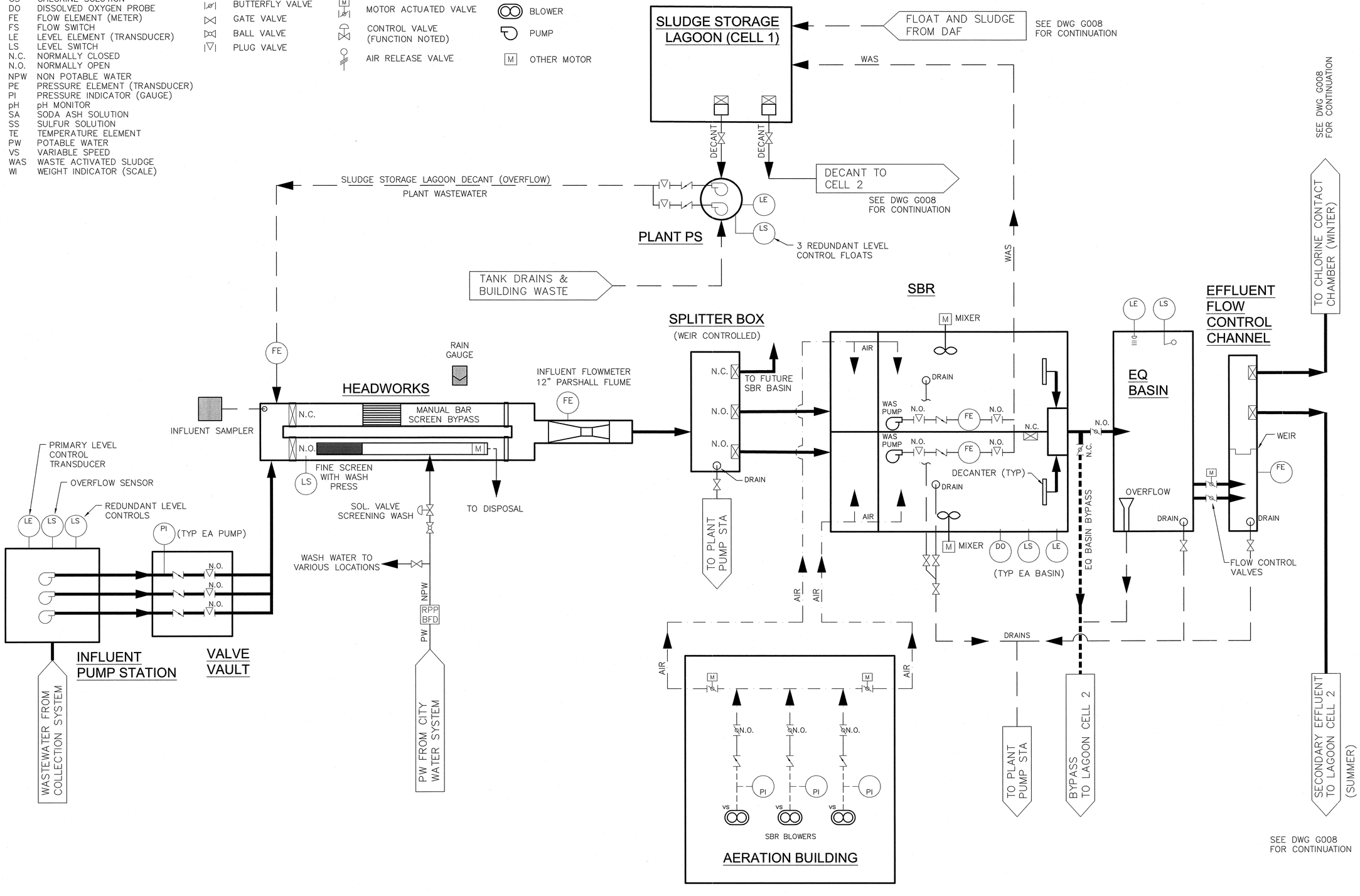
ABBREVIATIONS

CAW	CARRIER WATER
CS	CHLORINE SOLUTION
DO	DISSOLVED OXYGEN PROBE
FE	FLOW ELEMENT (METER)
FS	FLOW SWITCH
LE	LEVEL ELEMENT (TRANSDUCER)
LS	LEVEL SWITCH
N.C.	NORMALLY CLOSED
N.O.	NORMALLY OPEN
NPW	NON POTABLE WATER
PE	PRESSURE ELEMENT (TRANSDUCER)
PI	PRESSURE INDICATOR (GAUGE)
pH	pH MONITOR
SA	SODA ASH SOLUTION
SS	SULFUR SOLUTION
TE	TEMPERATURE ELEMENT
PW	POTABLE WATER
VS	VARIABLE SPEED
WAS	WASTE ACTIVATED SLUDGE
WI	WEIGHT INDICATOR (SCALE)

PROCESS DIAGRAM LEGEND

- CHECK VALVE
- BUTTERFLY VALVE
- GATE VALVE
- BALL VALVE
- PLUG VALVE
- WATER CONTROL GATE
- MOTOR ACTUATED VALVE
- CONTROL VALVE (FUNCTION NOTED)
- AIR RELEASE VALVE
- BACKFLOW DEVICE
- BLOWER
- PUMP
- OTHER MOTOR



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DSN. CB
DRN. TMT
CKD. CB
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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

PROCESS SCHEMATIC

DRAWING
G007
7 OF 223

JOB NUMBER
2599.3220.0

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SEE DRAWING G007 FOR ABBREVIATIONS AND SYMBOLS LEGEND

SECONDARY EFFLUENT FROM EQ BASIN (WINTER)

SEE DWG G007 FOR CONTINUATION

NOTE: EFFLUENT SAMPLES ARE TAKEN AT THE CENTER PIVOT FOR COMPLIANCE MONITORING DURING THE IRRIGATION SEASON.

TO LAGOON CELL 4

DIVERT TO LAGOON CELL 4

CAW

CARRIER WATER PUMP

DRAIN PUMP

COMPLIANCE MANHOLE

N.C.

N.O.

FINAL EFFLUENT TO BEAVER CREEK (WINTER)

EFFLUENT SAMPLER

EFFLUENT FLOW MEASUREMENT WEIR

FE

SS

SULFER DIOXIDE GAS INJECTOR

W1

SULFUR DIOXIDE GAS

LE

CLORINE SOLUTION TANK

CS PUMP (WINTER DISCHARGE)

CS PUMP (SUMMER IRRIGATION)

FROM ONSITE CHLORINE GENERATOR

CHLORINE CONTACT CHAMBER

CHLORINE INJECTION MANHOLE

CS

NPW

FROM WASH WATER SYSTEM

TUBE FLOCCULATOR AND DAF CLARIFIER

M

RECYCLE

FLOAT

SLUDGE

ALUM

POLYMER

AIR

PI

RECYCLE PUMP

SLUDGE PUMP

ALUM PUMP (2 TOTAL)

POLYMER PUMP (2 TOTAL)

TO EFFLUENT REUSE FIELDS (SUMMER)

SCREEN

TO SLUDGE STORAGE LAGOON CELL 1

SEE DWG G007 FOR CONTINUATION

(TYP EA PUMP)

VERTICAL TURBINE PUMP IN PUMP CAN (TYP)

PE

DECANT FROM CELL 1

SECONDARY EFFLUENT FROM EQ BASIN (SUMMER)

SEE DWG G007 FOR CONTINUATION

EFFLUENT STORAGE LAGOON (CELL 2)

EFFLUENT STORAGE LAGOON (CELL 3)

EFFLUENT STORAGE LAGOON (CELL 4)

SLUDGE PIPE FLUSHING PUMP

DAF TRANSFER PUMPS

IRRIGATION PUMPS

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CKD. CB
DATE: MAY 2026

REGISTERED PROFESSIONAL ENGINEER
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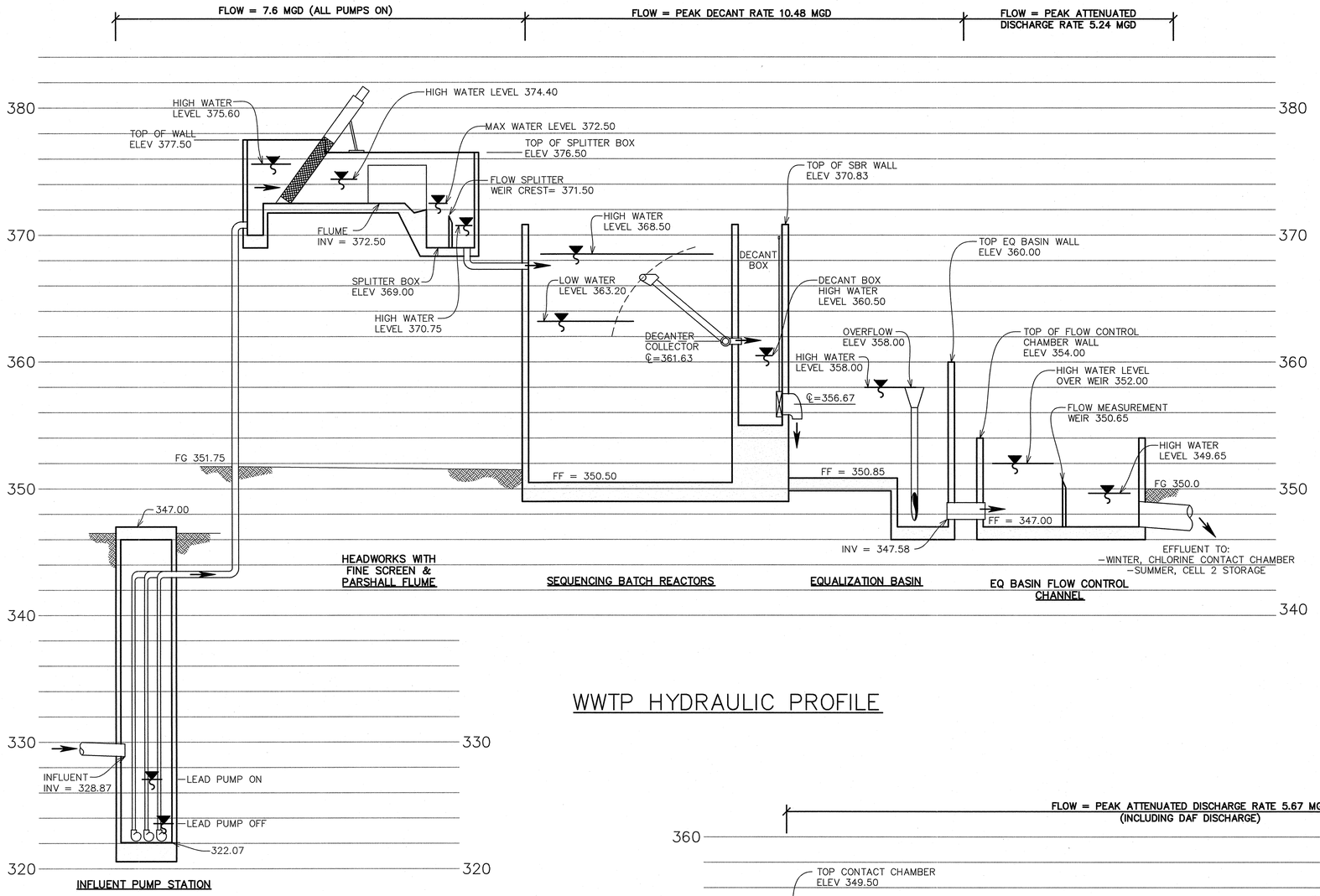
CITY OF AUMSVILLE, OREGON

WASTEWATER TREATMENT PLANT IMPROVEMENTS

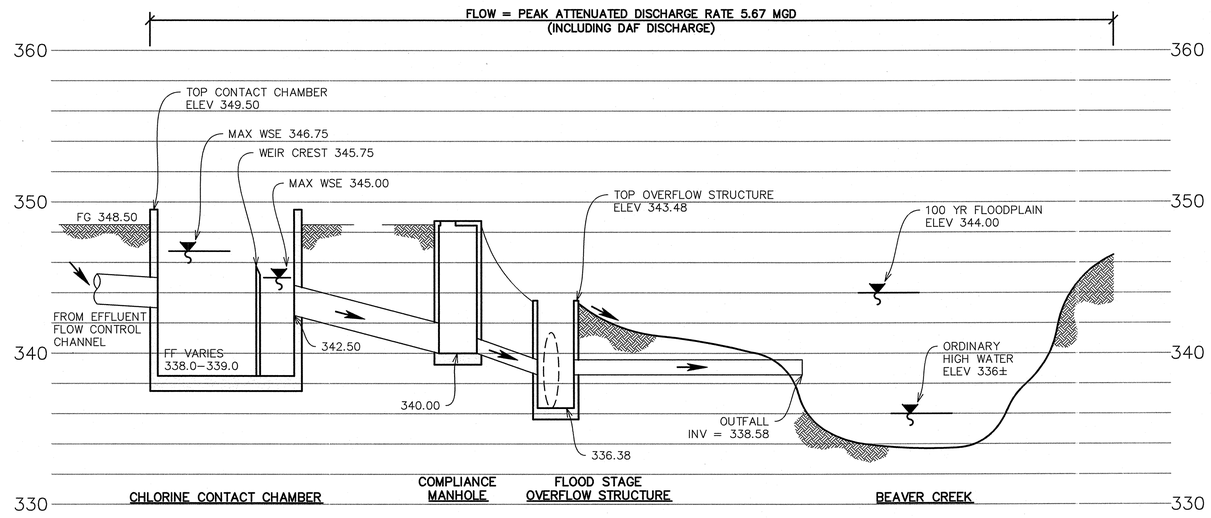
PROCESS SCHEMATIC

DRAWING
G008
8 OF 223

JOB NUMBER
2599.3220.0



WWTP HYDRAULIC PROFILE



WINTER DISCHARGE HYDRAULIC PROFILE

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DATE: MAY 2026

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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

HYDRAULIC PROFILES

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G009
9 OF 223

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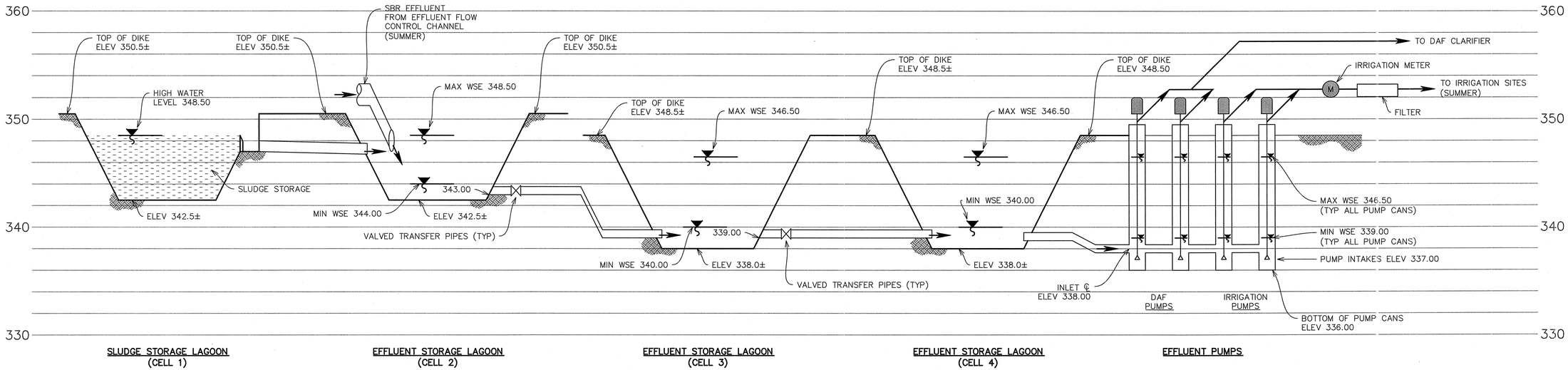
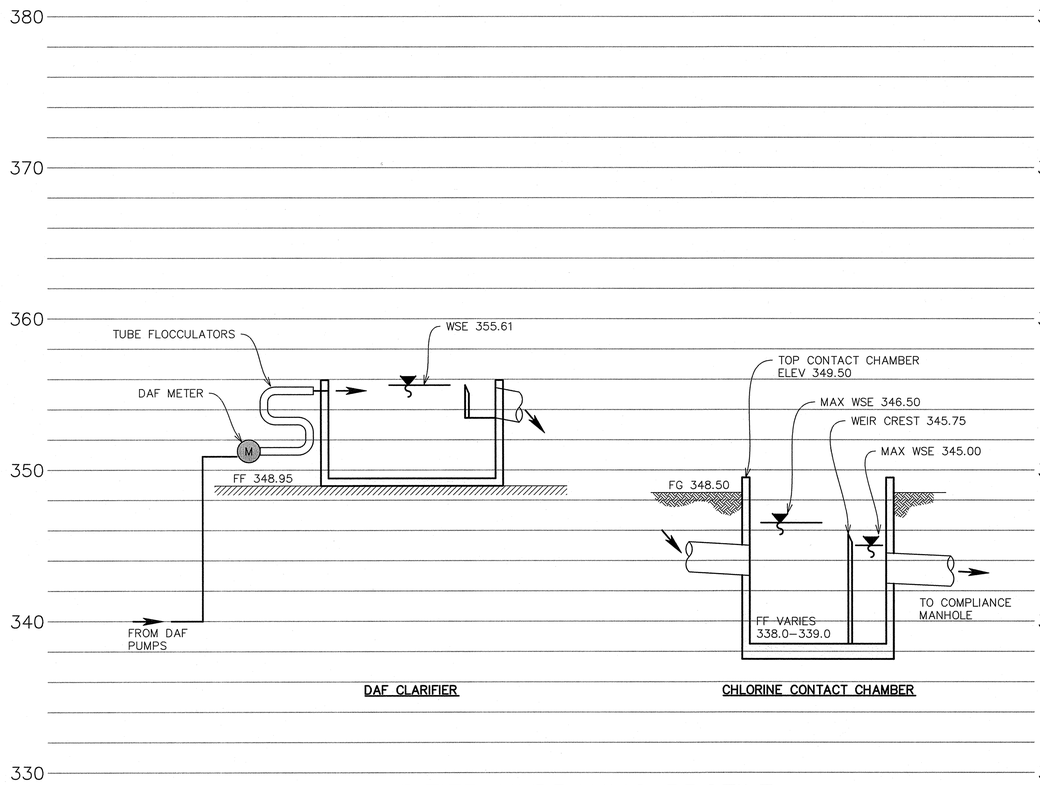


SUMMER DISCHARGE HYDRAULIC PROFILE



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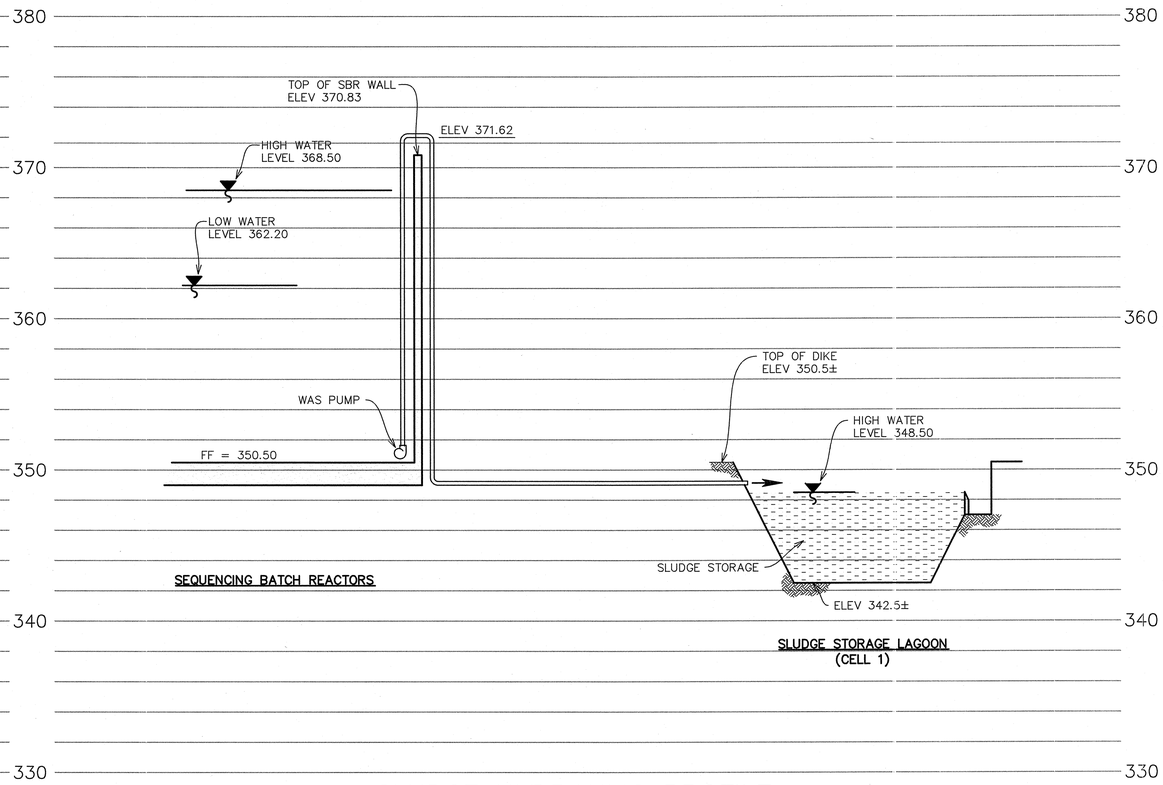

SLUDGE HYDRAULIC PROFILE

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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

HYDRAULIC PROFILES

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10 OF 223

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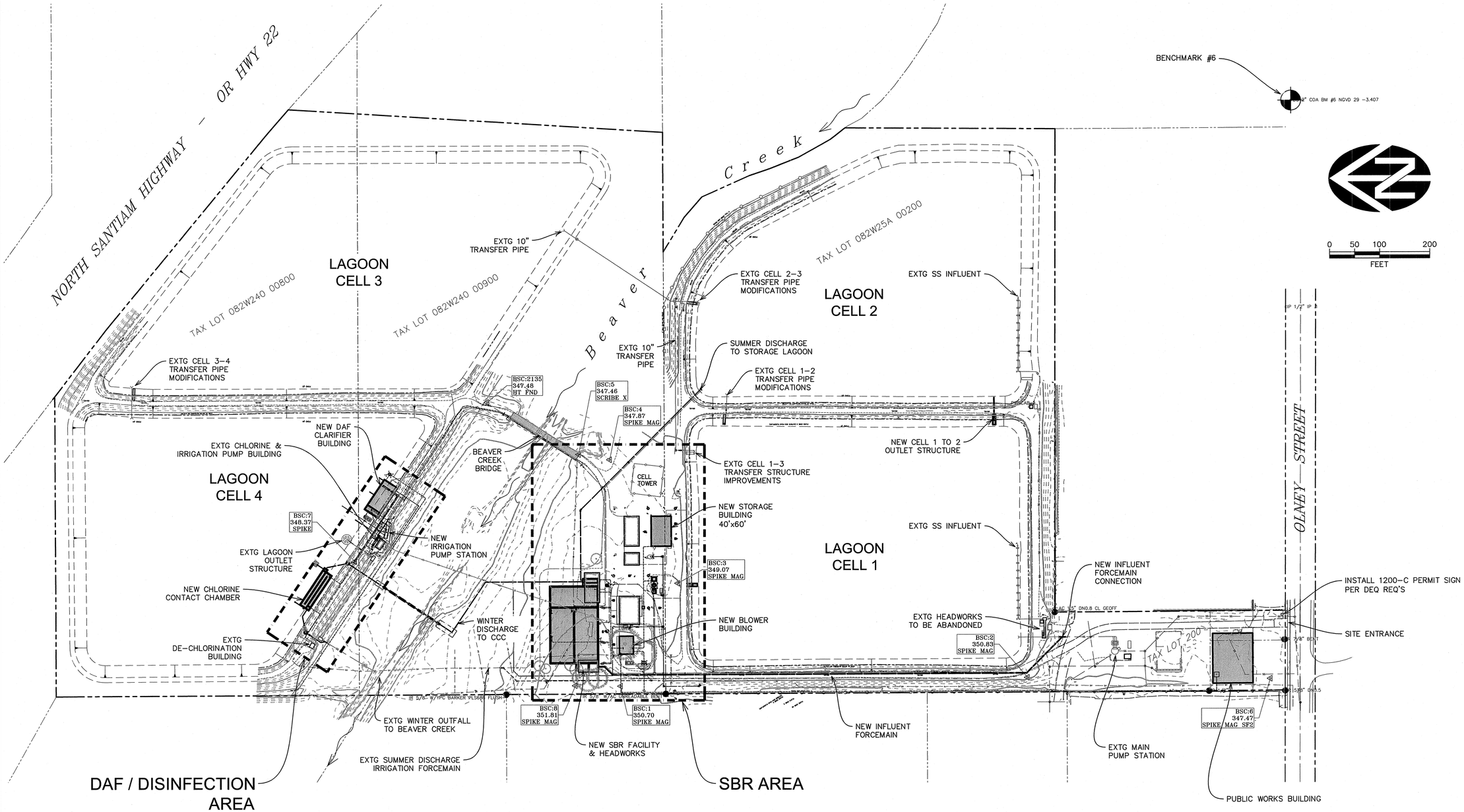

SURVEY CONTROL POINT TABLE

Point #	Raw Description	Elevation	Northing	Easting
1	SPIKE MAG	350.702	189898.5610	217487.8010
2	SPIKE MAG	350.830	189084.8560	217505.8830
3	SPIKE MAG	349.073	189783.9780	217694.5290
4	SPIKE MAG	347.869	189920.2470	217942.1320
5	SCRIBE X	347.458	189982.2240	217952.5130
6	SPIKE MAG SF2	347.473	188599.8850	217503.1190
7	SPIKE MAG SF4	348.369	190429.8060	217738.0610
8	SPIKE MAG SF1	351.808	189988.9710	217488.6750
2135	HT FND	347.481	190164.8410	218057.0830

BENCHMARK UTILIZED:
CITY OF AUSMVILLE # 6

ELEV:347.155' NGVD 29

2" BRASS DISK IN TOP OF CURB ON NORTH SIDE OF OLNEY ST AT TOP OF DEPRESSED CURB AT EAST SIDE OF DRIVEWAY TO 795 OLNEY ST

NO.	DATE	DESCRIPTION	BY
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REGISTERED PROFESSIONAL ENGINEER
OREGON JULY 14, 2006 CHRISTOPHER J. BRUNOW
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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

OVERALL WORK AREA MAP & SURVEY CONTROL DATA

DRAWING C001
11 OF 223

JOB NUMBER 2599.3220.0

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ESCP PREPARER

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cburgato@westech-eng.com
503-585-2474

PROJECT LOCATION

965 OLNEY ST
AUMSVILLE, OR 97325
LATITUDE = 44°51'36" N
LONGITUDE = 122°52'37" W

NARRATIVE DESCRIPTIONS

EXISTING SITE CONDITIONS:

SITE IS PARTIALLY DEVELOPED WITH THE EXISTING WASTEWATER TREATMENT PLANT FACILITIES, INCLUDING PAVED AREA, BUILDINGS, AND OPEN VEGETATED SPACES.

DEVELOPED CONDITIONS:

EXPANDING THE CITY'S EXISTING WASTEWATER TREATMENT PLANT FACILITIES, INCLUDING THREE NEW BUILDINGS, AND NEW SEQUENCING BATCH REACTOR ACTIVATED SLUDGE TANKAGE FOR THE TREATMENT PROCESS. THE PROJECT ALSO INCLUDES PROCESS PIPING, PAVEMENT, AND ASSOCIATED IMPROVEMENTS.

SITE AREA:

TOTAL SITE AREA = 49.3 AC
TOTAL DISTURBED AREA = 4.0 AC

SITE SOIL CLASSIFICATION & IMPORTED FILL SOURCE:

PER MARION COUNTY SOIL SURVEY, THE SITE SOILS INCLUDE:
-COURTNEY GRAVELLY SILTY CLAY LOAM, 0 TO 3% SLOPES
-CLACKAMAS GRAVELLY LOAM
-SALEM GRAVELLY LOAM

FILL MATERIAL WILL BE LOCAL MATERIAL OF SUFFICIENT QUALITY TO PLACE IN ENGINEERED LIFTS AND COMPACTED FOR BUILDING PADS AND ROADS.

LOCAL RAIN GAUGE:
SALEM-McNARY FIELD
LATITUDE = 44°54'34" N
LONGITUDE = 123°00'35" W
URL:
https://www.weather.gov/wrh/timeseries?site=KSLE

RECEIVING WATERBODY:
BEAVER CREEK

USE OF ENGINEERED SOIL:
NOT APPLICABLE

WORK IN APPLICABLE NATURAL BUFFERZONE:
YES, SEE PLANS

ADDITIONAL WATER QUALITY PERMITS:
NOT APPLICABLE

LEGEND

SYMBOLS

- AD AREA DRAIN
- CB or CATCH BASIN
- CO CLEANOUT
- FIRE HYDRANT
- GV GAS VALVE
- WV WATER VALVE
- G P W GAS/POWER/WATER METER
- DS DOWN SPOUT
- T MANHOLE TELEPHONE
- D MANHOLE STORM DRAIN
- S MANHOLE SANITARY SEWER
- SIGN POST
- PED PEDESTAL
- MAIL BOX
- IV IRRIGATION VALVE
- LIGHT POLE
- UTILITY/POWER POLES
- TP TEST PIT
- MONUMENT FOUND
- TREES - *TREENAME* DIAMETER (INCHES)/DRIP RADIUS (FEET)
  NOTE: DIAMETER MEASURED AT BREAST HEIGHT

LINE TYPES

- CATV LINE
- COMMUNICATION LINE
- EASEMENT LINE
- FENCE LINE
- FIBER OPTIC LINE
- GAS LINE
- EDGE OF GRAVEL LINE
- OVERHEAD LINE
- PHONE LINE
- POWER LINE
- SANITARY SEWER LINE
- STORM DRAIN LINE
- WATER LINE

YEAR / MONTH:	'26 08	'26 09	'26 10	'26 11	'26 12	'27 1	'27 2	'27 3	'27 4	'27 5	'27 6	'27 7	'27 8	'27 9	'27 10	'27 11	'27 12	'28 1
CLEARING AND STAGING																		
MASS GRADING																		
UTILITY INSTALLATION				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
PAVING AND VERTICAL CONSTRUCTION							X	X	X	X	X	X	X	X	X	X	X	X
FINAL STABLIZATION																		X
BMP'S																		
BIOBAGS	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
BIOSWALES/SEDIMENT BASINS																		
CHECK DAMS																		
PERIMETER CONTROL	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
CONCRETE TRUCK WASHOUT																		
CONSTRUCTION ENTRANCE	X	X	X	X	X	X	X	X										
DEWATERING																		
CONVEYANCE STRUCTURES																		
ENERGY DISSIPATERS																		
EROSION CONTROL BLANKETS & MATS																		
HYDROSEEDING											X	X	X	X	X	X	X	X
INLET PROTECTION	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
MULCHES																		
CHEMICAL TREATMENT SYSTEM																		
NATURAL BUFFER ZONE	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
OUTLET PROTECTION																		
TEMPORARY STABILIZATION											X	X	X	X	X	X	X	X
PERMANENT STABILIZATION												X	X	X	X	X	X	X
PLASTIC SHEETING																		
SEDIMENT TRAP																		
SOIL TACKIFIERS																		
TEMPORARY DIVERSION BERMS																		
VEGETATIVE BUFFER STRIPS																		

TRANSFER 1200-C PERMIT TO CONTRACTOR:

AFTER CONTRACT AWARD AND PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL FORMALLY TRANSFER (INTO CONTRACTOR'S NAME) THE 1200-C PERMIT AND THE RESPONSIBILITY FOR EROSION CONTROL INSPECTION UNDER THE PERMIT. THE CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE IN WRITING WHEN THE TRANSFER IS COMPLETE. NO GROUND DISTURBING WORK SHALL BE PERFORMED ON THE PROJECT UNTIL THE 1200-C PERMIT HAS BEEN TRANSFERRED AND DEQ HAS BEEN NOTIFIED OF THE CHANGE IN INSPECTOR RESPONSIBILITY.

THE PERMIT REGISTRANT IS RESPONSIBLE FOR MEETING ALL CONDITIONS OF THE 1200-C PERMIT. THIS ESCP HAS BEEN DEVELOPED TO FACILITATE COMPLIANCE WITH THE 1200-C PERMIT. IN CASES OF DISCREPANCIES OR OMISSIONS. THE 1200-C PERMIT REQUIREMENTS SUPERCEDE THE REQUIREMENTS OF THIS PLAN. THE PERMIT REGISTRANT IS REQUIRED TO ALTER THE ESCP DEPENDING ON SITE CONDITIONS TO BE PROTECTIVE OF WATER QUALITY.

EROSION CONTROL INSPECTIONS & RESPONSIBILITIES

1. PRIOR TO CONTRACT AWARD, INSPECTOR TO BE RYAN SCHOLTES AT WESTECH ENGINEERING, INC. (503-585-2474), RVSS INSPECTOR #601, EXPIRES AUG 28, 2028.
2. AFTER CONTRACT AWARD AND PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL ACQUIRE THE SERVICES OF A CERTIFIED EROSION CONTROL INSPECTOR MEETING DEQ REQUIREMENTS UNDER THE 1200-C PERMIT, AND NOTIFY DEQ OF THE NEW CERTIFIED EROSION CONTROL INSPECTOR.
3. HOLD A PRE-CONSTRUCTION MEETING OF PROJECT CONSTRUCTION PERSONNEL THAT INCLUDES THE INSPECTOR, TO DISCUSS EROSION AND SEDIMENT CONTROL MEASURES AND CONSTRUCTION LIMITS.
4. INSPECTIONS TO BE MADE AT LEAST EVERY 7 CALENDAR DAYS.
5. ALL INSPECTIONS MUST BE MADE IN ACCORDANCE WITH DEQ'S 1200-C PERMIT REQUIREMENTS.
6. INSPECTION LOGS MUST BE KEPT IN ACCORDANCE WITH DEQ'S 1200-C PERMIT REQUIREMENTS.
7. RETAIN A COPY OF THE ESCP AND ALL REVISIONS ON SITE AND MAKE IT AVAILABLE ON REQUEST TO DEQ, AGENT, OR THE LOCAL MUNICIPALITY. DURING INACTIVE PERIODS GREATER THAN SEVEN (7) CONSECUTIVE CALENDAR DAYS, RETAIN THE ESCP AT THE CONSTRUCTION SITE OR AT ANOTHER LOCATION.

SPILL PREVENTION PROCEDURES AND RESPONSE

- Spill prevention is an important factor in the successful operation of a storm water management system. All contractor employees will be trained on this plan so that they are certain of the location of materials, who to notify in case of a spill, and how to initially contain the spill of hazardous materials. Contractor employees shall never dispose waste materials into the storm water collection/treatment system. Contractor employees will be observant of other potential contamination occurrences. All contractor employees will review this plan especially with regards to the detailed spill response steps.
- This data will be posted in an accessible area at the site.

What to do in case of a spill

1. Spill kit to be located near the job trailer or another conspicuous location and clearly marked.
2. Get the spill kit.
   a. If possible, determine visually what types of fluids have been spilled.
   b. Put on gloves and glasses or any other necessary Personal Protective Equipment (PPE).
   c. Get the absorbent material provided in the kit and the drain block cover.
   d. Place the absorbent materials in the path of the spill.
   e. Remove any debris from the vicinity of the inlet where the spill is draining.
   f. Unroll the drain block cover and place it snugly over the inlet.
   g. Verify that the cover has full contact with the rim of the inlet.
   h. Use snakes, pillow or pigs to completely contain the area.
3. Notify the following personnel immediately:
   a. 1200-C Permit Registrant's Representative
   b. General Contractor
   c. When a spill includes any of the below, notify the Oregon Emergency Response System as soon as the Owner's Representative has knowledge of the release. Oregon Emergency Response System Phone: 1-800-452-0311
      i. Any amount of oil to waters of the state;
      ii. Oil spills on land in excess of 42 gallons;
      iii. Hazardous materials that are equal to, or greater than, the quantity listed in the Code of Federal Regulations, 40 CFR Part 302 (List of Hazardous Substances and Reportable Quantities), and amendments adopted before July 1, 2002

NOTE: Only dry cleanup methods will be employed to clean up spills (i.e., no use of water to wash spilled materials from pavement will be conducted). All spill cleanups shall be conducted in accordance with applicable regulations.

Responsible Personnel

The 1200-C Permit Registrant's Representative will be responsible for either managing the spill clean up for minor spills or contacting/retaining a company for the cleanup of major spills.

Waste Management Procedures

Activities performed onsite shall implement the following to eliminate the discharge of waste:

1. Locate activities that include waste products away from waters of the state and stormwater inlets or conveyances so that stormwater coming into contact with these activities cannot reach waters of the state;
2. Ensure adequate supplies are available at all times to handle spills, leaks, and disposal of liquids, and provide secondary containment (e.g. spill berms, decks, spill containment pallets);
3. Have a spill kit available on site and ensure personnel are available to respond expeditiously in the event of a leak or spill;
4. Clean up spills or contaminated surfaces immediately using dry clean up measures (do not clean contaminated surfaces by hosing the area down), and eliminate the source of the spill to prevent a discharge or a continuation of an ongoing discharge; and
5. Store materials in a covered area (e.g., plastic sheeting, temporary roofs), or in secondary containment to prevent the exposure of these containers to precipitation or stormwater runoff, or a similarly effective means designed to prevent the discharge of pollutants from these areas.
6. Building Materials & Building Products: Minimize material exposure in cases where the exposure to precipitation or to stormwater will result in a discharge of pollutants (e.g. elevate materials from soil to prevent leaching of pollutants).

Fertilizers, pesticides, herbicides, & insecticides

Comply with all application and disposal requirements included on the registered pesticide, herbicide, insecticide, and fertilizer label. When applying fertilizers, registrants must:

1. Apply at a rate and in amounts consistent with manufacturer's specifications;
2. Apply at the appropriate time of year for the location, and preferably timed to coincide as closely as possible to the period of maximum vegetation uptake and growth;
3. Avoid applying before heavy rains that could cause excess nutrients to be discharged;
4. Never apply to frozen ground;
5. Never apply to stormwater conveyance channels; and
6. Follow all other federal, state, and local requirements regarding fertilizer application.

Authorized non-stormwater discharges anticipated for the proposed project:

1. Landscape irrigation
2. Dust control water
3. Water line flushing (potable)

Potential pollutant-generating activities anticipated for the proposed project including an inventory of pollutants for each activity:

1. Mass Grading, Street & Utility Construction
   a. Sediment
   b. Vehicle and machinery related pollutants (Fuels, hydraulic fluid, oils)
2. Vertical Construction
   a. Paints, caulks, sealants, solvents
   b. Fluorescent light ballasts
   c. Sediment
   d. Vehicle and machinery related pollutants (Fuels, hydraulic fluid, oils)
3. Landscaping & Irrigation
   a. Fertilizers
   b. Pesticides, Herbicides, Insecticides

NO.	DATE	DESCRIPTION	BY
		REVISIONS	
1			

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

DSN. CB
DRN. TMT
CKD. CB
DATE: MAY 2026

REGISTERED PROFESSIONAL ENGINEER 86473PE OREGON JULY 14, 2000 CHRISTOPHER J. BURGATO
RENEWS: 12/31/2027

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
3841 Fairview Industrial Dr. S.E., Suite 100, Salem, OR 97302
Phone: (503) 585-2474 Fax: (503) 585-3986
E-mail: westech@westech-eng.com

CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

EROSION CONTROL NOTES

DRAWING
C002
12 OF 223

JOB NUMBER
2599.3220.0

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SUPPLEMENTAL WESTECH NOTES:

1. Clearing and grading erosion control measures shall be in place prior to site disturbance. All other necessary erosion control measures shall be implemented prior to starting work on the portion/phase of the project to which the measures are related. Erosion control measures shall be maintained in such a manner as to ensure that sediment and sediment–laden water does not enter the drainage system, roadways, or violate applicable water quality standards.

2. The erosion control construction, maintenance, replacement and upgrading of the erosion control facilities is the responsibility of the 1200–C Permit Registrant until all construction is completed and approved, and permanent erosion control (i.e. vegetation/landscaping) is established on all disturbed areas.

3. All recommended erosion control procedures are dependent on construction methods, staging, site conditions, weather and scheduling. During the construction period, erosion control facilities shall be upgraded as necessary due to unexpected storm events and to ensure that sediment and sediment laden water does not leave the site.

4. The 1200–C Permit Registrant is responsible for control of sediment transport. If an installed erosion control system does not adequately contain sediment on site, then the erosion control measures shall be adjusted or supplemented by the 1200–C Permit Registrant as necessary to ensure that sediment laden water does not leave the site. Additional measures shall be provided as required to ensure that all paved areas are kept clean for the duration of the project. Additional interim measures will include, at a minimum, installation of silt fences in accordance with the details shown on the drawings. These measures shall be installed along all exposed embankments and cut slopes to prevent sediment transport.

5. All existing and newly constructed storm inlets and drains shall be protected until pavement surfaces are completed and/or vegetation is established.

6. Erosion control facilities and sediment fences on active sites shall be inspected by the 1200–C Permit Registrant at least daily during any period with measurable precipitation. Any required repairs or maintenance shall be completed immediately. The erosion control facilities on inactive sites shall be inspected and maintained by the 1200–C Permit Registrant a minimum of once a month.

7. All catch basins and conveyance lines shall be cleaned prior to paving. The cleaning operation shall not flush sediment–laden water into the downstream system. The 1200–C Permit Registrant shall remove all accumulated sediment from all impacted catch basins and storm pipes prior to acceptance by the Owner.

8. The 1200–C Permit Registrant is solely responsible for protection of all adjacent property and downstream facilities from erosion and siltation during project construction. Any damage resulting from such erosion and siltation shall be corrected at the sole expense of the 1200–C Permit Registrant.

9. Locate any portable toilets away from waters of the state and stormwater inlets or conveyances. Position portable toilets so they are secure and will not be tipped or knocked over.

10. The 1200–C Permit Registrant shall provide site watering as necessary to prevent wind erosion of fine–grained soils.

11. Unless otherwise indicated on the drawings, all temporary erosion control facilities, including sediment fences, silt sacks, bio–bags, etc. shall be removed within 30 days after permanent landscaping/vegetation is established.

12. Sediment fences shall be constructed of continuous filter fabric to avoid use of joints. When joints are necessary, filter cloth shall be spliced together only at a support post, with a minimum 6–inch overlap, and both ends securely fastened to a post.

13. Sediment fence shall be installed per drawing details. Sediment fences shall have adequate support to contain all silt and sediment captured.

14. The standard strength filter fabric shall be fastened securely to stitched loops installed on the upslope side of the posts, and 6 inches of the fabric shall be extended into the trench. The fabric shall not extend more than 30 inches above the original ground surface. Filter fabric shall not be stapled to existing trees.

15. Bio–filter bags shall be clean 100 percent wood product waste. Bags shall be 18–inch x 18–inch x 30–inch, weigh approximately 45 lbs., and be contained in a bag made of 1/2–inch plastic mesh.

16. Sediment barriers shall be maintained until the up–slope area has been permanently stabilized. At no time shall more than 10–inches of sediment be allowed to accumulate behind sediment fences. No more than 2 inches of sediment shall be allowed to accumulate behind bio–filter bags. Sediment shall be removed prior to reaching the above stated depths. New sediment barriers shall be installed uphill as required to control sediment transport.

17. Stabilized construction entrances shall be installed prior to site disturbance and maintained for the duration of the project. Additional measures may be required to ensure that all paved areas are kept clean for the duration of the project.

18. The entrance shall be maintained in a condition that will prevent tracking or flow of mud onto the public right–of–way or approved access point. The entrance may require periodic top dressing as conditions demand, and repair and/or cleanout of any structures used to trap sediment.

19. The 1200–C Permit Registrant shall verify that all trucks are well sealed when transporting saturated soils from the site. Water drippage from trucks transporting saturated soils must be reduced to less than 1 gallon per hour prior to leaving the site.

20. All materials spilled, dropped, washed, or tracked from vehicles onto roadways or into storm drains must be removed immediately, and protection provided for downstream inlets and catch basins to ensure sediment laden water does not enter the storm drain system.
21. Significant sediment leaving the site must be cleaned up within 24 hours, and the cause must be investigated with corrective actions implemented within the same 24 hours.
22. Provide temporary stabilization for any area where work ceases for 14 days or more, and stabilize soils before weekends/holidays as needed. The registrant is responsible for ensuring that soils are stable during rain events at all times of the year.
23. Temporary grass cover measures must be fully established by October 15th, or other cover measures (i.e. erosion control blankets with anchors, 3–inches minimum of straw mulch, 6 mil HDPE plastic sheet, etc.) shall be in place over all disturbed soil areas until April 30th. To establish an adequate grass stand for controlling erosion by October 15th, it is recommended that seeding and mulching occur by September 1st. Straw mulch, if used, shall not leave any bare ground visible through the straw.

24. Minimum slope protection. For slopes steeper than 3H:1V but less than 2H:1V, use Tensar/North American Green Type S150 erosion control blanket. For slopes 2H:1V or steeper, use Tensar/North American Green Type SC150 erosion control blanket. Use a minimum of 2–inches straw mulch or Tensar/North American Green Type S150 for slopes flatter than 3H:1V. Slope protection shall be placed on all disturbed areas immediately after completion of each section of construction activity, until the erosion control seeding has been established. As an option during temporary or seasonal work stoppages, a 6–mil HDPE plastic sheet may be placed on exposed slopes. The plastic sheet shall be provided with an anchor trench at the top and bottom of the slope, and shall be sandbagged on the slopes as required to prevent damage or displacement by wind.

25. Permanent erosion control vegetation on all embankments and disturbed areas shall be re–established as soon as construction is completed.

26. Soil preparation. Topsoil should be prepared according to landscape plans, if available, or recommendations of grass seed supplier. It is recommended that slopes be textured before seeding by rack walking (i.e. driving a crawling tractor up and down the slopes to leave a pattern of cleat imprints parallel to slope contours) or other method to provide stable areas for seeds to rest.

27. When used, hydromulch shall be applied with grass seed at a rate of 2000 lbs. per acre between April 30 and June 10, or between September 1 and October 1. On slopes steeper than 10 percent, hydroseed and mulch shall be applied with a bonding agent (tackifier). Application rate and methodology to be in accordance with seed supplier recommendations.

28. When used in lieu of hydromulch, dry, loose, weed free straw used as mulch shall be applied at a rate of 4000 lbs. per acre (double the hydromulch application requirement). Anchor straw by working in by hand or with equipment (rollers, cleat trackers, etc.). Mulch shall be spread uniformly immediately following seeding.

29. When conditions are not favorable to germination and establishment of the grass seed, the seeded and mulched areas shall be irrigated as required to establish the grass cover.

30. Seeding. Recommended erosion control grass seed mix is as follows. Dwarf grass mix (low height, low maintenance) consisting of dwarf perennial ryegrass (80 % by weight), creeping red fescue (20 % by weight). Application rate shall be 100 lbs. per acre minimum.

31. Grass seed shall be fertilized at a rate of 10 lbs. per 1000 S.F with 16– 16–16 slow release type fertilizer. Development areas within 50 feet of water bodies and wetlands must use a non–phosphorous fertilizer.

32. The 1200–C Permit Registrant shall submit "Notice of Termination" to DEQ to end the 1200–C permit coverage once all soil disturbance activities have been completed and final stabilization of exposed soils has occurred.

33. The ESCP must accurately reflect current site conditions, be kept on site, and be available for review by the permitting authority, DEQ, or the local municipality.

34. If there is any conflict, discrepancy, or inconsistency between the DEQ 1200–C Permit Requirements and the Supplemental Westech Notes, the DEQ 1200–C Permit Requirements will control.

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VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

DSN. CB
DRN. TMT
CKD. CB
DATE: MAY 2026

REGISTERED PROFESSIONAL ENGINEER
86-473PE
OREGON
JAN. 14, 2005
CHRISTOPHER J. BRUCKNER
RENEWS: 12/31/2027

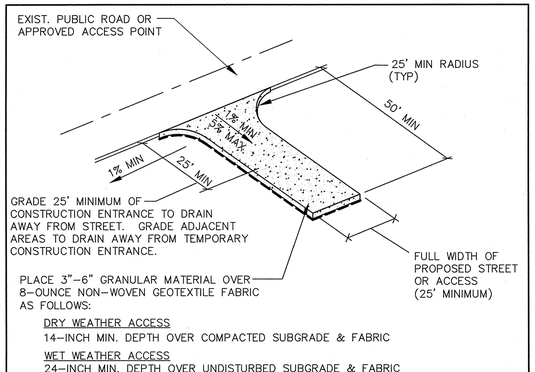
WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
3841 Fairview Industrial Dr. S.E., Suite 100, Salem, OR 97302
Phone: (503) 585–2474 Fax: (503) 585–3986
E–mail: westech@westech–eng.com

CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

EROSION CONTROL NOTES

DRAWING
C003
13 OF 223

JOB NUMBER
2599.3220.0



DRY WEATHER ACCESS
14–INCH MIN. DEPTH OVER COMPACTED SUBGRADE & FABRIC

WET WEATHER ACCESS
24–INCH MIN. DEPTH OVER UNDISTURBED SUBGRADE & FABRIC

CONSTRUCTION NOTES:

1. THE AREA OF THE CONSTRUCTION ENTRANCE SHALL BE STRIPPED OF ALL TOPSOIL, VEGETATION, ROOTS, AND OTHER NON–COMPACTABLE MATERIAL.
2. SUBGRADE SHALL BE COMPACTED AND PROOFROLLED PRIOR TO PLACEMENT OF GRANULAR MATERIAL. FAILURE TO PASS PROOFROLL WILL REQUIRE USE OF WET WEATHER SECTION.
3. FAILURE OR PUMPING OF THE DRY WEATHER SECTION WILL REQUIRE REMOVAL OF THE GRANULAR MATERIAL AND INSTALLATION OF THE WET WEATHER SECTION.

MAINTENANCE NOTES:

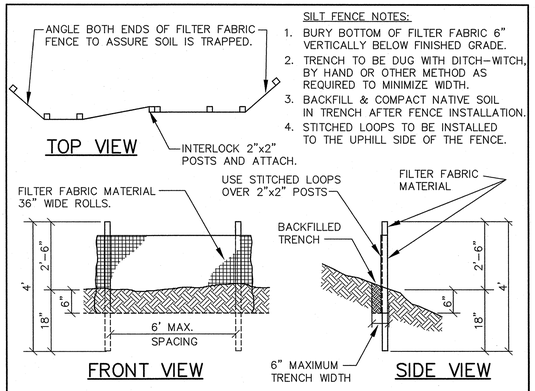
1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOW OF SEDIMENT ONTO PUBLIC RIGHT–OF–WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH 3"–6" INCH STONE AS CONDITIONS DEMAND, AND REPAIR AND/OR CLEAN–OUT OF STRUCTURES USED TO TRAP SEDIMENT.
2. ALL MATERIALS SPILLED, DROPPED, WASHED OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.
3. ALL TRUCKS TRANSPORTING SATURATED SOILS SHALL BE WELL SEALED. WATER DRIPPAGE FROM TRUCKS MUST BE REDUCED TO 1 GALLON PER HOUR PRIOR TO LEAVING THE SITE.

LAST REVISION DATE:	JO #
MAY 2013	STANDARD

TEMPORARY CONSTRUCTION ENTRANCE

(NTS)

WESTECH ENG.	DETAIL NO. 6100



SILT FENCE NOTES:

1. BURY BOTTOM OF FILTER FABRIC 6" VERTICALLY BELOW FINISHED GRADE.
2. TRENCH TO BE DUG WITH DITCH–WITCH, BY HAND OR OTHER METHOD AS REQUIRED TO MINIMIZE WIDTH.
3. BACKFILL & COMPACT NATIVE SOIL IN TRENCH AFTER FENCE INSTALLATION.
4. STITCHED LOOPS TO BE INSTALLED TO THE UPHILL SIDE OF THE FENCE.

MAINTENANCE NOTES:

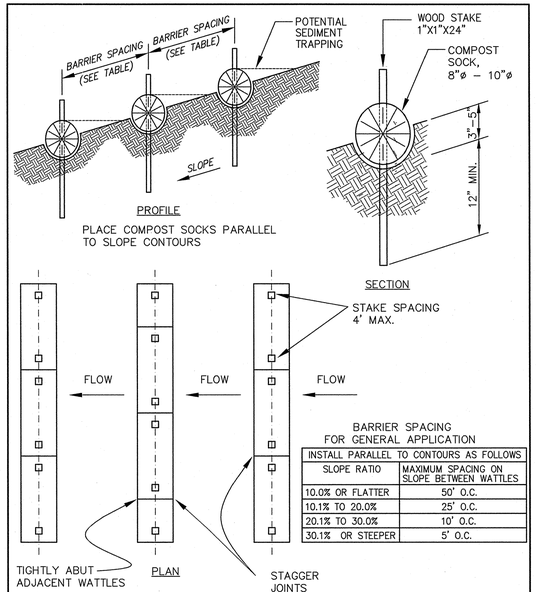
1. SEDIMENT BARRIERS SHALL BE MAINTAINED UNTIL UP–SLOPE AREA IS PERMANENTLY STABILIZED.
2. AT NO TIME SHALL MORE THAN ONE FOOT OF SEDIMENT BE ALLOWED TO ACCUMULATE BEHIND SEDIMENT FENCES OR BIOFILTER BAGS.
3. NEW SEDIMENT BARRIERS SHALL BE INSTALLED UPHILL AS REQUIRED TO CONTROL SEDIMENT TRANSPORT.

LAST REVISION DATE:	JO #
APRIL 2014	STANDARD

SEDIMENT BARRIERS

(NTS)

WESTECH ENG.	DETAIL NO. 6110



BARRIER SPACING FOR GENERAL APPLICATION

INSTALL PARALLEL TO CONTOURS AS FOLLOWS	
SLOPE RATIO	MAXIMUM SPACING ON SLOPE BETWEEN WATTLES
10.0% OR FLATTER	50' O.C.
10.1% TO 20.0%	25' O.C.
20.1% TO 30.0%	10' O.C.
30.1% OR STEEPER	5' O.C.

NOTES:

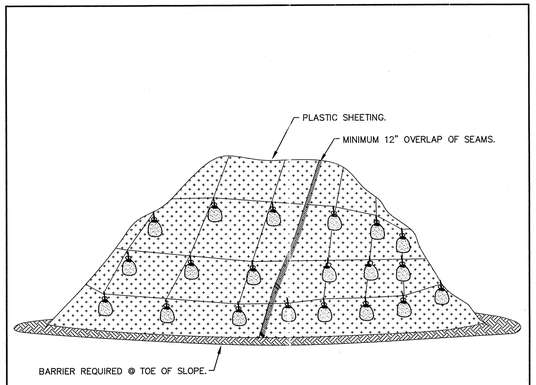
1. ALL MATERIAL SHALL CONFORM TO OSSC (ODOT/APWA) SPECIFICATIONS, CURRENT EDITION.
2. SEDIMENT BARRIERS SHALL BE MAINTAINED UNTIL UP–SLOPE AREA IS PERMANENTLY STABILIZED.
3. AT NO TIME SHALL SEDIMENT BE ALLOWED TO ACCUMULATE ABOVE THE TOP OF THE STRAW WATTLE.
4. NEW SEDIMENT BARRIERS SHALL BE INSTALLED UPHILL AS REQUIRED TO CONTROL SEDIMENT TRANSPORT.

LAST REVISION DATE:	JO #
APR 2026	STANDARD

COMPOST SOCK SEDIMENT BARRIER

(NTS)

WESTECH ENG.	DETAIL NO. 6120



STOCKPILE DETAIL

NOTES:

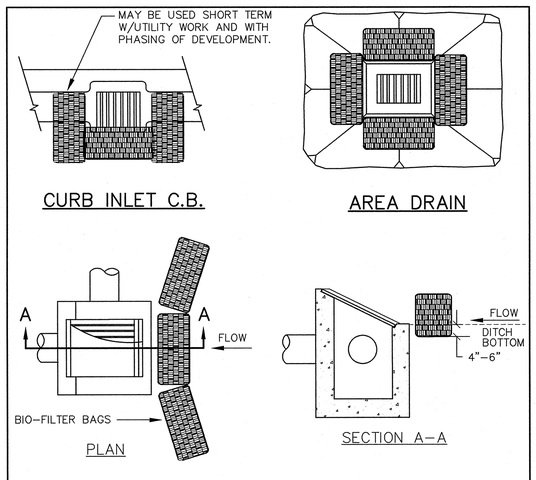
1. MINIMUM 12" OVERLAP OF ALL SEAMS REQUIRED.
2. SEDIMENT BARRIER REQUIRED @ TOE OF STOCK PILE.
3. COVERING MAINTAINED TIGHTLY IN PLACE BY USING SANDBAGS OR TIRES ON ROPES WITH A MAXIMUM 10' GRID SPACING IN ALL DIRECTIONS.
4. PLASTIC SHEETING TO EXTEND A MINIMUM OF 12" PAST THE BOTTOM OF THE PILE ONTO SURROUNDING GRADE ON ALL SIDES.

LAST REVISION DATE:	JO #
JAN 2019	STANDARD

STOCKPILE DETAIL

(NTS)

WESTECH ENG.	DETAIL NO. 6170



MAINTENANCE NOTES:

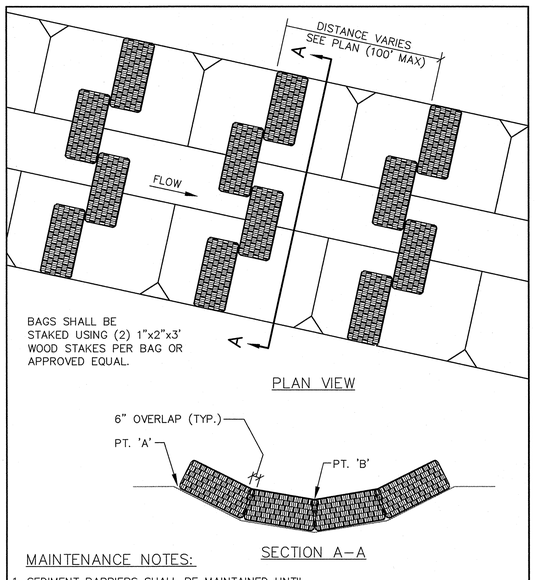
1. SEDIMENT BARRIERS SHALL BE MAINTAINED UNTIL UP–SLOPE AREA IS PERMANENTLY STABILIZED.
2. AT NO TIME SHALL MORE THAN ONE FOOT OF SEDIMENT BE ALLOWED TO ACCUMULATE BEHIND SEDIMENT FENCES OR BIOFILTER BAGS.
3. NEW SEDIMENT BARRIERS SHALL BE INSTALLED UPHILL AS REQUIRED TO CONTROL SEDIMENT TRANSPORT.

LAST REVISION DATE:	JO #
APRIL 2014	STANDARD

INLET SEDIMENT CONTROL

(NTS)

WESTECH ENG.	DETAIL NO. 6130



MAINTENANCE NOTES:

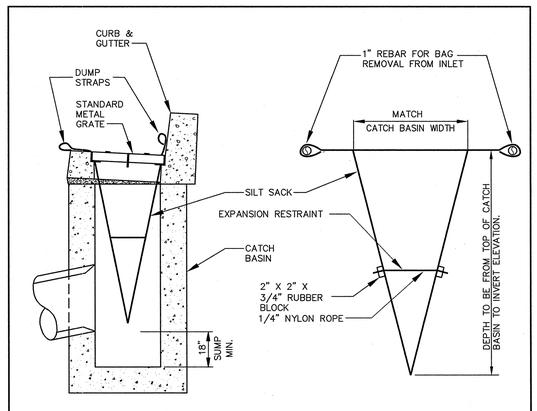
1. SEDIMENT BARRIERS SHALL BE MAINTAINED UNTIL UP–SLOPE AREA IS PERMANENTLY STABILIZED.
2. AT NO TIME SHALL MORE THAN ONE FOOT OF SEDIMENT BE ALLOWED TO ACCUMULATE BEHIND BIOFILTER BAGS.
3. NEW SEDIMENT BARRIERS SHALL BE INSTALLED UPHILL AS REQUIRED TO CONTROL SEDIMENT TRANSPORT.
4. PT. 'A' SHALL BE 6" MIN. HIGHER THAN PT. 'B'.

LAST REVISION DATE:	JO #
APRIL 2014	STANDARD

DITCH AND SWALE EROSION PROTECTION

(NTS)

WESTECH ENG.	DETAIL NO. 6140



NOTES:

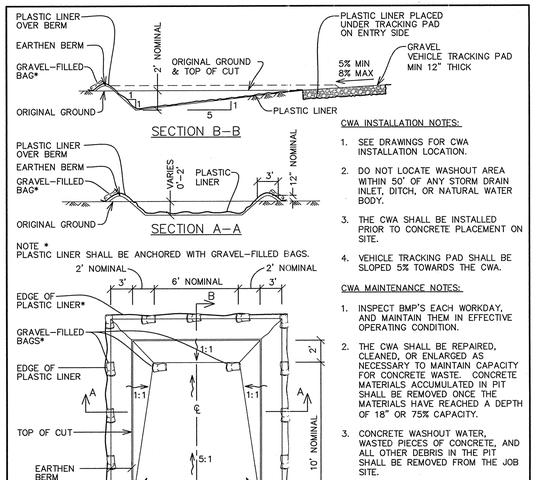
1. EMPTY SILT SACK AS NECESSARY.
2. SILTSACK SEDIMENT CONTROL DEVICE AS MANUFACTURED BY ACF ENVIRONMENTAL AND SUPPLIED BY ACF WEST (503) 771–5115 OR APPROVED EQUAL.

LAST REVISION DATE:	JO #
OCT 2002	STANDARD

SILTSACK INLET DETAIL

(NTS)

WESTECH ENG.	DETAIL NO. 6150



CWA INSTALLATION NOTES:

1. SEE DRAWINGS FOR CWA INSTALLATION LOCATION.
2. DO NOT LOCATE WASHOUT AREA WITHIN 50' OF ANY STORM DRAIN INLET, DITCH, OR NATURAL WATER BODY.
3. THE CWA SHALL BE INSTALLED PRIOR TO CONCRETE PLACEMENT ON SITE.
4. VEHICLE TRACKING PAD SHALL BE SLOPED 5% TOWARDS THE CWA.

CWA MAINTENANCE NOTES:

1. INSPECT BMP'S EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION.
2. THE CWA SHALL BE REPAIRED, CLEANED, OR ENLARGED AS NECESSARY TO MAINTAIN CAPACITY FOR CONCRETE WASTE. CONCRETE MATERIALS ACCUMULATED IN PIT SHALL BE REMOVED ONCE THE MATERIALS HAVE REACHED A DEPTH OF 18" OR 75% CAPACITY.
3. CONCRETE WASHOUT WATER, WASTED PIECES OF CONCRETE, AND ALL OTHER DEBRIS IN THE PIT SHALL BE REMOVED FROM THE JOB SITE.
4. THE CWA SHALL REMAIN IN PLACE UNTIL ALL CONCRETE FOR THE PROJECT IS PLACED.
5. WHEN THE CWA IS REMOVED, COVER THE DISTURBED AREA WITH TOP SOIL, SEED AND MULCH OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

LAST REVISION DATE:	JO #
MARCH 2026	STANDARD

TEMPORARY CONCRETE WASHOUT AREA (CWA) w/ PLASTIC LINER

(NTS)

WESTECH ENG.	DETAIL NO. WE6161

NO.	DATE	DESCRIPTION REVISIONS	BY
1			

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

DSN. CB
DRN. TMT
CKD. CB
DATE: MAY 2026

REGISTERED PROFESSIONAL ENGINEER
OREGON
JAN. 14, 1986
CHRISTOPHER J. BRAUN
86647PE
RENEWAL: 12/31/2027

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
3841 Fairview Industrial Dr. S.E., Suite 100, Salem, OR 97302
Phone: (503) 585–2474 Fax: (503) 585–3986
E–mail: westech@westech–eng.com

CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

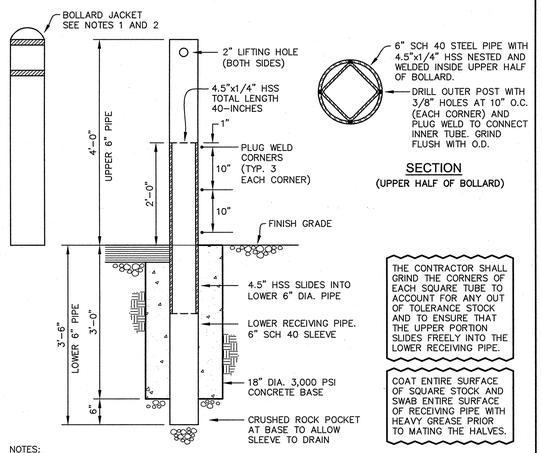
EROSION CONTROL DETAILS

DRAWING
C004
14 OF 223

JOB NUMBER
2599.3220.0

5/26/2026 12:13:59 PM
R:\Dwg\Aumsville City of\2025 WWTP Final Design 2599.3220.0\Civil\Plots\C002–4 EROS.dwg, (C004 tab)

CONTRACTOR SHALL COORDINATE WITH CITY FOR BOLLARD COLOR PRIOR TO ORDERING SLEEVE.



SECTION
(UPPER HALF OF BOLLARD)

THE CONTRACTOR SHALL GRIND THE CORNERS OF EACH SQUARE TUBE TO ACCOUNT FOR ANY OUT OF TOLERANCE STOCK AND TO ENSURE THAT THE UPPER PORTION SLIDES FREELY INTO THE LOWER RECEIVING PIPE.

COAT ENTIRE SURFACE OF SQUARE STOCK AND SWAB ENTIRE SURFACE OF RECEIVING PIPE WITH HEAVY GREASE PRIOR TO MATING THE HALVES.

NOTES:

1. PREFABRICATED BOLLARD SLEEVES SHALL BE DOME TOP SLEEVES FABRICATED FROM 1/4-INCH THICK HDPE PLASTIC WITH ULTRAVIOLET INHIBITORS TO RETARD CRACKING AND FADING. SLEEVES SHALL BE SAFETY YELLOW AND PROVIDED WITH TWO RED REFLECTORIZED BANDS FABRICATED INTO THE UPPER END. SLEEVES SHALL BE SIZED TO FIT TIGHTLY OVER THE STEEL POST CORE AND SHALL EXTEND TO COVER THE FULL HEIGHT OF THE CORE POST.
2. CONCRETE FOUNDATION SHALL BE HELD BELOW GRADE IN PAVED AREAS TO PERMIT PAVING UP TO THE POST. INSTALL BOLLARD JACKET AFTER PAVING IS COMPLETE TO PREVENT DAMAGE TO THE PRODUCT.

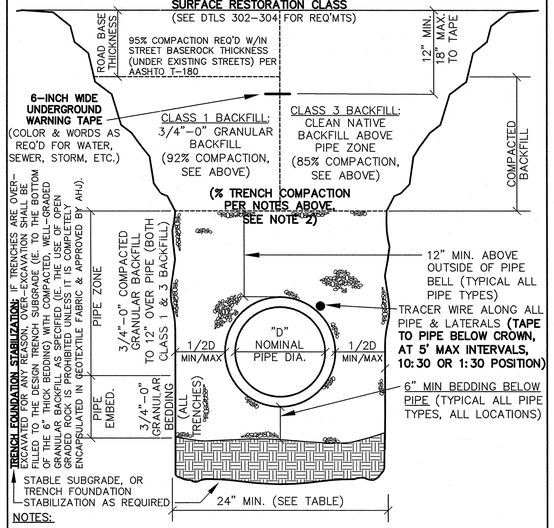
LAST REVISION DATE:	COPYRIGHT 1995 WESTECH ENGINEERING, INC.
MAY 2026	

6-INCH REMOVEABLE BOLLARD (GUARD POST)

(NTS)

AUMSVILLE, OR	DETAIL NO. 226

TRENCH COMPACTION: CLASS 1 GRANULAR BACKFILL – 92% OPTIMUM PER AASHTO T-180 (MODIFIED PROCTOR)
CLASS 3 NATIVE BACKFILL – 85% OPTIMUM PER AASHTO T-180



NOTES:

1. UNLESS OTHERWISE NOTED, (e.g. TRENCHES IN LAGOON DIKES), CLASS 1 GRANULAR BACKFILL REQUIRED UNDER ALL EXISTING OR FUTURE IMPROVED AREAS, INCLUDING STREETS, SHOULDERS, PARKING, SIDEWALKS, ETC. SEE DETAIL U3013 FOR BEDDING, PIPE ZONE, AND BACKFILL REQUIREMENTS FOR TRENCHES IN LAGOON DIKES.
2. SUBMIT WRITTEN BACKFILL COMPACTION TEST RESULTS PRIOR TO INSTALLING AC PAVEMENT OR CONCRETE SURFACE RESTORATION.
3. WHERE NEW PIPING IS IN SAME ALIGNMENT AS EXISTING PIPING, GRANULAR PIPE EMBEDMENT SHALL EXTEND TO A MIN. OF 6" BELOW THE NEW PIPING OR 6" BELOW EXISTING PIPING, WHICHEVER IS DEEPER.
4. SHORING NOTE, PIPE ZONE: FOR FLEXIBLE PIPE, BOTTOM OF TRENCH SHORING SHALL BE ABOVE PIPE SPRINGLINE PRIOR TO COMPACTING BACKFILL BELOW THE PIPE SPRINGLINE AND UNDER THE PIPE HAUNCHES (TO AVOID LOSS OF PIPE SIDE SUPPORT).

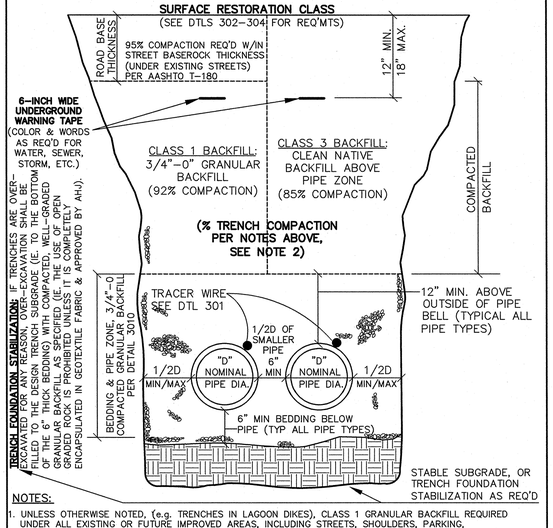
LAST REVISION DATE:	
MAR 2026	

TRENCH BACKFILL, BEDDING, AND PIPE ZONE

(NTS)

AUMSVILLE, OR	DETAIL NO. 301

TRENCH COMPACTION: CLASS 1 GRANULAR BACKFILL – 92% OPTIMUM PER AASHTO T-180 (MODIFIED PROCTOR)
CLASS 3 NATIVE BACKFILL – 85% OPTIMUM PER AASHTO T-180



NOTES:

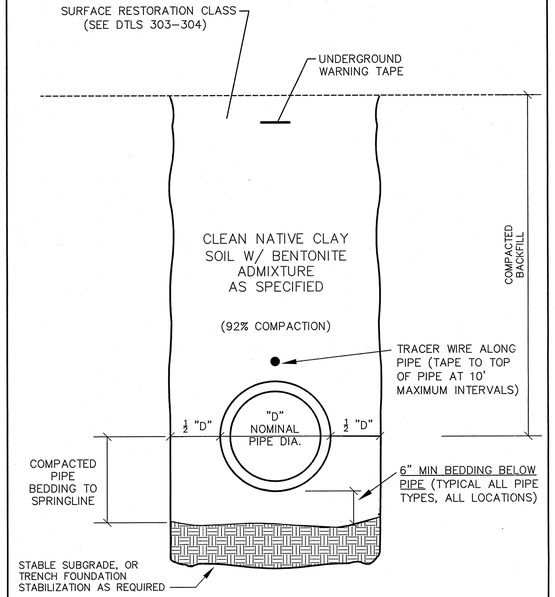
1. UNLESS OTHERWISE NOTED, (e.g. TRENCHES IN LAGOON DIKES), CLASS 1 GRANULAR BACKFILL REQUIRED UNDER ALL EXISTING OR FUTURE IMPROVED AREAS, INCLUDING STREETS, SHOULDERS, PARKING, SIDEWALKS, ETC. SEE DTL U3013 FOR BEDDING, PIPE ZONE, AND BACKFILL REQUIREMENTS FOR TRENCHES IN LAGOON DIKES.
2. SUBMIT WRITTEN BACKFILL COMPACTION TEST RESULTS PRIOR TO INSTALLING AC PAVEMENT OR CONCRETE SURFACE RESTORATION.
3. WHERE NEW PIPING IS IN SAME ALIGNMENT AS EXISTING PIPING, GRANULAR PIPE EMBEDMENT SHALL EXTEND TO A MIN. OF 6" BELOW THE NEW PIPING OR 6" BELOW EXISTING PIPING, WHICHEVER IS DEEPER.
4. SHORING NOTE, PIPE ZONE: FOR FLEXIBLE PIPE, BOTTOM OF TRENCH SHORING SHALL BE ABOVE PIPE SPRINGLINE PRIOR TO COMPACTING BACKFILL BELOW THE PIPE SPRINGLINE AND UNDER THE PIPE HAUNCHES (TO AVOID LOSS OF PIPE SIDE SUPPORT).
5. SEE PLANS FOR VERTICAL DESIGN OF PIPELINES. NOT ALL PIPES IN COMMON TRENCHES ARE AT THE SAME ELEVATION AS SHOWN ABOVE. VERTICAL DESIGN INFORMATION SHOWN ON THE PLAN SHEETS SHALL CONTROL.
6. POTABLE WATER PIPING SHALL NOT BE INSTALLED IN A COMMON TRENCH WITH ANY WASTEWATER, EFFLUENT, BYPASS, OR SLUDGE PIPE.

LAST REVISION DATE:	JO #
MAR 2026	2599.3220.0

MULTIPLE PIPE TRENCH BEDDING, PIPE ZONE & BACKFILL

(NTS)

WESTECH ENG.	DETAIL NO. 3011

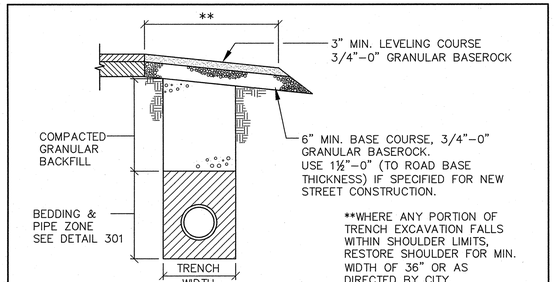


LAST REVISION DATE:	2599.3220.0
MAR 2026	

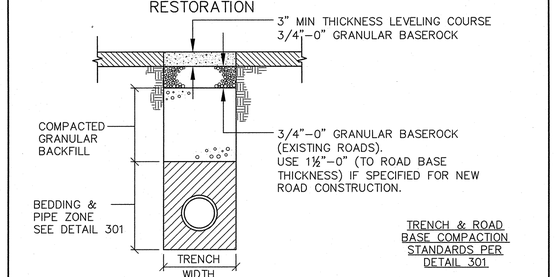
LAGOON DIKE TRENCH, BEDDING, BACKFILL & PIPE ZONE

(NTS)

AUMSVILLE, OR	DETAIL NO. U3013



CLASS 'C'
GRAVEL SHOULDER RESTORATION



CLASS 'D'
GRAVEL STREET RESTORATION

TRENCH & ROAD BASE COMPACTION STANDARDS PER DETAIL 301

NOTES:

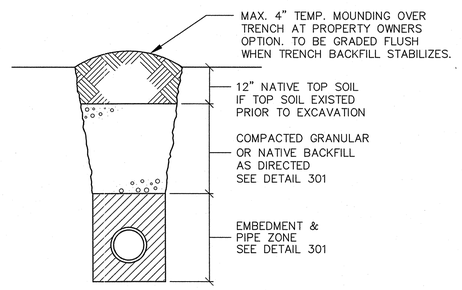
1. SHOULDER ROCK TO BE COMPACTED TO ROAD BASEROCK STANDARDS.

LAST REVISION DATE:	
FEB 2021	

GRAVEL SURFACE RESTORATION

(NTS)

AUMSVILLE, OR	DETAIL NO. 303



CLASS 'E'
UNIMPROVED & OPEN AREAS

TRENCH & ROAD BASE COMPACTION STANDARDS PER DETAIL 301

NOTES:

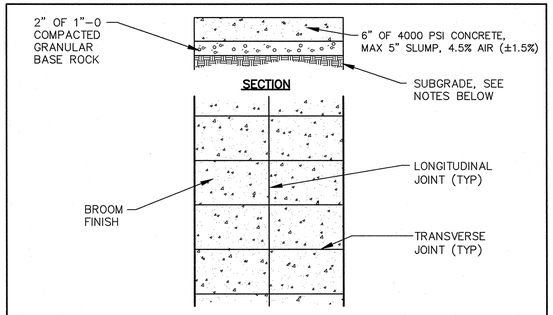
1. ANY TRENCH SETTLEMENT DURING WARRANTY PERIOD SHALL BE CORRECTED AT CONTRACTOR'S EXPENSE, INCLUDING SURFACE RESTORATION.

LAST REVISION DATE:	
FEB 2021	

NATIVE SURFACE RESTORATION

(NTS)

AUMSVILLE, OR	DETAIL NO. 304



CONCRETE PAVEMENT SECTION
NTS

NOTES:

1. PCC CONSTRUCTION SHALL CONFORM TO PORTLAND CEMENT ASSOCIATION (PCA) SPECIFICATIONS.
2. MAXIMUM LONGITUDINAL JOINT SPACING IS 15 FEET. TRANSVERSE JOINTS REQUIRED AT ALL CURB JOINTS OR A MAXIMUM OF 15 FEET.
3. LENGTH OF ANY PARTICULAR PANEL (BETWEEN JOINTS) SHALL NOT EXCEED 1.5 X WIDTH.
4. JOINT PATTERN TO BE APPROVED BY OWNER'S REPRESENTATIVE PRIOR TO POURING PCC.
4. DEPTH OF JOINTS SHALL BE 1/3 MINIMUM TO 1/2 MAX OF THE PAVEMENT THICKNESS.
5. ALL DESIGN SUBGRADES SHALL BE COMPACTED AND PROOF-ROLLED PRIOR TO PLACEMENT OF BASEROCK.
6. IF SUBGRADE FAILS THE PROOF-ROLL, SUBGRADE SHALL BE OVEREXCAVATED TO UNDISTURBED SOIL AND BACKFILLED WITH BASEROCK OVER MINIMUM 8.0-OZ. NONWOVEN FABRIC AS REQUIRED TO ALLOW COMPACTION OF UPPER (DESIGN) BASEROCK SECTION AND TO MAINTAIN STRUCTURAL INTEGRITY OF NATIVE SUBGRADE SOILS. TYPICAL MINIMUM OVEREXCAVATION REQUIRED IS 18-INCHES. NO RUBBER TIRED EQUIPMENT ALLOWED ON SUBGRADE FOLLOWING OVEREXCAVATION.

LAST REVISION DATE:	JO #
MAY 2024	2599.3220.0

CONCRETE PAVEMENT SECTION

(NTS)

WESTECH ENG.	DETAIL NO. 2392

NO.	DATE	DESCRIPTION	BY
1	5/27/2026	REMOVEABLE BOLLARD DETAIL	TMT

REVISIONS

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

DSN. CB
DRN. TMT
CKD. CB
DATE: MAY 2026

REGISTERED PROFESSIONAL ENGINEER
OREGON
JAN. 14, 2000
CHRISTOPHER J. BRUSATO
RENEWS: 12/31/2027

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
3841 Fairview Industrial Dr. S.E., Suite 100, Salem, OR 97302
Phone: (503) 585-2474 Fax: (503) 585-3986
E-mail: westech@westech-eng.com

CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

TYPICAL CIVIL DETAILS

DRAWING
C005
15 OF 223

JOB NUMBER
2599.3220.0

5/27/2026 3:31:54 PM
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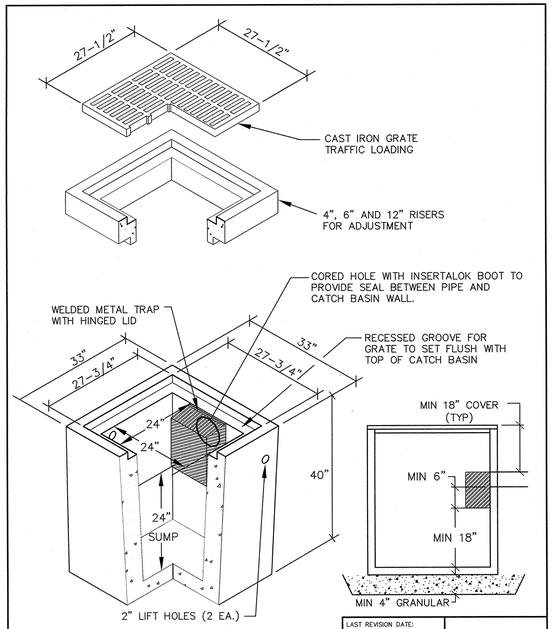


NOTES:

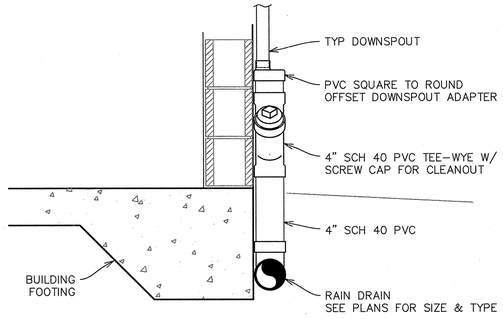
1. SEE CONSTRUCTION DRAWINGS FOR PIPE SIZE, LOCATION AND INVERT ELEVATION.
2. CONCRETE SHALL BE 4000 PSI @ 28 DAYS.
3. SET CB SQUARE WITH BUILDINGS OR WITH EDGE OF PARKING LOT, ALLEY OR DRIVEWAY WHEREIN IT LIES.
4. ADJUST PAVING SO WATER FLOWS TO CB WITH NO PONDING.

LAST REVISION DATE:	
MAR 2024	

PARKING LOT CATCH BASIN or PUBLIC ALLEY CATCH BASIN (PRECAST CONCRETE)

(NTS)

AUMSVILLE, OR	DETAIL NO. 315



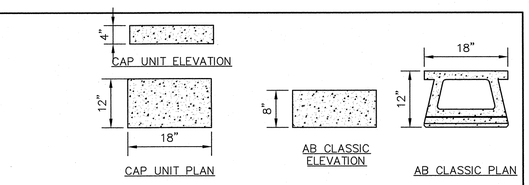
RAIN DRAIN DOWNSPOUT PIPING DETAIL

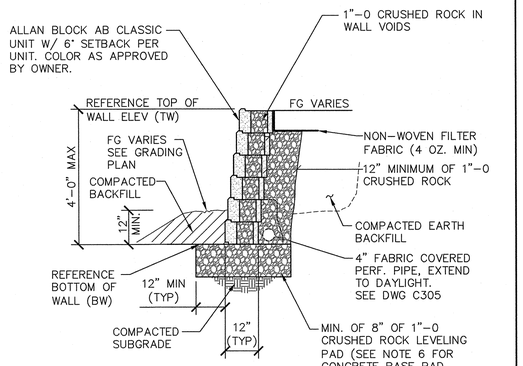
N.T.S.

1 / C006

RETAINING WALL NOTES:

1. Segmental Retaining Wall (SRW) concrete units shall be the standard color, rough face finish and conform to the requirements of ASTM C-90, ASTM C-140 and ASTM C-145. **Owner to select color from samples submitted by Contractor.**
2. Segmental concrete block units shall conform to the Allan Block® retaining wall system, manufactured by Allan Block® Corporation, or an approved alternate and conform to the requirements of ASTM C-90. The wall design is based upon **Allan Block® AB Classic units (8"H x 18"W x 12D"; 75 lbs/unit.).**
3. The Allan Block retaining wall, or approved equal, shall be constructed per manufacturer specifications and approved construction drawings, unless modified herein.
4. This SRW design is based upon the blocks specified above. The Contractor, may, at no additional cost to the owner, submit SRW design and shop drawings for an alternate SRW system for approval by the Owner's representative. The shop drawings shall include design calculations stamped by a professional engineer registered in the State of Oregon. Special inspection requirements, as specified herein, still apply to the substitute design. If the alternate wall system is approved, the Contractor shall be responsible for revising the block layout as necessary to address any differences in the SRW block dimensions.
5. The Contractor shall protect from damage, store and handle all materials in accordance with manufacturers recommendations and in a manner to prevent deterioration or damage due to moisture, temperature changes, Ultraviolet (UV) degradation, contaminants, corrosion, breaking, chipping or other causes. Damaged material shall not be incorporated into the segmental retaining wall.
6. Crushed rock leveling pad shall be placed on top of compacted subgrade (except where concrete base pad/footing is required on the drawings). Granular leveling pad shall be placed and compacted to a minimum of 92% of maximum dry density per AASHTO T-180 (Modified Proctor). Leveling pad thickness shall be a minimum of 8 inches as measured in place. An acceptable alternative is a 5" concrete (3300 psi) base pad on compacted subgrade.
7. Maximum particle size for wall backfill shall not exceed 2 inches in diameter.
8. The plasticity index (PI) for the backfill material used in the reinforced wall backfill shall not exceed 30 and the liquid limit shall not exceed 40, as per ASTM D-4318. The owner does not guarantee that all site soils meet these criteria.
9. Backfill shall be placed and compacted in lifts not to exceed a loose depth thickness of 8 inches for hand operated vibratory equipment and 12 inches for walk behind, self-propelled vibratory equipment. Backfill shall be compacted to 92% of AASHTO T-180 compaction standard.
10. Drainage backfill behind wall and voids in the SRW units shall consist of 1"-0 crushed rock containing no more than 5% passing No. 200 sieve. Provide 4 oz minimum drainage fabric above drain rock (12" minimum lap at any joints).
11. Wall drainpipe shall be fabric covered (3 oz min) HDPE slotted pipe conforming to ASTM F-405 (ADS Sock or approved equivalent). Wall drain pipe shall be connected to solid-wall drain pipe(s) draining to daylight or to an approved storm drain system.
12. The overall tolerance for the constructed face of wall relative to the vertical wall design or batter shall not exceed ± 1.25 inches maximum over a 10 foot distance; 3 inches maximum.
13. Cap units shall be secured in place using a flexible exterior grade masonry sealant.
14. The wall drainage system specified is intended to serve the Segmental Retaining Wall (SRW) in its final constructed condition in conjunction with the final site improvements in their final constructed condition. During construction, the Contractor shall manage site drainage and divert stormwater away from the wall structure as necessary to prevent overloading of wall drainage reinforced systems.
15. At the end of the each day's operation, the Contractor shall slope the last level of backfill away from the wall face to direct runoff of rainwater away from the wall face. In addition, the Contractor shall not allow surface runoff from adjacent areas to enter the wall construction site.
16. Inspection is required for construction of this segmental block retaining wall (SRW). Inspection to be arranged and scheduled by Contractor as specified.
17. Contractor shall insure all inspections are performed prior to proceeding with the next phase of work. At a minimum inspections shall include the following items: Observation that the wall subgrade bearing capacity meets the specified soil bearing capacity, or a minimum of 2,000 psf, whichever is greater. Observations of the compacted crushed rock leveling pads and wall drainage system. Observation of the wall batter. Soil testing results for plasticity index and liquid limit values for wall backfill material. Compaction results for the wall backfill.





LAST REVISION DATE:	JO #
MAY 2026	2599.3220.0

SEGMENTAL RETAINING WALL (NON-REINFORCED)

(NTS)

WESTECH ENG.	DETAIL NO. U8310

NO.	DATE	DESCRIPTION	BY
1		REVISIONS	

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

DSN. CB
DRN. TMT
CKD. CB
DATE: MAY 2026

REGISTERED PROFESSIONAL ENGINEER
OREGON JAN. 14, 2000
CHRISTOPHER J. BUDICH
78473PE
RENEWS: 12/31/2027

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
3841 Fairview Industrial Dr. S.E., Suite 100, Salem, OR 97302
Phone: (503) 585-2474 Fax: (503) 585-3986
E-mail: westech@westech-eng.com

CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

TYPICAL CIVIL DETAILS

DRAWING C006
16 OF 223

JOB NUMBER 2599.3220.0

5/26/2026 12:14:05 PM
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NOTE: PER ORS 92.044(7), MANHOLE MUST BE SET 1' MINIMUM CLEAR FROM ANY SURVEY MONUMENT

PROVIDE GASKETED PVC CAP ON ALL STUBS FOR FUTURE CONNECTION SHOWN ON DWGS (EXTEND PIPE 2' MIN BEYOND MH WALL), SLOPE PER DWGS.

TYP DROP THRU MH: 0.1' MIN STRAIGHT, 0.2' MIN CORNERS, SMALLER INLET PIPES TO MATCH LARGER OUTLET CROWN

INVERT ELEVATIONS PER DRAWINGS

O-RING or BUTYL RESIN MASTIC AS SPEC'D

OFFSET JOINT

STEPS, VERIFY LOCATION TO AVOID CONFLICTS WITH INSIDE OR OUTSIDE DROPS

VACUUM TESTING OF EXTG MANHOLES REQUIRED AFTER NEW CONNECTIONS. SEAL MH AS REQUIRED TO PASS.

SLOPE SHELVES 1:12 TO DRAIN

BUTYL RESIN MASTIC

ALL INSIDE JOINTS & PENETRATIONS SHALL BE GROUTED SMOOTH AFTER MH ASSEMBLY, SO AS NOT TO RETAIN DEBRIS OR SEDIMENT (TYP ALL).

KEYLOCK JOINT

ALL SS MHs CLEAN & INSTALL 9" WIDE EXTERNAL MASTIC WRAP AT ALL JOINTS & PICKHOLES (TRELLEBORG OR BESTWRAP), SECURE IN PLACE W/ 3 LAYERS OF PLASTIC PALLET WRAP. CONTACT PUBLIC WORKS FOR INSPECTION BEFORE BACKFILLING.

PLAN

MANHOLE FRAME & COVER, SET PER DTL 407

MANPAN MH LID INSERT AS REQ'D (SEE DTL 407)

SET FRAME IN NON-SHRINK GROUT

PAVED SURFACE

UNPAVED

GRADE RINGS (VARIABLE) 18" MAX.-TOP OF CONE TO RIM

MANHOLE BARREL JOINT OPTIONS & SEALING

SLOPE OF PRECAST ECCENTRIC CONE SHALL FACE DOWN GRADE. LOCATE STEPS ON UPSTREAM SIDE OF MANHOLE.

30" MAX, 8" MIN, 12" TYP

MASTIC WRAP AS NOTED

FLAT TOP MH'S SHALL BE USED FOR ALL MH'S LESS THAN 6' RIM TO INVERT, OR WITH TOP OF PIPE CONNECTIONS WITHIN 5 FEET OF RIM ELEV

48" INSIDE DIA. MIN

WALL THICKNESS PER ASTM C-478

ALL OPENINGS CORED DRILLED.

CHANNEL DEPTH= 2/3 PIPE DIA. MIN.

16" MAX

ALL PIPE PENETRATIONS ON SANITARY SEWER MANHOLES TO HAVE RUBBER BOOTS.

ROUTE TONING WIRE UP OUTSIDE OF MH AS SHOWN (TYP ALL PIPES).

FLOW

18" MAX

PRECAST BASE THICKNESS PER ASTM C-478

6" MIN COMPACTED GRANULAR BEDDING

STABLE SUBGRADE

SECTION A-A

NOTES:
1. PRECAST SECTIONS SHALL MEET OR EXCEED ASTM C-478. ALL CHANNELS & GROUTING TO BE SMOOTH.
2. WATERTIGHT O-RING OR MASTIC JOINTS REQUIRED, W/EXTERNAL SEAL AT BARREL JOINTS & PICKHOLES.
3. STEPS TO BE POLYPROPYLENE PLASTIC WITH GRADE 60 REINFORCING ROD. ADD STEPS TO EXTG CONNECTION MH IF EXTG STEPS ARE ABSENT.

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SEPT 2024	

STANDARD MANHOLE FOR 21" PIPE AND SMALLER (SEWER & STORM)

(NTS)

AUMSVILLE, OR | DETAIL NO. 401

NOTE: PER ORS 92.044(7), MANHOLE MUST BE SET 1' MINIMUM CLEAR FROM ANY SURVEY MONUMENT

PROVIDE GASKETED PVC CAP ON ALL STUBS FOR FUTURE CONNECTION SHOWN ON DWGS (EXTEND PIPE 2' MIN BEYOND MH WALL), SLOPE PER DWGS.

TYP DROP THRU MH: 0.1' MIN STRAIGHT, 0.2' MIN CORNERS, SMALLER INLET PIPES TO MATCH LARGER OUTLET CROWN

INVERT ELEVATIONS PER DRAWINGS

O-RING or BUTYL RESIN MASTIC AS SPEC'D

OFFSET JOINT

STEPS, VERIFY LOCATION TO AVOID CONFLICTS WITH INSIDE OR OUTSIDE DROPS

VACUUM TESTING OF EXTG MANHOLES REQUIRED AFTER NEW CONNECTIONS. SEAL MH AS REQUIRED TO PASS.

SLOPE SHELVES 1:12 TO DRAIN

BUTYL RESIN MASTIC

ALL INSIDE JOINTS & PENETRATIONS SHALL BE GROUTED SMOOTH AFTER MH ASSEMBLY, SO AS NOT TO RETAIN DEBRIS OR SEDIMENT (TYP ALL).

KEYLOCK JOINT

ALL SS MHs CLEAN & INSTALL 9" WIDE EXTERNAL MASTIC WRAP AT ALL JOINTS & PICKHOLES (TRELLEBORG OR BESTWRAP), SECURE IN PLACE W/ 3 LAYERS OF PLASTIC PALLET WRAP. CONTACT PUBLIC WORKS FOR INSPECTION BEFORE BACKFILLING.

PLAN

MANHOLE FRAME & COVER, SET PER DTL 407

MANPAN MH LID INSERT AS REQ'D (SEE DTL 407)

SET FRAME IN NON-SHRINK GROUT

PAVED SURFACE

UNPAVED

MANHOLE BARREL JOINT OPTIONS & SEALING

MASTIC WRAP AS SPEC'D

30" MAX, 12" TYP

GRADE RINGS (VARIABLE) 18" MAX.-TOP OF FLAT TOP TO RIM

FLAT TOP SECTION, 8" MIN THICKNESS

48" INSIDE DIA. MIN

WALL THICKNESS PER ASTM C-478

ALL OPENINGS CORED DRILLED.

CHANNEL DEPTH= 2/3 PIPE DIA. MIN.

16" MAX

ALL PIPE PENETRATIONS ON SANITARY SEWER MANHOLES TO HAVE RUBBER BOOTS AS SPECIFIED.

ROUTE TONING WIRE UP OUTSIDE OF MH AS SHOWN (TYP ALL PIPES).

FLOW

18" MAX

PRECAST BASE THICKNESS PER ASTM C-478

6" MIN COMPACTED GRANULAR BEDDING

STABLE SUBGRADE

SECTION A-A

NOTES:
1. PRECAST SECTIONS SHALL MEET OR EXCEED ASTM C-478. ALL CHANNELS & GROUTING TO BE SMOOTH.
2. WATERTIGHT O-RING OR MASTIC JOINTS REQUIRED, W/EXTERNAL SEAL AT BARREL JOINTS & PICKHOLES.
3. STEPS TO BE POLYPROPYLENE PLASTIC WITH GRADE 60 REINFORCING ROD. ADD STEPS TO EXTG CONNECTION MH IF EXTG STEPS ARE ABSENT.

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FLAT TOP MANHOLE FOR 21" PIPE AND SMALLER (SEWER & STORM)

(NTS)

AUMSVILLE, OR | DETAIL NO. 402

NOTE: PER ORS 92.044(7), MANHOLE MUST BE SET 1' MINIMUM CLEAR FROM ANY SURVEY MONUMENT

PROVIDE GASKETED PVC CAP ON ALL STUBS FOR FUTURE CONNECTION SHOWN ON DWGS (EXTEND PIPE 2' MIN BEYOND MH WALL), SLOPE PER DWGS. (THIS STUB NOT SHOWN BELOW)

TYP DROP THRU MH: 0.1' MIN STRAIGHT, 0.2' MIN CORNERS, SMALLER INLET PIPES TO MATCH LARGER OUTLET CROWN

O-RING or BUTYL RESIN MASTIC AS SPEC'D

OFFSET JOINT

STEPS, VERIFY LOCATION TO AVOID CONFLICTS WITH INSIDE OR OUTSIDE DROPS

VACUUM TESTING OF EXTG MANHOLES REQUIRED AFTER NEW CONNECTIONS. SEAL MH AS REQUIRED TO PASS.

SLOPE SHELVES 1:12 TO DRAIN

BUTYL RESIN MASTIC

ALL INSIDE JOINTS & PENETRATIONS SHALL BE GROUTED SMOOTH AFTER MH ASSEMBLY, SO AS NOT TO RETAIN DEBRIS OR SEDIMENT (TYP ALL).

KEYLOCK JOINT

ALL SS MHs CLEAN & INSTALL 9" WIDE EXTERNAL MASTIC WRAP AT ALL JOINTS & PICKHOLES (TRELLEBORG OR BESTWRAP), SECURE IN PLACE W/ 3 LAYERS OF PLASTIC PALLET WRAP. CONTACT PUBLIC WORKS FOR INSPECTION BEFORE BACKFILLING.

PLAN

INVERT ELEVATIONS PER DWGS

MANHOLE FRAME & COVER, SET PER DTL 407

MANPAN MH LID INSERT AS REQ'D (SEE DTL 407)

SET FRAME IN NON-SHRINK GROUT AND GRADE RINGS

PAVED SURFACE

UNPAVED

MANHOLE BARREL JOINT OPTIONS & SEALING

MASTIC WRAP AS NOTED

30" MAX, 12" TYP

GRADE RINGS (VARIABLE) 18" MAX.-TOP OF FLAT TOP TO RIM

FLAT TOP SECTION, 8" MIN THICKNESS

60" INSIDE DIA. MIN

FOR MANHOLES DEEPER THAN 11 FT. RIM TO INVERT, SEE DETAIL 403A

ALL OPENINGS CORED DRILLED

12" MIN.

WALL THICKNESS PER ASTM C-478

ALL PIPE PENETRATIONS ON SANITARY SEWER MANHOLES TO HAVE RUBBER BOOTS.

CHANNEL DEPTH = 2/3 PIPE DIA. MIN.

18" MAX

ROUTE TONING WIRE UP OUTSIDE OF MH AS SHOWN (TYP ALL PIPES).

PRECAST BASE THICKNESS PER ASTM C-478

6" MIN COMPACTED GRANULAR BEDDING

STABLE SUBGRADE

SECTION A-A

NOTES:
1. PRECAST SECTIONS SHALL MEET OR EXCEED ASTM C-478. ALL CHANNELS & GROUTING TO BE SMOOTH.
2. WATERTIGHT O-RING OR MASTIC JOINTS REQUIRED, W/EXTERNAL SEAL AT BARREL JOINTS & PICKHOLES.
3. STEPS TO BE POLYPROPYLENE PLASTIC WITH GRADE 60 REINFORCING ROD. ADD STEPS TO EXTG CONNECTION MH IF EXTG STEPS ARE ABSENT.

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SEPT 2024	

MANHOLE FOR 24" AND 27" PIPE (SEWER & STORM)

(NTS)

AUMSVILLE, OR | DETAIL NO. 403

SANITARY STORM

24 3/4"

7/8"

22"

8 EA.-1/2" RIBS EQUALLY SPACED

27"

25"

INSTALLATION OF FRAME & MH INSERT TO CONFORM WITH DETAIL 407

1/2"

SUBURBAN FRAME 3" 3"

STANDARD FRAME 7" 3"

23"

24 1/2"

31"

NOTES:
1. COVER AND FRAME SHALL BE GRAY CAST IRON PER ASTM A-48, CLASS 30.
2. COVER AND FRAME TO BE MACHINED TO PROVIDE A TRUE BEARING SURFACE ALL AROUND.
3. NOTCH LID FOR LIFTING HOOK.
4. NON-LOCKDOWN STYLE TYPICAL. BOLTDOWN/LOCKDOWN LIDS ARE PROHIBITED EXCEPT WHERE EXPLICITLY NOTED ON THE APPROVED DWGS. BOLTDOWN/LOCKDOWN LIDS WHICH ARE INSTALLED WHERE NOT NOTED/SPECIFIED SHALL BE REPLACED BY CONTACTOR AT NO ADDED COST TO CITY.
5. ADJUSTABLE MANHOLE FRAME BY RIM RISER OR APPROVED EQUAL MAY BE USED. SEE DTL 405A.

LAST REVISION DATE:	
SEPT 2024	

MANHOLE FRAME AND COVER (STANDARD AND SUBURBAN)

(NTS)

AUMSVILLE, OR | DETAIL NO. 405

CLEANOUT COVERS: ALL SEWER CLEANOUT LIDS TO READ "SEWER"
ALL STORM CLEANOUT LIDS TO READ "STORM" OR "C/O".

24" SQUARE CONCRETE PAD OR AC PAVEMENT OUTSIDE OF PAVED AREAS. SLOPE AWAY FROM CLEANOUT.

C.O.

90° C.O. FRAME & COVER

1/2"

7"

WING NUT PIPE PLUG W/SHOULDERS (CHERNE STYLE)

VARIES

ROUTE TONING WIRE UP INTO CLEANOUT BOX AS SHOWN

45° BEND

WYE (GASKETED FOR 3034 PVC RISER)

PIPE TO BEAR ON COMPACTED GRANULAR BACKFILL

PVC SPIGOT PLUG IN GASKETED WYE SOCKET

13-1/2"

12"

1-1/4"

20"

6" MIN COMPACTED GRANULAR BEDDING

STABLE SUBGRADE

HANDLE

13-1/4"

1-1/4"

SECTION A - A

CLEANOUT FRAME & COVER

NOTES:
1. USE INLAND FOUNDRY MODEL 240 FRAME & COVER IN ALL AREAS.
2. COVER AND FRAME SHALL BE GRAY CAST IRON ASTM A-48, CLASS 30.
3. COVER AND FRAME TO BE MACHINED TO A TRUE BEARING ALL AROUND.

ALL CONCRETE SHALL BE 3300 PSI @ 28 DAYS, MAX 5" SLUMP, 4.5% AIR (±1.5%).

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JAN 2026	

MAINLINE CLEANOUT

(NTS)

AUMSVILLE, OR | DETAIL NO. 411

BLIND FLANGE W/ STAINLESS STEEL NUTS & BOLTS

SET FRAME IN NON-SHRINK GROUT

24" CAST IRON MANHOLE FRAME AND COVER. (16-HOLE LID)

4" MIN.

PVMT.

UNPAVED

GRADE RINGS (VARIABLE)

CL 52 D.I. PIPE SPOOL (FLxPE). MATCH PIPE LINE SIZE.

12" MIN.

24" DIA. CONC. T & G PIPE (C-76,REINF., CLASS IV)

6" THICK (MIN) CONCRETE 3000 PSI BASE

COMPACTED TRENCH BACKFILL

RETAINER GLAND CAST INTO BASE

PIPELINE

D.I. MJ TEE W/ RETAINER GLANDS

LAST REVISION DATE:	JO #
APRIL 2026	2599.3220.0

SLUDGE LINE CLEANING PORT

(NTS)

AUMSVILLE, OR | DETAIL NO. 4500

WIDTH AS REQ'D FOR ACTUAL GENSET/TANK PROVIDED

24" CLEAR

RADIATOR END OF GENERATOR

GENSET OR TANK OUTLINE (LARGER OF BODY/TOP OR BASE TANK FOOTPRINT), OFFSET ON SLAB AS SHOWN

304 SS ANCHOR BOLTS, SIZE & ø TO MATCH SKID OR TANK. EMBED = 5¾" TYP MIN, UNLESS GREATER REQUIRED BY BOLT SEISMIC CALCS BY GENSET SUPPLIER. IF EPOXY THREADED ANCHOR RODS ARE PROPOSED, USE SIMPSON SET 3-G HIGH-STRENGTH EPOXY ADHESIVE IN CLEAN HOLES 1/8" LARGER THAN ø OF BOLTS OR THREADED RODS. PROVIDE DOUBLE NUTS ON TOP OF THREADED ANCHOR RODS.

6" TYPICAL, RADIATOR END OF GENERATOR SKID/TANK. PROVIDE CLEARANCE SHOWN ON ALL SIDES OF SOUND/WEATHER ENCLOSURE WITH MAINT. ACCESS DOORS (ALL EXCEPT RADIATOR END).

3/4" CHAMFER ALL AROUND, TYP. ALL EXPOSED CORNERS & TOP EDGES

PLAN

#4 REBAR AROUND PERIMETER OF FOOTING, 24"x24" CORNER BARS (3" CLR FROM BASEROCK)

SET GENSET SLAB 1" MIN ABOVE ADJACENT PAVEMENT GRADE ON HIGH SIDE FOR DRAINAGE. EXPANSION JOINT TYP ONLY WHERE ABUTTING CONC. SLABS OR STRUCTURES. SAWCUT EXTG AC WHERE REQUIRED.

LENGTH AS REQ'D FOR ACTUAL GENSET/TANK PROVIDED

3" CLR (TYP ALL SIDES)

12" MIN

#5 REBAR @ 12" OC EA. WAY

3" CLR

PAVED

18" MIN

UNPAVED

12" MIN

12"

THICKEN AS REQ'D FOR 12" EMB. OR 18" THICKNESS, WHICHEVER IS GREATER

UNDISTURBED SUBGRADE

12" MIN OF 3/4"-0" GRANULAR BASEROCK, COMPACT TO 95% T-180

SECTION

NTS

NOTES:
1. GRADE 60 REBAR, SIZE & SPACING AS SHOWN.
2. ALL CONCRETE SHALL BE BATCH MIXED, 3300 PSI @ 28 DAYS, MAX 5" SLUMP, 4.5% AIR (±1.5%).
3. TOP OF BASE SLAB TO BE LEVEL. SEE PLAN FOR GENERAL LOCATION & ORIENTATION.
4. SLOPE GROUND/PAVING TO DRAIN AROUND OR AWAY FROM GENERATOR SLAB (NO DRAINAGE ACROSS SLAB).
5. UNLESS OTHERWISE SHOWN ON PLANS, SET BASE SLAB 3-INCHES ABOVE GRADE IN UNPAVED AREAS.
6. VERIFY STUB-UP LOCATIONS PER MANUF. SHOP DWGS. SEE ELECTRICAL PLANS FOR CONDUIT SIZE/CONFIG.
7. VERIFY CODE CLEARANCES AROUND GENSET (TYP 3'6" FROM BREAKER PANEL SIDE, 3' ON ALL OTHER SIDES).

LAST REVISION DATE:	JO #
MAY 2026	2599.3220.0

CONCRETE BASE SLAB FOR OUTDOOR GENERATOR, WITH SOUND/WEATHER ENCLOSURE

WESTECH ENG. | 8002

NO.	DATE	DESCRIPTION	BY
1		REVISIONS	

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

DSN. CB
DRN. TMT
CKD. CB
DATE: MAY 2026

REGISTERED PROFESSIONAL ENGINEER OREGON JULY 14, 2006 CHRISTOPHER T. BRUHATOVE 84473PE
RENEWS: 12/31/2027

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
3841 Fairview Industrial Dr. S.E., Suite 100, Salem, OR 97302
Phone: (503) 585-2474 Fax: (503) 585-3986
E-mail: westech@westech-eng.com

CITY OF AUMSVILLE, OREGON

WASTEWATER TREATMENT PLANT IMPROVEMENTS

TYPICAL CIVIL DETAILS

DRAWING C007
17 OF 223

JOB NUMBER 2599.3220.0

5/26/2026 12:14:07 PM
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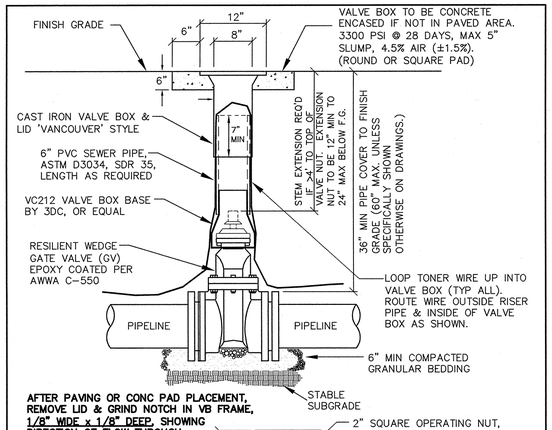


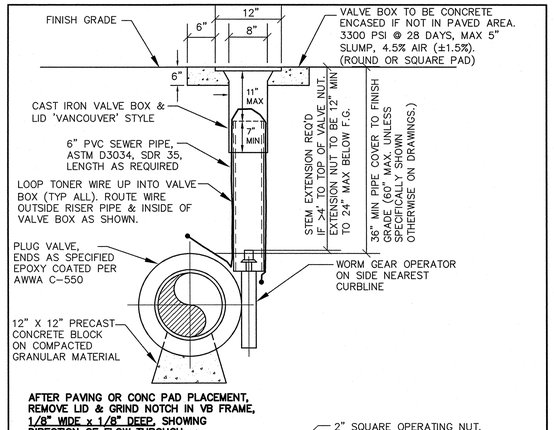
NOTES:
1. DI BODY GV SHALL CONFORM TO AWWA C-509 OR C-515.
2. VALVE BOXES SHALL BE PLUMB AND CENTERED DIRECTLY OVER THE VALVE NUT, INSTALLED ON VALVE BOX BASE AS SHOWN.
3. VALVE BOX TOP SHALL BE ADJUSTED TO FINISHED GRADE.
4. PVC SHALL BE ONE CONTINUOUS PIECE, NO BELLS OR COUPLERS.
5. VALVE BOX LIDS ON PRESSURE SEWERS TO READ "S" OR "SEWER".
6. COMPLETELY CLEAN OUT ALL VALVE BOX COVER PICKHOLES PRIOR TO REQUESTING FINAL INSPECTION.

LAST REVISION DATE:	JO #
JULY 2024	STANDARD

GATE VALVE AND VALVE BOX DETAIL

(NTS)

AUMSVILLE, OR	DETAIL NO. 501



NOTES:
1. VALVE BOXES SHALL BE PLUMB AND CENTERED DIRECTLY OVER THE VALVE NUT.
2. VALVE BOX TOP SHALL BE ADJUSTED TO FINISHED GRADE.
3. PVC SHALL BE ONE CONTINUOUS PIECE, NO BELLS OR COUPLERS.
4. COMPLETELY CLEAN OUT ALL VALVE BOX COVER PICKHOLES PRIOR TO REQUESTING FINAL INSPECTION.

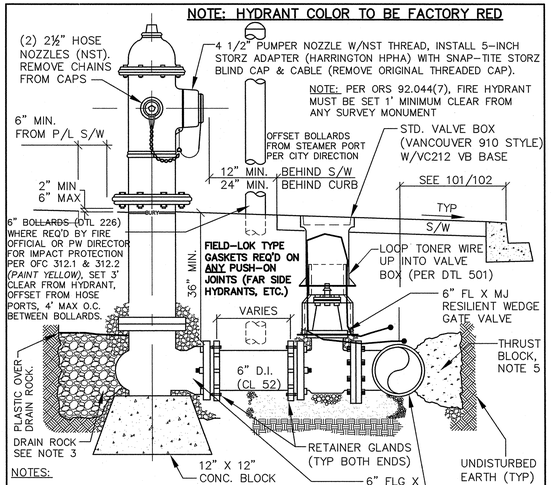
LAST REVISION DATE:	JO #
MARCH 2026	2599.3220.0

PLUG VALVE AND VALVE BOX DETAILS

(NTS)

AUMSVILLE, OR	DETAIL NO. U502

NOTE: HYDRANT COLOR TO BE FACTORY RED



NOTES:
1. HYDRANTS TO BE MUELLER SUPER CENTURION 250, MODEL A423, WITH FULL SIZE (5¼") FOOT VALVE.
2. **ALL FITTINGS IN CONTACT WITH CONCRETE SHALL BE WRAPPED IN PLASTIC.** HYDRANT DRAIN HOLES TO REMAIN OPEN TO DRAIN ROCK AND OPERATIONAL.
3. 1-1/2" TO 3/4" CLEAN DRAIN ROCK SHALL BE PLACED TO A MIN. OF 6" ABOVE DRAIN OUTLET.
4. WHERE PLANTER STRIP EXISTS, HYDRANT SHALL BE PLACED SO FRONT PORT IS A MIN. OF 24" BEHIND FACE OF CURB.
5. THRUST BLOCK BEHIND STANDARD 6" FIRE HYDRANT TEE SHALL HAVE MIN. 3.7 SQ. FT. BEARING AREA.
6. RESTRAIN ALL JOINTS ON ALL HYDRANT LEADS. RETAINER GLANDS SHALL BE USED IN LEIU OF CONCRETE THRUST BLOCK BEHIND HYDRANT.
7. ALL HYDRANTS SHALL BE SET PLUMB.
8. FOR HYDRANT LEADS LONGER THAN 30', AN ADDITIONAL GATE VALVE SHALL BE PROVIDED WITHIN 3 FT. OF THE HYDRANT.
9. PAINT CURB (TOP & FACE) FOR 10 FEET MIN EACH WAY FROM HYDRANT (GREATER CURB PAINTING DISTANCE MAY BE REQUIRED FOR HYDRANTS SERVING FDCs, AS DIRECTED BY FIRE CODE OFFICIAL (PAINT COLOR TO BE AS DIRECTED BY CITY).
10. INSTALL REFLECTIVE BLUE TRAFFIC MARKER @ STREET CENTERLINE, EACH HYDRANT.

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SEPT 2024	

STANDARD FIRE HYDRANT ASSEMBLY

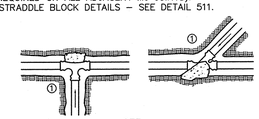
(NTS)

AUMSVILLE, OR	DETAIL NO. 503

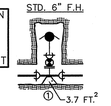
FITTING SIZE (Inches)	TEE, WYE, & ① HYDRANTS	90° BEND ② (STRADDLE BLOCKS REQ'D FOR PLUGGED CROSS OR PLUGGED TEE)	45° BEND ③	22 1/2° BEND ③	11 1/4° BEND ③
2	*	*	*	*	*
4	1.7	2.4	1.3	*	*
6	3.7	5.3	2.9	1.5	*
8	6.7	9.5	5.1	2.7	1.3
10	10.5	14.8	8	4.1	2
12	15.1	21.3	11.6	5.9	2.9
16	26.8	37.9	20.5	10.4	5.2
18	33.9	47.9	25.9	12.8	6.7
LARGER	* *	* *	* *	* *	* *
BEARING AREA OF THRUST BLOCKS (sq. ft.)					

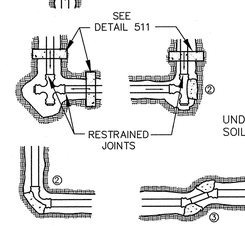
* BLOCK TO UNDISTURBED TRENCH WALLS
* * THRUST BLOCKS FOR PIPES LARGER THAN 18" WILL BE INDIVIDUALLY DESIGNED BY THE ENGINEER.

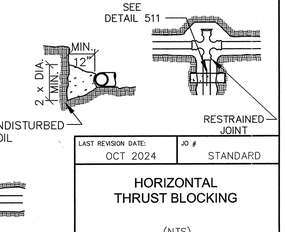
NOTES:
1. ALL VALUES ARE BASED ON THE FOLLOWING ASSUMPTIONS: AVG. PRESSURE = 100 PSI x 2 (safety factor); 1500 PSF SOIL BEARING CAPACITY; NORMAL DISTRIBUTION SYSTEM DESIGN VELOCITY NOT TO EXCEED 5 FPS.
2. **ALL FITTINGS SHALL BE WRAPPED IN PLASTIC PRIOR TO PLACEMENT OF CONCRETE.**
3. BEARING SURFACE OF THRUST BLOCKING SHALL BE AGAINST UNDISTURBED SOIL.
4. TRUCK-MIXED CONCRETE MIX SHALL HAVE A MIN. 28 DAY STRENGTH OF 3300 PSI (5" MAX SLUMP). USE OF HAND-MIXED SACK-CRETE TYPE CONCRETE REQUIRES WRITTEN LOCAL JURISDICTION APPROVAL PRIOR TO USE, AND SHALL BE 4000 PSI MIX, MIXED WITH MIN AMOUNT OF WATER NECESSARY FOR WORKABILITY (5" MAX SLUMP). USE OF DRY SACK-CRETE MIX (BAGS OR LOOSE MIX) IS PROHIBITED FOR PERMANENT THRUST RESTRAINT.
5. ALL PIPE ZONES SHALL BE BACKFILLED WITH GRANULAR BACKFILL AND COMPACTED.
6. IF THRUST BLOCKS ARE APPROVED IN WRITING FOR INSTALLATION IN FRONT OF PLUGGED CROSS OR PLUGGED TEE, EACH SHALL HAVE A #4 REBAR LIFTING LOOP INSTALLED IN TOP TO ALLOW FOR FUTURE TB REMOVAL.
7. VERTICAL THRUST RESTRAINT – TYPICALLY USE STRADDLE BLOCK PER DETAIL 511 (RETAINER GLANDS REQUIRED ON ALL ADJACENT MJ JOINTS).
8. STRADDLE BLOCK DETAILS – SEE DETAIL 511.



NOTE: PW INSPECTION OF THRUST BLOCK FORMS & PLASTIC REQ'D PRIOR TO CONCRETE PLACEMENT







LAST REVISION DATE:	JO #
OCT 2024	STANDARD

HORIZONTAL THRUST BLOCKING

(NTS)

AUMSVILLE, OR	DETAIL NO. 510

MATERIALS

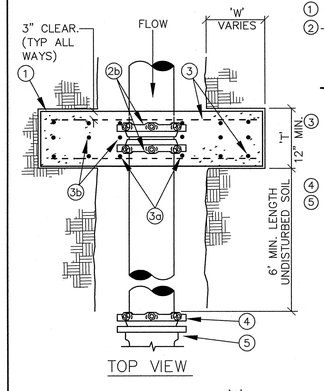
① CONCRETE STRADDLE BLOCK.

② –EITHER **(2a)** ONE SERRATED–LOCK STYLE SPLIT–RING RESTRAINT HARNESS (ROMAC 600 OR EQUAL), OR **(2b)** TWO RETAINER GLAND WEDGE–STYLE RESTRAINTS, SET OPPOSED (EBBA MEGA–LUG OR EQUAL). **–WEDGE STYLE RESTRAINTS SHALL BE WRAPPED WITH PLASTIC PRIOR TO CONCRETE PLACEMENT.**

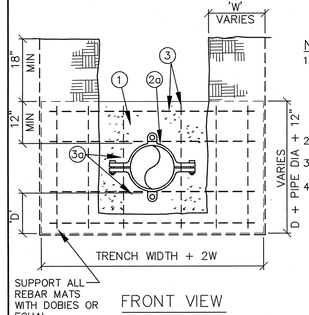
③ ≤12" PIPE, #4 REBAR @12" O.C. E.W., **(3a)** INSTALL REBAR EACH SIDE OF RESTRAINT FITTING INSIDE CONCRETE AS SHOWN. **(3b)** INSTALL 3 MATS OF REBAR FOR PIPE LARGER THAN 12" DIAMETER.

④ RETAINER GLAND, ON ADJACENT FITTING.

⑤ MJ FITTING, BEND, VALVE OR BLOWOFF.



PIPE SIZE	'W'	'D'	'T'
6"	12"	8"	12"
8"	16"	10"	12"
10"	20"	12"	12"
12"	24"	18"	18"
14"&16"	**28"**	**24"**	**18"**
18"	**32"**	**30"**	**18"**
>12"	**SIZE TO BE VERIFIED BY DESIGN ENG (NOTE 1).**		



NOTES:
1. STRADDLE BLOCKS FOR >12" PIPE SHALL BE VERIFIED INDIVUALLY FOR APPLICATION BY THE DESIGN ENGINEER AND SHALL BE BASED ON THE FOLLOWING:
   a.) 200 PSI WATER TEST PRESSURE.
   b.) SOIL BEARING CAPACITY, REBAR SIZE & SPACING VERIFIED BY THE ENGINEER.
2. BEARING AREA OF BLOCK SHALL BE AGAINST UNDISTURBED SOIL.
3. STRADDLE BLOCK SHALL HAVE A MINIMUM OF 18" COVER.
4. CONCRETE SHALL HAVE A MIN. 28 DAY STRENGTH OF 3300 PSI.

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DEC 2021	

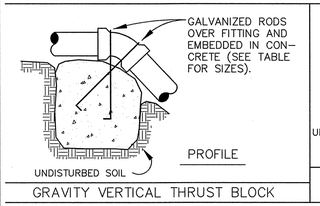
STRADDLE BLOCK FOR WATERLINE PIPE & PRESSURE SEWER PIPE

(NTS)

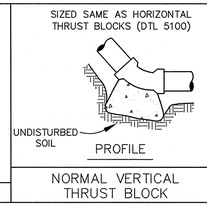
AUMSVILLE, OR	DETAIL NO. 511

NOTICE: ANY GRAVITY VERTICAL THRUST BLOCK PROPOSED IN LIEU OF STRADDLE BLOCKS SHALL BE BASED ON A PROJECT SPECIFIC DESIGN BY THE ENGINEER (SEE PLANS) AND APPROVED BY THE LOCAL JURISDICTION. AS ADDITIONAL CORROSION PROTECTION, 6 OZ MARS ZINC CAP NUTS (SACRIFICIAL ANODES) SHALL BE INSTALLED ON THE END OF ALL BOLTS ON ALL JOINTS AT (OR ADJACENT TO) THE GRAVITY VERTICAL THRUST BLOCK LOCATION.

NOTES:
1. KEEP CONCRETE CLEAR OF JOINT AND JOINT ACCESSORIES. FITTINGS SHALL BE WRAPPED IN PLASTIC PRIOR TO PLACEMENT OF CONCRETE.
2. CONCRETE THRUST BLOCKING SHALL BE POURED AGAINST UNDISTURBED EARTH.
3. CONCRETE MIX SHALL BE 3300 PSI @ 28 DAYS, MAX 5" SLUMP, 4.5% AIR (±1.5%).
4. THRUST BLOCK VOLUMES FOR VERTICAL BENDS HAVING UPWARD RESULTANT THRUSTS ARE BASED ON TEST PRESSURE OF 150 P.S.I.G. AND THE WEIGHT OF CONCRETE = 4050 LBS./CU.YD (150 PCF).
5. ALL REBAR SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM-123. REBAR SHALL BE BENT BEFORE GALVANIZATION, AND LAST 4" OF BAR SHALL BE BENT 90 DEGREES WITH A 1/2" RADIUS BEND. REBAR SHALL BE TIGHTLY FIT TO RESTRAINED FITTING.
6. FOR HORIZONTAL THRUST BLOCK DETAILS SEE DETAIL 510.
7. STRADDLE BLOCK NOTE: FOR VERTICAL BENDS, STRADDLE BLOCKS ARE TYPICALLY REQUIRED IN LIEU OF GRAVITY VERTICAL THRUST BLOCKS (SEE NOTE BELOW RIGHT). SEE DETAIL 511 FOR GENERAL CONFIGURATION OF STRADDLE BLOCKS.



GRAVITY VERTICAL THRUST BLOCK



NORMAL VERTICAL THRUST BLOCK

VOLUME OF THRUST BLOCK IN CUBIC YARDS (VERTICAL BENDS)

FITTING SIZE	BEND ANGLE 45°	22 1/2°	11 1/4°
4	1.1	0.4	0.2
6	2.7	1.0	0.4
8	4.9	1.5	0.6
10	***	2.3	0.9
12	***	3.2	1.3
14	***	4.3	1.8
16	***	***	2.3

FITTING SIZE	ROD SIZE	EMBEDMENT
12" AND LESS	#6	30"
14" – 16"	#8	36"

GRAVITY VERTICAL THRUST BLOCK FOR USE ONLY WHERE SPECIFICALLY APPROVED BY PUBLIC WORKS DIRECTOR AND CITY ENGINEER (TYPICALLY USE DTL 511 W/RETAINER GLANDS ON MJ JOINTS).

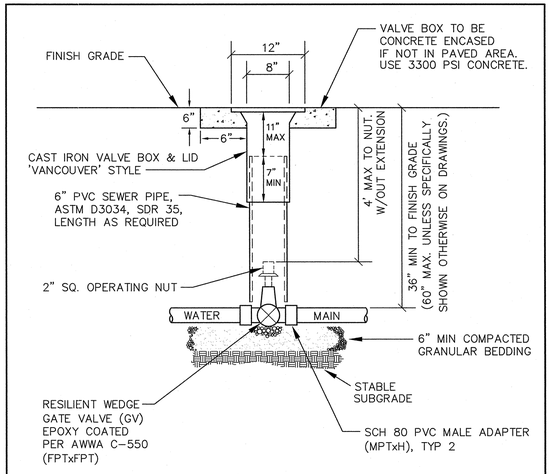
*** VERTICAL BENDS THAT REQUIRE A THRUST BLOCK VOLUME EXCEEDING 5 CUBIC YARDS REQUIRE SPECIAL BLOCKING DETAILS. SEE PLANS FOR VOLUMES SHOWN INSIDE HEAVY LINE IN TABLE.

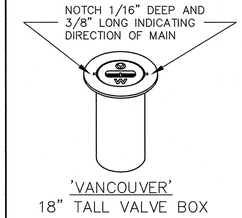
LAST REVISION DATE:	JO #
OCT 2024	

VERTICLE THRUST BLOCKING

(NTS)

AUMSVILLE, OR	DETAIL NO. 512





NOTES:
1. GV SHALL CONFORM TO AWWA C-509.
2. VALVE BOXES SHALL BE PLUMB AND CENTERED DIRECTLY OVER THE VALVE NUT.
3. VALVE BOX TOP SHALL BE ADJUSTED TO MEET FINISHED GRADE.
4. PVC SHALL BE ONE CONTINUOUS PIECE, NO BELLS OR COUPLERS.

LAST REVISION DATE:	JO #
JAN 2026	2599.3220.0

2" GATE VALVE AND VALVE BOX DETAIL

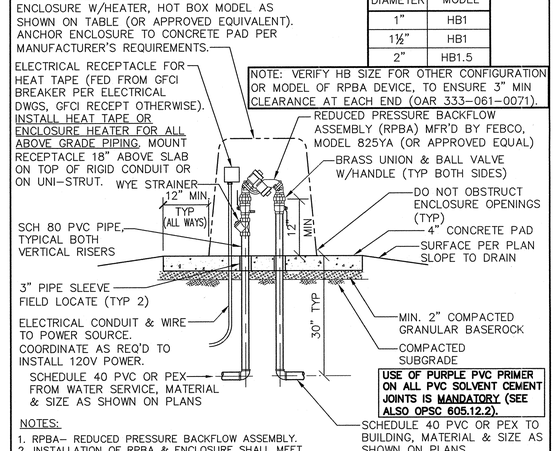
(NTS)

WESTECH ENG.	DETAIL NO. 514

PAD MOUNTED FIBERGLASS INSULATED ENCLOSURE W/HEATER, HOT BOX MODEL AS SHOWN ON TABLE (OR APPROVED EQUIVALENT). ANCHOR ENCLOSURE TO CONCRETE PAD PER MANUFACTURER'S REQUIREMENTS.

RPBA DIAMETER	HOT BOX MODEL
1"	HB1
1½"	HB1
2"	HB1.5

NOTE: VERIFY HB SIZE FOR OTHER CONFIGURATION OR MODEL OF RPBA DEVICE, TO ENSURE 3" MIN CLEARANCE AT EACH END (OAR 333-061-0071).



NOTES:
1. RPBA– REDUCED PRESSURE BACKFLOW ASSEMBLY.
2. INSTALLATION OF RPBA & ENCLOSURE SHALL MEET OREGON HEALTH AUTHORITY, DRINKING WATER SERVICES REQUIREMENTS.
3. CONTRACTOR SHALL HAVE RPBA TESTED AND CERTIFIED PRIOR TO APPROVAL BY THE CITY, AND COPIES OF TEST REPORTS PROVIDED TO CITY.
4. RPBA & ENCLOSURE SHALL CONFORM TO REQUIREMENTS OF PUBLIC/PRIVATE AGENCIES HAVING JURISDICTION.
5. ENCLOSURES SHALL HAVE A MINIMUM OF 3' CLEARANCE FROM ALL OTHER VAULTS OR STRUCTURES.
6. VERIFY ENCLOSURE DIMENSIONS ARE ADEQUATE FOR CLEARANCE BASED ON HEIGHT OF REDUCED PRESSURE ASSEMBLY.
7. ENCLOSURE SHALL BE CENTERED OVER THE COMPLETED REDUCED PRESSURE BACKFLOW ASSEMBLY.
8. POWER SHALL BE INSTALLED IN SCHEDULE 40 RIGID CONDUIT PER NEC REQUIREMENTS.
9. ALL CONCRETE SHALL HAVE 3,300 PSI @ 28 DAYS, MAX 5" SLUMP, 4.5% AIR (±1.5%).
10. HOT BOX DRAINAGE OPENINGS SHALL NOT BE OBSTRUCTED BY GRADING OR PLANTINGS.
11. RPBA SHALL BE INSTALLED A MIN. OF 12 INCHES ABOVE THE 100-YEAR FLOOD ELEVATION AS DETERMINED BY FEMA.
12. FINISH GRADE TO SLOPE AWAY FROM ENCLOSURE SLAB AT 2% MIN. SLOPE.
13. AFTER CONSTRUCTION COMPLETION & ACCEPTANCE, PROPERTY OWNER IS RESPONSIBLE TO ENSURE FREEZE PROTECTION IS PLUGGED IN & WORKING DURING COLD WEATHER PERIODS AS NECESSARY.

LAST REVISION DATE:	JO #
SEPT 2025	STANDARD

2" AND SMALLER REDUCED PRESSURE BACKFLOW ASSEMBLY

(NTS)

WESTECH ENG.	DETAIL NO. 5410

NO.	DATE	DESCRIPTION REVISIONS	BY

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

DSN.: CB
DRN.: TMT
CKD.: CB
DATE: MAY 2026

REGISTERED PROFESSIONAL ENGINEER
OREGON JULY 14, 2006 CHRISTOPHER T. BUCKLEY
RENEWS: 12/31/2027

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
3841 Fairview Industrial Dr. S.E., Suite 100, Salem, OR 97302
Phone: (503) 585-2474 Fax: (503) 585-3986
E-mail: westech@westech-eng.com

CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

TYPICAL CIVIL DETAILS

DRAWING C008
18 OF 223
JOB NUMBER 2599.3220.0

5/26/2026 12:14:09 PM
R:\Dwg\Aumsville City of\2025 WWTP Final Design 2599.3220.0\Civil\Plots\C005-8 DETAILS.dwg, (C008 tab)

GENERAL NOTES

CODES AND STANDARDS:

A. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE REQUIREMENTS OF THE 2025 OREGON STRUCTURAL SPECIALTY CODE AND 2024 EDITION INTERNATIONAL BUILDING CODE INCLUDING REFERENCE STANDARDS LISTED BELOW:
- AMERICAN NATIONAL STANDARDS INSTITUTE/AMERICAN SOCIETY OF CIVIL ENGINEERS - (ANSI/ASCE 7-2022)
- AMERICAN INSTITUTE OF STEEL CONSTRUCTION (ANSI/AISC 360-22)
- AMERICAN WELDING SOCIETY STANDARDS FOR WELDING AS MODIFIED BY AISC SPEC. (AWS D1.1 - 2015, AWS D1.4 - 2018)
- AMERICAN CONCRETE INSTITUTE (ACI 301 - 2016, ACI 318 - 2019)
- MASONRY STANDARDS JOINT COMMITTEE (MSJC/TMS 402 - 2022)
- NATIONAL DESIGN SPECIFICATIONS FOR WOOD CONSTRUCTION (NDS - 2024)
- AMERICAN NATIONAL STANDARDS INSTITUTE/TRUSS PLATE INSTITUTE (ANSI/TPI 1-2022)

DESIGN LOADS:

A. ROOF LOADS:
DEAD LOAD = 20 psf
SNOW LOAD MIN. = 35 psf (ULT), 24.5 psf (ASD) or p_f + DRIFT
p_g = 16 psf (ULT), 11 psf (ASD)
p_f = 12 psf (ULT), 8 psf (ASD)
c_e = 1.0 c_t = 1.0

B. WIND DESIGN DATA:
ULTIMATE WIND SPEED = 104 mph
EXPOSURE = "C"
RISK CATEGORY III
MWFRS - DIRECTIONAL PROCEDURE: (ASCE 7-16 CH. 27)
K_d = 0.85
G = 0.85
K_{zt} = 1.0
COMPONENTS AND CLADDING:
INTERIOR PRESSURE COEFFICIENT = ±0.18
ZONE 1: +25.9 psf / -64.2 psf
ZONE 2: +25.9 psf / -93.7 psf
ZONE 3: +25.9 psf / -111.3 psf
ZONE 4: +34.8 psf / -37.7 psf
ZONE 5: +34.8 psf / -46.5 psf
* MIN. ULTIMATE PRESSURE = 16 psf

ULTIMATE DESIGN WIND PRESSURE (1.0W) BASED ON 10 SF AREA AND MAY BE ADJUSTED AS REQUIRED PER ASCE7 FOR LARGER AREAS.

C. SEISMIC DESIGN DATA: (FROM GEOTECH REPORT)
S_s = 0.755 S_1 = 0.381
SITE CLASS = D
S_{DS} = 0.601 S_{D1} = 0.731 (NORTH) 0.381 (SOUTH)
SEISMIC DESIGN CATEGORY D
BASIC SEISMIC FORCE RESISTING SYSTEM:
- SPECIAL MASONRY SHEARWALLS R = 5.0
EQUIVALENT LATERAL FORCE ANALYSIS
RISK CATEGORY = III

D. IMPORTANCE FACTORS:
SEISMIC (I_e) = 1.25

GENERAL REQUIREMENTS:

A. IT IS THE RESPONSIBILITY OF THE BUILDER/CONTRACTOR TO OBTAIN APPROPRIATE APPROVALS AND NECESSARY PERMITS FROM CITY, COUNTY, STATE, OR FEDERAL AGENCIES, AS REQUIRED.
B. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION METHODS, TECHNIQUES, SEQUENCING, AND SAFETY REQUIRED TO COMPLETE CONSTRUCTION.
C. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND DETAILS PRIOR TO PROCEEDING WITH CONSTRUCTION. ALL DISCREPANCIES SHALL BE APPROVED BY THE ARCHITECT OR ENGINEER OF RECORD.
D. CONTRACTOR SHALL VERIFY ALL REQUIRED PENETRATIONS ON ARCHITECTURAL, MECHANICAL AND ELECTRICAL PLANS. ALL DIMENSIONS SHALL BE FIELD VERIFIED AS EARLY AS POSSIBLE.
E. CONTRACTOR SHALL THOROUGHLY REVIEW AND REDLINE ALL SHOP DRAWINGS PRIOR TO SUBMITTAL TO THE ENGINEER AND ARCHITECT. SUBMIT SHOP DRAWINGS IN A TIMELY FASHION TO ALLOW 10 BUSINESS DAYS FOR REVIEW BY DESIGN TEAM. ALL MODIFICATIONS OR COMMENTS MADE DURING REVIEW DO NOT RELIEVE CONTRACTOR FROM COMPLIANCE WITH THE REQUIREMENTS OF THE PLANS OR SPECIFICATIONS.

STRUCTURAL OBSERVATION PROGRAM:

A. CONTRACTOR IS RESPONSIBLE FOR NOTIFYING THE REGISTERED DESIGN PROFESSIONAL RESPONSIBLE FOR OBSERVATION IN ADVANCE.
B. OBSERVATION TO BE PERFORMED ON A PERIODIC BASIS.
C. A FIELD REPORT WILL BE SUBMITTED TO THE BUILDING DEPARTMENT FOLLOWING EACH SITE VISIT.
D. ITEMS FOR OBSERVATION:
1. CONCRETE:
TANK STRUCTURES FOUNDATION REBAR PLACEMENT
TANK STRUCTURES WALL REBAR PLACEMENT
2. STRUCTURAL MASONRY:
CMU REBAR PLACEMENT
3. WOOD:
ROOF FRAMING
PLYWOOD NAILING

FOUNDATIONS:

A. ALL FOOTINGS TO REST ON FIRM, UNDISTURBED SOIL, OR STRUCTURAL FILL, FREE OF ORGANIC MATERIAL, AND CAPABLE OF SUPPORTING A MINIMUM ALLOWABLE BEARING PRESSURE OF 2,000 psf. UNDER COMBINED DEAD AND LIVE LOADS. SEE CENTRAL GEOTECHNICAL SERVICES GEOTECH REPORT WESTECH-17-01, DATED FEBRUARY 4, 2025.
B. RAMMED AGGREGATE PIERS UNDER TANK STRUCTURES
C. ALL SLABS-ON-GRADE SHALL BE UNDERLAIN BY A MINIMUM OF 6" OF FREE- DRAINING (LESS THAN 5% PASSING THE NO. 200 SIEVE), WELL GRADED, CRUSHED ROCK. THE BASE COURSE MATERIALS SHALL BE COMPACTED TO AT LEAST 95% OF MAXIMUM DRY DENSITY RELATIVE TO ASTM D1557 (MODIFIED PROCTOR).
D. RETAINING WALL DESIGN FORCES (EQUIVALENT FLUID PRESSURE):
ACTIVE PRESSURE = 41 pcf
AT-REST PRESSURE = 59 pcf
PASSIVE PRESSURE = 250 pcf
SOIL WEIGHT = 120 pcf (ASSUMED)

CONCRETE:

A. ALL CONCRETE WORK SHALL CONFORM TO OSSC CHAPTER 19, "CONCRETE," ACI 318, "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE," ACI 301, "SPECIFICATIONS FOR STRUCTURAL CONCRETE," ACI 117, "SPECIFICATIONS FOR TOLERANCES FOR CONCRETE CONSTRUCTION AND MATERIALS."
B. SPECIAL INSPECTIONS: ALL CONCRETE MIXES REQUIRE SPECIAL INSPECTION UNLESS OTHERWISE NOTED.
C. REINFORCING: ALL CONCRETE SHALL BE REINFORCED UNLESS SPECIFICALLY NOTED IN PLANS AND DETAILS. WHERE REINFORCING IS NOT INDICATED, PROVIDE REINFORCING AS SHOWN IN SIMILAR DETAILS AND VERIFY PLACEMENT WITH ENGINEER.
D. CONCRETE EXPOSED TO WEATHER: ALL CONCRETE MIXES EXPOSED TO WEATHER SHALL BE AIR-ENTRAINED WITH AN AIR CONTENT OF 5% ±1%.
E. CONCRETE CAST AGAINST EXISTING: WHERE CONCRETE IS CAST AGAINST EXISTING OR PREVIOUSLY CURED CONCRETE, ROUGHEN CONTACT SURFACES TO 1/4" AMPLITUDE AND CLEAN SURFACE OF LAITANCE, FOREIGN MATTER, PAINT AND LOOSE PARTICLES.
F. FLY ASH: PORTLAND CEMENT CONTENT MAY BE REPLACED WITH UP TO 25% FLY ASH CONFORMING TO ASTM C618 (INCLUDING TABLE 2A) TYPE F OR TYPE C, PROVIDED THAT MIX STRENGTH IS SUBSTANTIATED BY TEST DATA.
G. SLAG: PORTLAND CEMENT CONTENT MAY BE REPLACED WITH UP TO 25% SLAG CEMENT CONFORMING TO ASTM C989, PROVIDED THAT MIX STRENGTH IS SUBSTANTIATED BY TEST DATA.
H. ADMIXTURES: WATER REDUCING ADMIXTURES CONFORMING TO ASTM C494 MAY BE USED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND SHALL BE INCORPORATED IN THE CONCRETE MIX DESIGN SUBMITTAL.
I. SLUMP: SLUMP REQUIRED FOR PROPER PLACEMENT SHALL BE DETERMINED BY THE CONTRACTOR AND SUPPLIER BASED UPON DELIVERY TIME AND METHOD OF PLACEMENT AND INCLUDED IN THE MIX DESIGN SUBMITTAL INCLUDING INFLUENCE OF ADDITIVES.
J. WATER: WATER SHALL BE CLEAN AND POTABLE. NO WATER SHALL BE ADDED IN FIELD UNLESS SPECIFICALLY APPROVED IN WRITING BY THE CONCRETE SUPPLIER AS A PROPORTION ALLOTTED WITHIN APPROVED CONCRETE MIX DESIGN.
K. SUBMITTALS: CONTRACTOR SHALL SUBMIT A COPY OF EACH CONCRETE MIX DESIGN AND (30) 28-DAY BREAK TEST RECORDS TO ENGINEER FOR REVIEW AND COMMENT. ALLOW SUFFICIENT TIME FOR REVIEW AND APPROVAL BEFORE DELIVERY.
L. WEATHER: CONTRACTOR SHALL CAREFULLY MONITOR THE WEATHER IN THE DAYS PRECEDING AND FOLLOWING SCHEDULED CONCRETE POURS. TEMPERATURES BELOW 40°F OR ABOVE 90°F CAN ADVERSELY AFFECT THE QUALITY OF CONCRETE. SIMILARLY, OTHER ENVIRONMENTAL FACTORS SUCH AS LOW HUMIDITY AND HIGH WIND SPEEDS CAN ALSO AFFECT THE QUALITY OF CONCRETE. CONTRACTOR IS TO BE FAMILIAR WITH AND READY TO IMPLEMENT PROCEDURES OUTLINED IN ACI 305 / ACI 306 IN THE EVENT OF WEATHER CONDITIONS.
M. PIPE & CONDUIT ARE NOT PERMITTED TO BE INSTALLED IN SLABS OR FOOTING TRENCHES WITHOUT PRIOR APPROVAL OF THE ARCHITECT OR ENGINEER.
N. CONCRETE MIX DESIGNS:

LOCATION	COARSE AGGREGATE SIZE	MAXIMUM WATER/CEMENT RATIO	MINIMUM COMPRESSIVE STRENGTH (F'_c)	ADD'L NOTES
FOUNDATIONS, STEMWALLS, AND RETAINING WALLS	1½"	.46	4,000	
SLABS ON GRADE	¾"	.44	3,500	1,2
ELEVATED SLABS	¾"	.44	4,000	
WALLS, PILASTERS, AND COLUMNS	1½"	.44	4,000	3
NON-SHRINK GROUT	½"	.44	6,000	4
CDF	¾"	.50	500	

NOTES:
1. A MINIMUM 10 MIL VAPOR RETARDER WITH A PERMEANCE OF 0.1 SHALL BE INSTALLED UNDER SLAB.
2. EXCLUDES GROUND OR POLISHED SLAB FINISHES
3. THIS MIX MAY BE HIGH SLUMP OR SELF-CONSOLIDATING CONCRETE (SCC) TO FACILITATE PLACEMENT.
4. THIS MIX SHALL HAVE A SHRINKAGE LIMIT OF 0.035% AT 28-DAYS.

REINFORCING STEEL:

A. ALL REINFORCING STEEL SHALL BE BILLET STEEL DEFORMED BARS CONFORMING TO ASTM A615, GRADE 60, EXCEPT USE ASTM A706, GRADE 60 BARS WHERE WELDING IS REQUIRED. (NO. 3 BARS MAY BE GRADE 40). SUBMIT MILL CERTIFICATES FOR ALL BARS REQUIRING WELDING.
B. FABRICATION AND PLACEMENT OF REINFORCING STEEL SHALL BE IN ACCORDANCE WITH CRSI MSP-1-16 "MANUAL OF STANDARD PRACTICE" AND CHAPTER 25 OF ACI 318 "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS".
C. ALL CONCRETE SLAB REINFORCING STEEL SHALL BE SUPPORTED AT THE REQUIRED HEIGHTS BY APPROVED BOLSTERS PRIOR TO POURING SLAB CONCRETE.
D. REINFORCING STEEL LAP SPLICES NOT OTHERWISE INDICATED SHALL BE ACI STANDARD CLASS B SPLICES STAGGERED BETWEEN ADJACENT BARS ONE LAP LENGTH MINIMUM.

BAR SIZE "D"	DEVELOPMENT FACTOR	DEVELOPMENT LENGTH	CLASS B LAP SPLICE LENGTH	
			BOTTOM BAR	TOP BAR
#3	38 x D	14.2"	18.5"	24"
#4	38 x D	19"	24.7"	32.1"
#5	38 x D	23.7"	30.8"	40.1"
#6	38 x D	28.5"	37"	48.1"
#7	47 x D	41.5"	54"	70.1"
#8	47 x D	47.4"	61.7"	80.2"

E. PROVIDE CORNER BARS SAME SIZE AND SPACING AS HORIZONTAL BARS AND PROJECT 48 DIAMETERS EACH WAY OR 2'-0" X 2'-0" MINIMUM UNLESS DETAILED OTHERWISE.
F. PROVIDE (2)-#5 BARS AROUND ALL OPENINGS AND RECESSES. EXTEND THESE BARS 24 INCHES BEYOND THE CORNER OF THE OPENINGS.
G. CONTRACTOR SHALL PROVIDE AND CAST IN ALL NECESSARY INSERTS.

REINFORCING PROTECTION:

A. CONCRETE DEPOSITED AGAINST EARTH: 3 INCHES.
B. CONCRETE FORMED SURFACES EXPOSED TO GROUND AND WEATHER:
#5 AND SMALLER BAR - 1½ INCHES
#6 AND LARGER BAR - 2 INCHES
C. CONCRETE SURFACES NOT EXPOSED TO WEATHER OR IN CONTACT WITH THE GROUND:
#11 AND SMALLER BAR - ¾ INCHES
D. SLABS = ¾ INCHES

MASONRY:

A. CONCRETE MASONRY UNITS SHALL CONFORM TO ASTM C90, GRADE "N", MEDIUM WEIGHT HAVING A MINIMUM COMPRESSIVE STRENGTH OF 2000 psi AT 28 DAYS. (f'_m = 1,500 psi) MASONRY UNITS AT TIME OF PLACEMENT SHALL HAVE BEEN AIR CURED FOR A MINIMUM OF 28 DAYS OR KILN CURED, WITH A MAXIMUM WATER ABSORPTION OF 17 pcf/unit AND A LINEAR SHRINKAGE OF 0.065 MAXIMUM.
B. CONCRETE MASONRY BLOCK SHALL HAVE KORFIL INSULATION INSERTS IN CELLS WITHOUT REINFORCEMENT AND CELLS WITH VERTICAL REINFORCEMENT ONLY. OMIT INSERTS AT BOND BEAMS, LINTELS AND WHERE SHOWN ON DETAILS.
C. MORTAR SHALL BE ASTM C270 TYPE "S" WITH A MINIMUM COMPRESSIVE STRENGTH OF 1800 psi AT 28 DAYS FOR ABOVE GRADE MASONRY WORK. BELOW GRADE MASONRY SHALL BE TYPE "M" MORTAR.
D. GROUT FILL ALL CELLS. GROUT SHALL EXCEED A COMPRESSIVE STRENGTH OF 2000 psi AT 28 DAYS IN ACCORDANCE WITH ASTM C476. SLUMP SHALL BE 9½" ±1½". SUBMIT COPY OF GROUT MIX DESIGN AND 30 BREAK TEST RECORDS TO THE ENGINEER PRIOR TO GROUT PLACEMENT. WATER/CEMENT RATIO SHALL NOT EXCEED 0.56.
E. ALL MASONRY CONSTRUCTION SHALL CONFORM WITH PRESENT OSHA REQUIREMENTS INCLUDING THOSE REGARDING THE ESTABLISHMENT OF "LIMITED ACCESS ZONES".
F. ALL MASONRY CONSTRUCTION SHALL BE IN ACCORDANCE WITH TMS 402/602 "SPECIFICATION FOR MASONRY CONSTRUCTION" AND TRANSPORTING OF READY-MIX GROUT IN ACCORDANCE WITH ASTM C94 "STANDARD SPECIFICATION FOR READY-MIX CONCRETE".
G. MASONRY UNITS SHALL BE PLACED IN COURSES OF RUNNING BOND.
H. REINFORCING STEEL SHALL BE RAIL STEEL DEFORMED BARS CONFORMING TO ASTM A615, GRADE 60. USE ASTM A706, GRADE 60 WHERE WELDING IS REQUIRED.
I. PROVIDE KNOCKOUT BOND BEAM BLOCK FOR ALL HORIZONTAL BOND BEAMS AND AT THE TOPS OF EACH WALL.
J. PROVIDE CORNER BARS SAME SIZE AND SPACING AS HORIZONTAL BARS AND PROJECT 48 DIAMETERS EACH WAY.
K. PROVIDE (2)-#4 BARS AROUND ALL OPENINGS AND RECESSES. EXTEND THESE BARS 24" BEYOND THE CORNER OF OPENINGS.
L. MASONRY WALLS SHALL BE REINFORCED AS FOLLOWS, EXCEPT WHERE SHOWN OTHERWISE ON PLANS:
8" WALLS - #5 VERTICAL AT 40" O.C. AT CENTERLINE OF WALL
- (2) #4 HORIZONTAL CONTINUOUS AT 48" O.C. HOOK BAR AT ENDS OF WALLS.

STRUCTURAL STEEL:

A. ALL STRUCTURAL STEEL WIDE FLANGE MEMBERS SHALL CONFORM TO STRUCTURAL STEEL DESIGNATION ASTM A992. ALL STEEL PLATES IN THE SPECIAL MOMENT-RESISTANT FRAMES SHALL CONFORM TO STRUCTURAL STEEL DESIGNATION ASTM A572 (50ksi). ALL OTHER STRUCTURAL STEEL PLATES, ANGLES AND MISC. SHAPES SHALL CONFORM TO STRUCTURAL STEEL DESIGNATION ASTM A36.
B. ALL HOLLOW STRUCTURAL SECTIONS (HSS) SHALL CONFORM TO ASTM A500, GRADE B DESIGNATION HAVING A MINIMUM YIELD STRENGTH OF 46,000 psi FOR RECTANGULAR SHAPES AND HAVING A MINIMUM YIELD STRENGTH OF 42,000 psi FOR ROUND SHAPES.
C. ALL STRUCTURAL STEEL PIPE SHALL CONFORM TO ASTM A53, GRADE B.
D. FABRICATION AND ERECTION SHALL CONFORM TO THE SPECIFICATIONS SET FORTH IN AISC 360 "SPECIFICATIONS FOR STRUCTURAL STEEL BUILDINGS," AND AISC 303 "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES," AND THE "STANDARD CODE FOR ARC AND GAS WELDING IN BUILDING CONSTRUCTION."
E. HIGH STRENGTH BOLTS SHALL BE ASTM A325-N, BEARING-TYPE CONNECTION DESIGNED WITH THREADS INCLUDED IN THE SHEAR PLANE. HIGH STRENGTH BOLTS ARE NOT 'SLIP CRITICAL,' AND THEREFORE SHALL BE 'SNUG TIGHT.'
F. ALL OTHER BOLTS NOT DESIGNATED AS HIGH STRENGTH SHALL BE ASTM A307, GRADE A.
G. GALVANIZE ALL EXTERIOR BOLTS IN ACCORDANCE WITH ASTM A153.
H. LOCK NUTS SHALL BE 1F1 100, GRADE B PREVAILING TORQUE TYPE.
I. PLAIN HARDENED WASHERS SHALL BE ASTM F436.
J. BEVELED WASHERS SHALL BE ANSI B18.23.1.
K. WELDING SHALL CONFORM TO AWS D1.1 "STRUCTURAL WELDING CODE - STEEL." WELDING FILLER METAL SHALL BE AWS A5.1 OR A5.5 E70XX ELECTRODES OR AWS A5.18 ER70S-X. ALL WELDING SHALL BE PERFORMED BY WELDERS AWS CERTIFIED WITHIN THE PAST 2 YEARS FOR THE TYPE OF WELDING PERFORMED. WELDER SHALL PRESENT EVIDENCE OF QUALIFICATION WITHIN THE PAST TWO YEARS. WELD ELECTRODE E70T-4 IS PROHIBITED.
L. AFTER FABRICATION, BUT BEFORE INSTALLATION, REMOVE RUST SCALE, GREASE AND OIL BY WIRE BRUSHING AND CHEMICAL TREATMENT.
M. SHOP PRIME STEEL ITEMS WITH ONE HEAVY COAT OF RUST INHIBITING METAL PRIMER, UNLESS STEEL IS TO BE GALVANIZED.
N. GALVANIZING COAT ALL EXPOSED METAL PER ASTM A123, G60.

MSC ENGINEERS
CONSULTING STRUCTURAL ENGINEERS
SINCE 1925

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

DSN. CBS
DRN. SMC
CKD. CBS
DATE: MAY 26

REGISTERED PROFESSIONAL ENGINEER
OREGON JULY 1, 2014 CAMERON B. SWEARINGIN
63202
DIGITALLY SIGNED
EXPIRES: JUNE 30, 2028

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

STRUCTURAL GENERAL NOTES

DRAWING
S001
19 OF 223

JOB NUMBER
231048

5/19/2026 7:25:49 AM
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GENERAL NOTES

STRUCTURAL WOOD:

A. ALL STRUCTURAL WOOD MEMBERS SHALL BE DOUGLAS FIR-LARCH NO.2 OR BETTER GRADE AS NOTED IN NATIONAL DESIGN SPECIFICATIONS FOR STRESS GRADE LUMBER AND ITS FASTENINGS, UNLESS NOTED OTHERWISE. ALL POSTS SHALL BE DOUGLAS FIR #1 OR BETTER.
B. ALL STUDS TO BE DOUGLAS FIR #2 OR BETTER AS NOTED IN NATIONAL DESIGN SPECIFICATIONS FOR STRESS GRADE LUMBER.
C. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL BOLTS, AND PLATES AS REQUIRED TO COMPLETE THE JOB.
D. WASHERS SHALL BE USED UNDER ALL BOLT HEADS AND NUTS BEARING ON WOOD.
E. ALL WOOD MEMBERS IN CONTACT WITH CONCRETE OR MASONRY SHALL BE PRESERVATIVE TREATED.
F. UNLESS NOTED OTHERWISE HEADERS ARE TO BE 4X8 DF/L #2 OR BETTER.
G. ALL NAILING NOT SHOWN SHALL BE AS CALLED FOR IN OSSC TABLE 2304.10.1 FASTENING SCHEDULE.
H. ALL NAILING INTO TREATED LUMBER SHALL BE GALVANIZED.
I. LAMINATING 2X BENDING MEMBERS (BEAMS):
   -MINIMUM OF 3 ROWS 10D (0.148"X3") NAILS @ 12" O.C.
   -IF USING 16D COMMON NAILS, THE NUMBER OF NAILING ROWS MAY BE DECREASED BY ONE.
   -SIDE LOADED BEAMS SHALL BE CONNECTED WITH SIMPSON SDS SCREWS IN TWO ROWS WITH SPACING 16" O.C.
J. LAMINATING 2X COMPRESSION MEMBERS (COLUMNS):
   -(2) 2X6 LAMINATIONS: (2) ROWS OF 10D COMMON NAILS @ 6" O.C.
   -(3) 2X6 LAMINATIONS: (2) ROWS OF 30D COMMON NAILS @ 8" O.C.

PLYWOOD:

A. WALL SHEATHING:
   15/32" PLYWOOD WALL SHEATHING APA RATED 24/0 EXPOSURE 1. LAY HORIZONTAL AND BLOCK ALL EDGES. ATTACH WITH 8D GALVANIZED COMMON NAILS 6" O.C. EDGES & 12" O.C. FIELD, UNLESS NOTED OTHERWISE IN SHEARWALL SCHEDULE.
B. ROOF SHEATHING:
   19/32" PLYWOOD ROOF SHEATHING APA RATED 40/20 EXTERIOR GLUE EXPOSURE 1. W/ 8D GALVANIZED COMMON NAILS @ 6" O.C. EDGES AND 12" O.C. FIELD, UNLESS NOTED OTHERWISE ON PLANS. LAY PERPENDICULAR TO SUPPORTS AND STAGGER JOINTS. (BLOCK AS REQUIRED ON PLAN)

WOOD FRAMED TRUSSES:

A. TRUSS DESIGN DRAWINGS AND TRUSS PLACEMENT DIAGRAM SHALL BE STAMPED BY AN ENGINEER LICENSED IN THE STATE OF OREGON RETAINED BY THE TRUSS MANUFACTURER.
B. ROOF TRUSSES TO CARRY ALL DEAD LOADS AND LOADS NOTED AS FOLLOWS. LOADS TO BE COMBINED PER OSSC CHAPTER 16 & ASCE 7 CHAPTER 2.
   - LIVE LOADS & ROOF LIVE LOADS PER OSSC CHAPTER 16, TABLE 1607.1 AND ASCE 7 CHAPTER 4, TABLE 4.3-1.
   - SNOW LOADS PER OSSC CHAPTER 16, SECTION 1608 AND ASCE 7 CHAPTER 7
   - WIND LOADS PER OSSC CHAPTER 16, SECTION 1609 AND ASCE 7 CHAPTER 26 AND CHAPTER 30.
C. ROOF TRUSSES TO BE DESIGNED TO RESIST ALL AXIAL LOADS AS SPECIFIED ON THE CONSTRUCTION DOCUMENTS.
E. TRUSS MANUFACTURER'S DESIGN SHALL INCLUDE ALL TEMPORARY REQUIRED BRACING AND SHORING FOR THE ERECTION AND INSTALLATION OF THE ROOF TRUSSES.
F. TRUSS MANUFACTURER'S DESIGN SHALL INCLUDE ALL BLOCKING, BRIDGING, FASTENING, AND ATTACHING DEVICES TO CARRY THE SPECIFIED LOADS INCLUDING PLY TO PLY TRUSS CONNECTIONS.
G. ERECTION AND INSTALLATION OF THE ROOF TRUSSES BY THE CONTRACTOR SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS AND DESIGN SET FORTH BY THE MANUFACTURER.
H. THE TRUSS MANUFACTURER SHALL SUPPLY ALL TRUSSES, ASSOCIATED LOAD TRANSFER BLOCKS, HANGERS, BRACING, BRIDGING, BLOCKING, AND BEVELED PLATES AS REQUIRED TO COMPLETE THE ROOF TRUSS FRAMING.
I. EACH TRUSS SHALL BE ATTACHED TO THE DOUBLE TOP PLATE OF WALL WITH SIMPSON H1 CLIPS U.O.N ON CONSTRUCTION DOCUMENTS.
J. EACH GIRDER TRUSS SHALL BE ATTACHED TO A MINIMUM DOUBLE STUD IN WALL BELOW WITH SIMPSON LGT GIRDER TIEDOWN U.O.N ON CONSTRUCTION DOCUMENTS. EDGE NAIL WALL SHEATHING TO DOUBLE STUD.
K. MAKE ALL BOTTOM CHORD CONNECTIONS AFTER DEAD LOAD HAS BEEN APPLIED. PROVIDE DEFLECTION CAPABILITY UNLESS TRUSS DESIGNED FOR SUPPORT BY INTERIOR WALLS.
L. TRUSS MANUFACTURER SHALL SUBMIT TRUSS DESIGN DRAWINGS WITH ALL REQUIREMENTS AS SPECIFIED IN SECTION 2303.4.1.1 OF THE I.B.C AS FOLLOWS:
   1. SLOPE OR DEPTH, SPAN AND SPACING PER CONSTRUCTION DOCUMENTS.
   2. LOCATION OF ALL JOINTS AND SUPPORT LOCATIONS.
   3. NUMBER OF PLIES IF GREATER THAN ONE.
   4. REQUIRED BEARING WIDTHS ASSUMING AN ALLOWABLE COMPRESSION PERPENDICULAR TO GRAIN OF 625 psi (DF #2).
   5. DESIGN LOADS FOR **ROOF** AS APPLICABLE INCLUDING:
      I. TOP CHORD LIVE LOAD OF 20 psf (MIN.) OR APPROPRIATE SNOW LOAD.
         - Cd = 1.25 FOR ROOF LIVE LOAD
         - Cd = 1.15 FOR ROOF SNOW LOAD
      II. TOP CHORD DEAD LOAD OF 7 psf (MIN.).
      III. SOLAR DEAD LOAD 5 psf (MIN.) APPLIED @ TOP CHORD WHERE APPLICABLE
      IV. BOTTOM CHORD LIVE LOAD OF 10 psf (MIN). NEED NOT BE APPLIED SIMULTANEOUSLY WITH ROOF SNOW OR LIVE LOAD.
      V. BOTTOM CHORD DEAD LOAD OF 10 psf (MIN).
      VI. UPLIFT LOAD OF 8 psf ULTIMATE (MIN).
      VII. ADDITIONAL LOADS AND LOCATIONS, SUCH AS CONCENTRATED LOADS AND THEIR POINTS OF APPLICATION
      VIII. ENVIRONMENTAL DESIGN CRITERIA AND LOADS (WIND, RAIN, SNOW, SEISMIC, ETC).
   6. OTHER LATERAL LOADS, INCLUDING DRAG STRUT LOADS IF SPECIFIED ON THE CONSTRUCTION DOCUMENTS.
   7. ADJUSTMENTS TO WOOD MEMBER AND METAL CONNECTOR PLATE DESIGN VALUE FOR CONDITIONS OF USE.
   8. MAXIMUM REACTION FORCE AND DIRECTION, INCLUDING MAXIMUM UPLIFT REACTION FORCES WHERE APPLICABLE.
   9. METAL-CONNECTOR-PLATE TYPE, SIZE AND THICKNESS OR GAGE, AND THE DIMENSIONED LOCATION OF EACH METAL CONNECTOR PLATE EXCEPT WHERE SYMMETRICALLY LOCATED RELATIVE TO THE JOINT INTERFACE.
   10. SIZE, SPECIES AND GRADE FOR EACH MEMBER TO BE SPECIFIED BY THE TRUSS MANUFACTURER.
   11. TRUSS-TO-TRUSS CONNECTIONS AND TRUSS FIELD ASSEMBLY REQUIREMENTS.
   12. CALCULATED SPAN-TO-DEFLECTION RATIO AND MAXIMUM VERTICAL AND HORIZONTAL DEFLECTION FOR LIVE AND TOTAL LOADS WITH THE MAXIMUM LIVE LOAD DEFLECTION LIMITED TO L/240 OF THE SPAN. LONG TERM CREEP OF 1.5 MUST BE APPLIED TO DEAD LOAD DEFLECTION.
   13. MAXIMUM AXIAL TENSILE AND COMPRESSION FORCES IN THE TRUSS MEMBERS.
   14. REQUIRED PERMANENT INDIVIDUAL TRUSS MEMBER RESTRAINT LOCATION AND THE METHOD AND DETAILS OF RESTRAINT/BRACING TO BE USED IN ACCORDANCE WITH SECTION 2303.4.1.2 TO BE DESIGNED AND SET FORTH IN THE TRUSS DESIGN DRAWINGS BY THE TRUSS DESIGN PROFESSIONAL.

STRUCTURAL STAINLESS STEEL:

A. ALL STRUCTURAL PLATES, SHEETS AND STRIPS SHALL CONFORM TO STEEL DESIGNATION ASTM A480 TYPE 304 OR 316 HAVING A MINIMUM YIELD STRENGTH OF 30,000 PSI.
B. ALL STRUCTURAL BARS AND SHAPES SHALL CONFORM TO STEEL DESIGNATION ASTM A276 TYPE 304 OR 316 HAVING A MINIMUM YIELD STRENGTH OF 30,000 PSI.
C. ALL HALLOW STRUCTURAL SECTIONS (HSS) SHALL CONFORM TO ASTM A269 TYPE 304 OR 316 HAVING A MINIMUM YIELD STRENGTH OF 30,000 PSI.
D. ALL STRUCTURAL PIPES SHALL CONFORM TO ASTM A312 TYPE 304 OR 316 HAVING A MINIMUM YIELD STRENGTH OF 30,000 PSI.
E. FABRICATION AND ERECTION SHALL CONFORM TO THE SPECIFICATION SET FORTH IN AISC 360-10 "SPECIFICATIONS FOR STRUCTURAL STEEL BUILDINGS," 2010, AND AISC 303-10 "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES," 2010, AND THE "STANDARD CODE FOR ARC AND GAS WELDING IN BUILDING CONSTRUCTION."
F. ALL BOLTS SHALL BE SSINA TYPE 304 OR 316 STAINLESS STEEL.
G. WELDING SHALL CONFORM TO AWS D1.6 "STRUCTURAL WELDING CODE - STAINLESS STEEL." WELDING FILLER METAL SHALL BE AWS A5.4 OR A5.9 E3XX OR ER3XX ELECTRODES. ALL WELDING SHALL BE PERFORMED BY WELDERS AWS CERTIFIED WITHIN THE PAST 2 YEARS FOR THE TYPE OF WELDING PERFORMED. WELDER SHALL PRESENT EVIDENCE OF QUALIFICATION WITHIN THE PAST TWO YEARS.

ACCESSIBILITY:

A. ALL DOOR HARDWARE TO BE LEVER HANDLES CONFORMING TO ADA REQUIREMENTS.
B. DOOR THRESHOLDS TO CONFORM TO ADA REQUIREMENTS.
C. PROVIDE BLOCKING IN REST ROOM WALLS FOR GRAB BAR INSTALLATION.

STRUCTURAL ALUMINUM:

A. ALUMINUM CONSTRUCTION SHALL BE IN ACCORDANCE WITH OSSC CHAPTER 20 AND THE ALUMINUM DESIGN MANUAL, ADM1
B. STRUCTURAL SHAPES, BARS, PLATES, AND SHEETS INDICATED ON DRAWINGS SHALL BE ALUMINUM MEETING THE ALUMINUM ASSOCIATION ALLOY 6061-T6 UNLESS OTHERWISE NOTED.
C. WHERE ALUMINUM IS IN CONTACT WITH CONCRETE OR MASONRY SURFACES, CONTACT SURFACE SHALL BE COATED.
D. MATERIAL AND PROCEDURES FOR WELDING ALUMINUM SHALL BE IN ACCORDANCE WITH AWS D1.2. ALUMINUM FILLER SHALL BE ALLOY 5356.

ACCEPTABLE POST INSTALLED ANCHOR PRODUCTS:

A. THE FOLLOWING ANCHOR PRODUCTS HAVE BEEN APPROVED BY THE ICC FOR USE IN CRACKED CONCRETE. THIS LIST IS PROVIDED FOR THE CONTRACTOR TO USE AS A RESOURCE FOR ALTERNATE MANUFACTURERS AND ANCHOR TYPES. IF AN ALTERNATE IS DESIRED FROM THIS LIST, THE CONTRACTOR IS TO NOTIFY THE E.O.R. SO THAT PROPER SIZE AND EMBEDMENT MAY BE SPECIFIED.
B. LISTED ANCHORS MAY NOT BE AN EQUIVALENT TO THOSE SPECIFIED IN THE PLANS.

ADHESIVE ANCHORS:
- HILTI HIT-HY 200
- HILTI HIT-RE 500-V3 EPOXY
- SIMPSON SET-3G EPOXY
- SIMPSON AT-XP ACRYLIC
- DEWALT AC200+ ACRYLIC
- DEWALT / POWERS PURE 110+ EPOXY
- ITW RED HEAD EPCON G5 EPOXY
- ITW RED HEAD EPCON S7 EPOXY

WEDGE ANCHORS / EXPANSION ANCHORS:
- HILTI KWIK BOLT TZ EXPANSION ANCHOR
- HILTI HSL-3 HEAVY DUTY EXPANSION ANCHOR
- SIMPSON STRONG-BOLT 2 WEDGE ANCHOR
- DEWALT / POWERS POWER-STUD+ SD1 EXPANSION ANCHOR
- DEWALT / POWERS POWER-STUD+ SD2 EXPANSION ANCHOR

SCREW ANCHORS:
- HILTI KWIK HUS-EZ (KH-EZ) SCREW ANCHOR
- SIMPSON TITEN HD SCREW ANCHOR
- DEWALT SCREW-BOLT + SCREW ANCHOR

STRUCTURAL INSPECTION AND TESTING:

A. CONTRACTOR SHALL PROVIDE WRITTEN STATEMENT OF RESPONSIBILITY TO THE BUILDING OFFICIAL AND OWNER PRIOR TO COMMENCEMENT OF WORK AS REQUIRED BY OSSC SECTION 1704.2.3.
B. ALL CONSTRUCTION SHALL BE INSPECTED IN CONFORMANCE WITH THE OREGON STRUCTURAL SPECIALTY CODE.
C. ALL ITEMS NOTED AS REQUIRING SPECIAL INSPECTION PER THE OREGON STRUCTURAL SPECIALTY CODE IN ACCORDANCE WITH SECTION 1705, SHALL BE PERFORMED BY A QUALIFIED PERSON WHO CAN DEMONSTRATE COMPETENCE FOR THE PARTICULAR TYPE OF CONSTRUCTION BEING INSPECTED. THE SPECIAL INSPECTIONS SHALL BE PERFORMED IN ADDITION TO THE INSPECTIONS REQUIRED BY THE OREGON STRUCTURAL SPECIALTY CODE, THE PLANS AND SPECIFICATIONS, THE ARCHITECT OF RECORD, AND THE BUILDING OFFICIALS.
   1. THE ITEMS MARKED WITH AN "X" SHALL BE INSPECTED IN ACCORDANCE WITH OSSC SECTION 1705 BY A CERTIFIED SPECIAL INSPECTOR FROM AN ESTABLISHED TESTING AGENCY. FOR MATERIAL SAMPLING AND TESTING REQUIREMENTS, REFER TO THE MATERIAL SAMPLING AND TESTING SECTION, THE PROJECT SPECIFICATIONS AND THE SPECIFIC GENERAL NOTES SECTIONS. THE TESTING AGENCY SHALL SEND COPIES OF ALL STRUCTURAL TESTING AND INSPECTION REPORTS DIRECTLY TO THE ARCHITECT, ENGINEER, CONTRACTOR AND BUILDING OFFICIAL. ANY MATERIALS WHICH FAIL TO MEET THE PROJECT SPECIFICATIONS SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE CONTRACTOR FOR CORRECTION, THEN, IF UNCORRECTED, TO THE PROPER DESIGN AUTHORITY AND TO THE BUILDING OFFICIAL. THE SPECIAL INSPECTOR SHALL SUBMIT A FINAL SIGNED REPORT STATING WHETHER THE WORK REQUIRING SPECIAL INSPECTION WAS TO THE BEST OF THE INSPECTOR'S KNOWLEDGE, IN CONFORMANCE WITH THE APPROVED PLANS AND SPECIFICATIONS AND THE APPLICABLE WORKMANSHIP PROVISIONS OF THE CODE SPECIAL INSPECTION TESTING REQUIREMENTS APPLY EQUALLY TO ALL BIDDER DESIGNED COMPONENTS.
   2. CONTINUOUS SPECIAL INSPECTION MEANS THAT THE SPECIAL INSPECTOR IS ON THE SITE AT ALL TIMES OBSERVING THE WORK REQUIRING THE SPECIAL INSPECTION. PERIODIC SPECIAL INSPECTION MEANS THAT THE SPECIAL INSPECTOR IS ON THE SITE AT TIME INTERVALS NECESSARY TO CONFIRM THAT ALL WORK REQUIRING SPECIAL INSPECTION IS IN COMPLIANCE.
   3. INSPECTION FOR PREFABRICATED CONSTRUCTION SHALL BE THE SAME AS IF THE MATERIAL USED IN THE CONSTRUCTION TOOK PLACE ON SITE. CONTINUOUS INSPECTION WILL NOT BE REQUIRED DURING PREFABRICATION IF THE APPROVED AGENCY CERTIFIES THE CONSTRUCTION AND FURNISHES EVIDENCE OF COMPLIANCE.
   4. INSPECTIONS FOR NAILING, BOLTING, ANCHORING AND OTHER FASTENING OF COMPONENTS WITHIN THE SEISMIC-FORCE-RESISTING SYSTEM, INCLUDING DRAG STRUTS, BRACES AND HOLDOWNS, WHERE FASTENER SPACING IS 4" OC OR LESS.
   5. POST INSTALLED ANCHORS REQUIRE PERIODIC INSPECTION (OSSC TABLE 1705.3) UNLESS A MORE STRINGENT REQUIREMENT IS IMPOSED BY THE INDIVIDUAL ANCHOR'S RESEARCH REPORT.
D. OWNER OR OWNERS REPRESENTATIVE TO RETAIN AN APPROVED SPECIAL INSPECTOR TO OBSERVE AND APPROVE ALL REQUIRED SPECIAL INSPECTION ITEMS.
E. SPECIAL INSPECTION REPORTS TO BE PROVIDED TO THE BUILDING OFFICIAL & DESIGN PROFESSIONALS IN A TIMELY MANNER AND IN ACCORDANCE WITH OSSC SECTION 1704.2.4.

STRUCTURAL INSPECTION AND TESTING:

A. CONTRACTOR SHALL PROVIDE WRITTEN STATEMENT OF RESPONSIBILITY TO THE BUILDING OFFICIAL AND OWNER PRIOR TO COMMENCEMENT OF WORK AS REQUIRED BY OSSC SECTION 1704.2.3.
B. ALL CONSTRUCTION SHALL BE INSPECTED IN CONFORMANCE WITH THE OREGON STRUCTURAL SPECIALTY CODE.
C. ALL ITEMS NOTED AS REQUIRING SPECIAL INSPECTION PER THE OREGON STRUCTURAL SPECIALTY CODE IN ACCORDANCE WITH SECTION 1705, SHALL BE PERFORMED BY A QUALIFIED PERSON WHO CAN DEMONSTRATE COMPETENCE FOR THE PARTICULAR TYPE OF CONSTRUCTION BEING INSPECTED. THE SPECIAL INSPECTIONS SHALL BE PERFORMED IN ADDITION TO THE INSPECTIONS REQUIRED BY THE OREGON STRUCTURAL SPECIALTY CODE, THE PLANS AND SPECIFICATIONS, THE ARCHITECT OF RECORD, AND THE BUILDING OFFICIALS.
   1. THE ITEMS MARKED WITH AN "X" SHALL BE INSPECTED IN ACCORDANCE WITH OSSC SECTION 1705 BY A CERTIFIED SPECIAL INSPECTOR FROM AN ESTABLISHED TESTING AGENCY. FOR MATERIAL SAMPLING AND TESTING REQUIREMENTS, REFER TO THE MATERIAL SAMPLING AND TESTING SECTION, THE PROJECT SPECIFICATIONS AND THE SPECIFIC GENERAL NOTES SECTIONS. THE TESTING AGENCY SHALL SEND COPIES OF ALL STRUCTURAL TESTING AND INSPECTION REPORTS DIRECTLY TO THE ARCHITECT, ENGINEER, CONTRACTOR AND BUILDING OFFICIAL. ANY MATERIALS WHICH FAIL TO MEET THE PROJECT SPECIFICATIONS SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE ARCHITECT. ALL DISCREPANCIES SHALL BE BROUGHT TO THE PROPER DESIGN AUTHORITY AND TO THE BUILDING OFFICIAL. THE SPECIAL INSPECTOR SHALL SUBMIT A FINAL SIGNED REPORT STATING WHETHER THE WORK REQUIRING SPECIAL INSPECTION WAS TO THE BEST OF THE INSPECTOR'S KNOWLEDGE, IN CONFORMANCE WITH THE APPROVED PLANS AND SPECIFICATIONS AND THE APPLICABLE WORKMANSHIP PROVISIONS OF THE CODE SPECIAL INSPECTION TESTING REQUIREMENTS APPLY EQUALLY TO ALL BIDDER DESIGNED COMPONENTS.
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   3. INSPECTION FOR PREFABRICATED CONSTRUCTION SHALL BE THE SAME AS IF THE MATERIAL USED IN THE CONSTRUCTION TOOK PLACE ON SITE. CONTINUOUS INSPECTION WILL NOT BE REQUIRED DURING PREFABRICATION IF THE APPROVED AGENCY CERTIFIES THE CONSTRUCTION AND FURNISHES EVIDENCE OF COMPLIANCE.
   4. INSPECTIONS FOR NAILING, BOLTING, ANCHORING AND OTHER FASTENING OF COMPONENTS WITHIN THE SEISMIC-FORCE-RESISTING SYSTEM, INCLUDING DRAG STRUTS, BRACES AND HOLDOWNS, WHERE FASTENER SPACING IS 4" OC OR LESS.
   5. POST INSTALLED ANCHORS REQUIRE PERIODIC INSPECTION (OSSC TABLE 1705.3) UNLESS A MORE STRINGENT REQUIREMENT IS IMPOSED BY THE INDIVIDUAL ANCHOR'S RESEARCH REPORT.
D. OWNER OR OWNERS REPRESENTATIVE TO RETAIN AN APPROVED SPECIAL INSPECTOR TO OBSERVE AND APPROVE ALL REQUIRED SPECIAL INSPECTION ITEMS.
E. SPECIAL INSPECTION REPORTS TO BE PROVIDED TO THE BUILDING OFFICIAL & DESIGN PROFESSIONALS IN A TIMELY MANNER AND IN ACCORDANCE WITH OSSC SECTION 1704.2.4.

GENERAL - SPECIAL INSPECTIONS

SYSTEM or MATERIAL	OSSC CODE REFERENCE	CODE or STANDARD REFERENCE	FREQUENCY (NOTE 6)		REMARKS
			CONTINUOUS	PERIODIC	
FABRICATORS	1705.11 1704.2.5				SPECIAL INSPECTION IS REQUIRED FOR STRUCTURAL LOAD-BEARING MEMBERS AND ASSEMBLIES FABRICATED ON THE PREMISES OF A FABRICATOR'S SHOP, SPECIAL INSPECTIONS SHALL BE PERFORMED DURING FABRICATION. PERFORMING SPECIAL INSPECTIONS IS NOT REQUIRED, WHERE FABRICATOR HAS BEEN APPROVED AS AN APPROVED FABRICATOR, PER SECTION 1704.2.5.1.
DEFERRED SUBMITTALS				X	SPECIAL INSPECTION REQUIREMENTS FOR DEFERRED SUBMITTAL ITEMS, INCLUDING REQUIREMENTS FOR DESIGNATED SEISMIC SYSTEMS IN ACCORDANCE WITH OSSC SECTION 1705.13.4 IF APPLICABLE, TO BE SPECIFIED BY THE SYSTEM ENGINEER AND INCLUDED WITH DEFERRED SUBMITAL DOCUMENTS.
SUBMITTALS TO THE BUILDING OFFICIAL1	1704.5			X	CERTIFICATES OF COMPLIANCE, REPORTS OF PRE-CONSTRUCTION TESTS, OR REPORTS OF MATERIAL PROPERTIES SHALL BE SUBMITTED TO THE BUILDING OFFICIAL.
PRE-ENGINEERED STRUCTURES	1705.1.1	MBMA	X	X	REFER TO DEFERRED SUBMITTALS AND FABRICATORS REQUIREMENTS
POST INSTALLED ADHESIVE ANCHORS WITH SUSTAINED TENSION LOADS INSTALLED HORIZONTALLY OR AT AN UPWARD INCLINE IN HARDENED CONCRETE AND COMPLETED MASONRY			X		
POST INSTALLED MECHANICAL ANCHORS AND ADHESIVE ANCHORS (EXCLUDING CONDITIONS NOTED ABOVE) IN HARDENED CONCRETE AND COMPLETED MASONRY				X	
WIND RESISTING COMPONENTS - SPECIAL INSPECTIONS					
ROOF COVERING, ROOF DECK AND ROOF FRAMING CONNECTIONS	1705.12.3			X	
EXTERIOR WALL COVERING AND WALL CONNECTIONS TO ROOF AND FLOOR DIAPHRAGMS AND FRAMING	1705.12.3			X	

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SINCE 1925
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NO.	DATE	DESCRIPTION	BY
		REVISIONS	

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING
0 IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY
1"

DSN. CBS
DRN. SMC
CKD. CBS
DATE: MAY 26

REGISTERED PROFESSIONAL ENGINEER
63202
DIGITALLY SIGNED
OREGON
CAMERON B. SWEARINGEN
2026
EXPIRES: JUNE 30, 2028

WESTECH ENGINEERING, INC.
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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

STRUCTURAL GENERAL NOTES

DRAWING
S002
20 OF 223

JOB NUMBER
231048

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SPECIAL INSPECTION TABLES

SOILS/GEOTECHNICAL - SPECIAL INSPECTIONS

SYSTEM or MATERIAL	INSPECTION				REMARKS
	OSSC CODE REFERENCE	CODE or STANDARD REFERENCE	FREQUENCY (NOTE 6)		
			CONTINUOUS	PERIODIC	
SOILS					
VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY	1705.6	GEOTECHNICAL REPORT		X	UNDER DIRECT SUPERVISION OF THE GEOTECHNICAL ENGINEER
VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL				X	
PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS				X	
DURING FILL PLACEMENT, VERIFY USE OF PROPER MATERIALS AND PROCEDURES IN ACCORDANCE WITH THE PROVISIONS OF THE APPROVED GEOTECHNICAL REPORT. VERIFY DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL.			X		
PRIOR TO PLACEMENT OF COMPACTED FILL, INSPECT SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY				X	

SOILS/GEOTECHNICAL - TESTING

SYSTEM or MATERIAL	INSPECTION				REMARKS
	OSSC CODE REFERENCE	CODE or STANDARD REFERENCE	FREQUENCY (NOTE 6)		
			CONTINUOUS	PERIODIC	
FILL IN-PLACE DENSITY OR PREPARED SUBGRADE DENSITY	1705.6	VARIES; GEOTECHNICAL REPORT OR MINIMUM PER OSSC APPENDIX J107.5, WHICHEVER IS GREATER		X	UNDER DIRECT SUPERVISION OF THE GEOTECHNICAL ENGINEER
MATERIAL VERIFICATION		VARIES; CLASSIFICATION AND TESTING OF CONTROLLED FILL MATERIALS		X	UNDER DIRECT SUPERVISION OF THE GEOTECHNICAL ENGINEER
TEST ELEMENTS	1705.6 1705.7		REFERENCE SPECIFICATIONS FOR PERFORMANCE VARIFICATION AND PROOF LOAD TESTING REQUIREMENTS		BY THE GEOTECHNICAL ENGINEER
FILL IN-PLACE DENSITY OR PREPARED SUBGRADE DENSITY	1705.10	ASTM D4945, ASTM D5882, ASTM D6760, OR ASTM D7949, OR OTHER APPROVED METHOD			WHENEVER THERE IS A DOCUMENTED CONCERN AN ENGINEERING ASSESSMENT IS REQUIRED AND SHALL INCLUDE TESTS FOR DEFECTS

CONCRETE - SPECIAL INSPECTIONS

SYSTEM or MATERIAL	INSPECTION				REMARKS
	OSSC CODE REFERENCE	CODE or STANDARD REFERENCE	FREQUENCY (NOTE 6)		
			CONTINUOUS	PERIODIC	
GENERAL	1705.6 1705.7	ACI 318: 26.13			SPECIAL INSPECTIONS OF CONCRETE SHALL CONFORM TO THE REQUIREMENTS OF SECTION 1705.3 OF THE IBC AND SECTION 26.13 OF ACI 318.
REINFORCING STEEL	1901.5	ACI 318: CH. 20, 25.2, 25.3, 26.6.1-26.6.3		X	REINFORCING TO COMPLY WITH ALL CODE PROTECTION, SPACING AND TOLERANCE LIMITS.
INSPECT ANCHORS/BOLTS CAST IN CONCRETE		ACI 318:	X	X	ALL CAST-IN-PLACE ANCHORS/BOLTS SHALL BE VISUALLY INSPECTED. REFERENCE STEEL INSPECTIONS FOR ADDITIONAL INSTALLATION, MATERIAL AND WELDING INSPECTIONS OF STEEL ITEMS EMBEDDED IN CONCRETE (HEADED STUDS, DBA'S, ETC.)
VERIFYING USE OF REQUIRED MIX DESIGN(S)	1904.1 1904.2 1908	ACI 318: CH. 19, 26.4.3, 26.4.4		X	
CONCRETE SPECIMENS FOR TESTING		ASTM C172 ASTM C31 ACI 318: 26.5, 26.12	X		PRIOR TO CONCRETE PLACEMENT, FABRICATE CONCRETE SPECIMENS FOR TESTING. SEE THE CONCRETE TESTING TABLE FOR ADDITIONAL INFORMATION.
CONCRETE/SHOTCRETE PLACEMENT, NON-SHRINK GROUT	1908	ACI 318: 26.5, 26.13.3.2(A)	X		
CONCRETE/SHOTCRETE CURING	1908.1	ACI 318: 26.5.3 - 26.5.5		X	VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURES AND TECHNIQUES
VERIFICATION OF IN-SITU CONCRETE PRIOR TO REMOVAL OF FORMS AND SHORES FROM ELEVATED BEAMS AND SLABS		ACI 318: 26.11.2		X	
VERIFICATION OF FORMWORK		ACI 318: 26.11.1.2(B), 26.13.3.3		X	SPECIAL INSPECTIONS APPLY TO SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED
EMBEDDED ITEMS IN CONCRETE				X	ALL NON-STRUCTURAL EMBEDDED ITEMS, SUCH AS CONDUITS, PIPES AND SLEEVES, SHALL BE REVIEWED FOR CONFORMANCE WITH STRUCTURAL DOCUMENTS FOR SIZE, SPACING, LOCATION, EDGE DISTANCE AND TRIM REINFORCING.
REINFORCING STEEL MECHANICAL COUPLERS, TERMINATORS AND FORMSAVERS		ICC EVALUATION REPORTS		X	

CONCRETE - TESTING

SYSTEM or MATERIAL	INSPECTION		FREQUENCY (NOTE 6)	REMARKS
	OSSC CODE REFERENCE	CODE or STANDARD REFERENCE		
CONCRETE STRENGTH	1705.3 ASTM C172 ASTM C 31 ACI 318 26.12, ACI 318 26.5	ASTM C39	EACH 150 CY NOR LESS THAN EACH 5000 SF OF SLAB OR WALL PLACED EACH SHIFT	FABRICATE SPECIMENS AT TIME FRESH CONCRETE IS PLACED
CONCRETE SLUMP		ASTM C143		
CONCRETE AIR CONTENT		ASTM C231		
CONCRETE TEMPERATURE		ASTM C1064		

MASONRY MINIMUM VERIFICATION REQUIREMENTS

MINIMUM VERIFICATION	REQUIRED FOR QUALITY ASSURANCE LEVEL			CODE REFERENCE	REMARKS
	QUALITY ASSURANCE LEVEL 1	QUALITY ASSURANCE LEVEL 2	QUALITY ASSURANCE LEVEL 3	TMS 602-16 TABLE 3 (S-25)	
PRIOR TO CONSTRUCTION, VERIFICATION OF COMPLIANCE OF SUBMITTALS.	R	R	R	ART. 1.5	
PRIOR TO CONSTRUCTION VERIFICATION OF F'M AND F'AAC, EXCEPT WHERE SPECIFICALLY EXEMPTED BY THE CODE.	NR	R	R	ART. 1.4 B	
DURING CONSTRUCTION, VERIFICATION OF SLUMP FLOW AND VISUAL STABILITY INDEX (VSI) WHEN SELF-CONSOLIDATING GROUT IS DELIVERED TO THE PROJECT SITE.	NR	R	R	ART. 1.5 & 1.6.3	
DURING CONSTRUCTION, VERIFICATION OF F'M AND F'AAC FOR EVERY 5,000 SQ. FT.	NR	NR	R	ART 1.4 B	
DURING CONSTRUCTION, VERIFICATION OF PROPORTIONS OF MATERIALS AS DELIVERED TO THE PROJECT SITE FOR PREMIXED OR PREBLENDED MORTAR, PRESTRESSING GROUT, AND GROUT OTHER THAN SELF-CONSOLIDATING GROUT.	NR	NR	R	ART 1.4 B	

NOTE: R=REQUIRED, NR=NOT REQUIRED (SEE NOTE 6)

MASONRY MINIMUM SPECIAL INSPECTION REQUIREMENTS

INSPECTION TASK	FREQUENCY			CODE REFERENCE		REMARKS
	QUALITY ASSURANCE LEVEL 1	QUALITY ASSURANCE LEVEL 2	QUALITY ASSURANCE LEVEL 3	TMS 402-16	TMS 602-16 TABLE 4 (S-26)	
1. AS MASONRY CONSTRUCTION BEGINS, VERIFY THAT THE FOLLOWING ARE IN COMPLIANCE:						
A. PROPORTIONS OF SITE-PREPARED MORTAR	NR	P	P		ART. 2.1, 2.6 A, & 2.6 C	
B. GRADE, TYPE, AND SIZE OF REINFORCEMENT AND ANCHOR BOLTS, AND PRESTRESSING TENDONS AND ANCHORAGES	NR	P	P		ART 3.4 & 3.6 A	
2. PRIOR TO GROUTING, VERIFY THAT THE FOLLOWING ARE IN COMPLIANCE:						
A. GROUT SPACE	NR	P	C		ART. 3.2 D & 3.2 F	
B. PLACEMENT OF REINFORCEMENT, CONNECTORS, AND ANCHOR BOLTS	NR	P	C	SEC. 6.1, 6.3.1, 6.3.6 &6.3.7	ART. 3.2 E & 3.4	REFERENCE THE GENERAL TABLE FOR SPECIAL INSPECTION REQUIRED FOR POST INSTALLED ANCHORS INTO COMPLETED MASONRY.
C. PROPORTIONS OF SITE-PREPARED GROUT AND PRESTRESSING GROUT FOR BONDED TENDONS	NR	P	P		ART. 2.6 B & 2.4 G.1.B	
3. VERIFY COMPLIANCE OF THE FOLLOWING DURING CONSTRUCTION:						
A. MATERIALS AND PROCEDURES WITH THE APPROVED SUBMITTALS	NR	P	P		ART. 1.5	
B. PLACEMENT OF MASONRY UNITS AND MORTAR JOINT CONSTRUCTION	NR	P	P		ART. 3.3 B	
C. SIZE AND LOCATION OF STRUCTURAL MEMBERS	NR	P	P		ART. 3.3 F	
D. TYPE, SIZE AND LOCATION OF ANCHORS, INCLUDING OTHER DETAILS OF ANCHORAGE OF MASONRY TO STRUCTURAL MEMBERS, FRAMES, OR OTHER CONSTRUCTION	NR	P	C	SEC. 1.2.1 (E), 6.2.1 & 6.3.1		
E. PREPARATION, CONSTRUCTION, AND PROTECTION OF MASONRY DURING COLD WEATHER (TEMPERATURE BELOW 40 F) OR HOT WEATHER (TEMPERATURE ABOVE 90 F)	NR	P	P		ART. 1.8 C & 1.8 D	
F. PLACEMENT OF GROUT AND PRESTRESSING GROUT FOR BONDED TENDONS IS IN COMPLIANCE	NR	C	C		ART. 3.5 & 3.6 C	
4. OBSERVE PREPARATION OF GROUT SPECIMENS, MORTAR SPECIMENS, AND/ OR PRISMS	NR	P	C		ART. 1.4 B.2.A.3, 1.4 B.2.B.3, 1.4 B.2.C.3, 1.4 B.3 & 1.4 B.4	

NOTE: R=REQUIRED, NR=NOT REQUIRED, P=PERIODIC, C=CONTINUOUS (SEE NOTE 6)

MSC ENGINEERS
CONSULTING STRUCTURAL ENGINEERS
SINCE 1925

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING
0 IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY 1"

DSN. CBS
DRN. SMC
CKD. CBS
DATE: MAY 26

REGISTERED PROFESSIONAL ENGINEER
63202
DIGITALLY SIGNED
OREGON
CAMERON B. SWEARINGEN
EXPIRES: JUNE 30, 2028

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
3841 Fairview Industrial Dr. S.E., Suite 100, Salem, OR 97302
Phone: (503) 585-2474 Fax: (503) 585-3986
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CITY OF AUMSVILLE, OREGON

WASTEWATER TREATMENT PLANT IMPROVEMENTS

SPECIAL INSPECTION TABLES

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SPECIAL INSPECTION TABLES

MASONRY - REQUIRED TESTING		
MINIMUM VERIFICATION	IBC CODE REFERENCE OR REFERENCED STANDARD	REMARKS
UNIT STRENGTH METHOD-MASONRY UNIT	IBC 1705.4 , TMS 602 1.4.B, TMS 602.2.3, TMS 602 2.3 E, ASTM REFERENCES PER REMARKS	CONCRETE MASONRY (ASTM C90) CONCRETE MASONRY UNIT MATERIALS TO CONFORM TO ASTM C55, C73, C90, C129, C744, OR C1634 AS SPECIFIED. CLAY MASONRY (ASTM C62, ASTM C216, OR ASTM C652), CLAY OR SHALE MASONRY UNITS TO CONFORM TO ASTM C34, C56, C62, C126, C212, C216, C652, C1088, OR C1405 OR TO ANSI A 137.1 AS SPECIFIED. AAC MASONRY UNITS TO CONFORM TO ASTM C1691 AND ASTM C1693.
UNIT STRENGTH METHOD-COMPRESSIVE STRENGTH OF MORTAR	IBC 1705.4, TMS 602 2.1 , ASTM C270	MORTAR SHALL COMPLY WITH ASTM C270 . FOR AAC (ASTM C1660)
UNIT STRENGTH METHOD-COMPRESSIVE STRENGTH OF GROUT	IBC 1705.4, TMS 602 2.2, ASTM C476	GROUT SHALL COMPLY WITH ASTM C476. WHEN F'M EXCEEDS 2,000 PSI PROVIDE GROUT COMPRESSIVE STRENGTH THAT EQUALS OR EXCEEDS f'm. DETERMINE COMPRESSIVE STRENGTH OF GROUT IN ACCORDANCE WITH ASTM C1019. DO NOT USE ADMIXTURES UNLESS ACCEPTABLE. FIELD ADDITION OF ADMIXTURES IS NOT PERMITTED IN SELF-CONSOLIDATING GROUT.
PRISM TEST METHOD	IBC 1705.4, TMS 602 1.4 B.2.3, 1.4 B.4, ASTM C1314	FOR BOTH CLAY AND CONCRETE MASONRY,TEST IN ACCORDANCE WITH ASTM C1314. DETERMINE LENGTH, WIDTH AND HEIGHT DIMENSIONS OF THE PRISM AND TEST PRISMS WHEN AT LEAST 28 DAYS OLD IN ACCORDANCE WITH ASTM C1314.
TESTING PRISMS FROM CONSTRUCTED MASONRY	IBC 1705.4, TMS 602 1.4 B 4.A, 1.4 B 4.B, 1.4 B 4.C, ASTM C1532	PRISM SAMPLING AND REMOVAL- FOR EACH 5000 SQUARE FEET OF WALL AREA IN QUESTION, SAW-CUT A MINIMUM OF THREE PRISMS FROM COMPLETED MASONRY. SELECT, REMOVE, AND TRANSPORT PRISMS PER ASTM C1532/C1532M.

NOTE: 1.4 B.1 OR 1.4 B.2 EITHER THE UNIT STRENGTH METHOD OR THE PRISM TEST METHOD MAY BE CHOSEN TO SATISFY SPECIAL INSPECTIONS COMPRESSIVE STRENGTH FOR EACH WYTHE.

WOOD - SPECIAL INSPECTIONS					
SYSTEM or MATERIAL	OSSC CODE REFERENCE	CODE or STANDARD REFERENCE	FREQUENCY (NOTE 6) CONTINUOUS	FREQUENCY (NOTE 6) PERIODIC	REMARKS
WOOD - REQUIRED STRUCTURAL SPECIAL INSPECTIONS					
FABRICATION OF PREFABRICATED STRUCTURAL ELEMENTS	1705.5			X	REFER TO INSPECTION OF FABRICATOR REQUIREMENTS
METAL PLATE CONNECTED WOOD TRUSSES SPANNING 60 FT OR GREATER	1705.5.2			X	VERIFY TEMPORARY INSTALLATION OF RESTRAINT/BRACES AND PERMANENT INDIVIDUAL TRUSS MEMBERS RESTRAINT/BRACES ARE INSTALLED IN ACCORDANCE WITH APPROVED TRUSS SUBMITTAL
WOOD - REQUIRED WIND RESISTANCE INSPECTIONS					
NAILING, BOLTING, ANCHORING, AND OTHER FASTENING OF COMPONENTS WITHIN THE MAIN WIND-FORCE RESISTING SYSTEM, INCLUDING WOOD SHEAR WALLS, WOOD DIAPHRAGMS, COLLECTORS, BRACES AND HOLDOWNS	1705.12.1			X	SPECIAL INSPECTIONS ARE NOT REQUIRED FOR WOOD SHEAR WALLS, SHEAR PANELS AND DIAPHRAGMS WHERE THE LATERAL RESISTANCE IS PROVIDED BY STRUCTURAL SHEATHING AND FASTENER SPACING IS MORE THAN 4" ON CENTER. REFER TO TABLE 2 FOR MATERIAL SPECIFIC REQUIREMENTS.

STEEL - SPECIAL INSPECTIONS					
SYSTEM or MATERIAL	OSSC CODE REFERENCE	CODE or STANDARD REFERENCE	FREQUENCY (NOTE 6) CONTINUOUS/ PERFORM	FREQUENCY (NOTE 6) PERIODIC/ OBSERVE	REMARKS
CONTRACTOR QUALITY CONTROL REQUIREMENTS		AISC 360 CHAPTER N	X	X	CONTRACTOR TO PROVIDE QUALITY CONTROL FOR ALL ITEMS INDICATED TO BE OBSERVED AND/OR PERFORMED IN TABLE BELOW
STEEL FABRICATION					
FABRICATION OF STRUCTURAL ELEMENTS	1704.2.5.1	AISC 360		X	REFER TO INSPECTION OF FABRICATOR REQUIREMENTS
MATERIAL VERIFICATION OF STRUCTURAL STEEL COMPONENTS	1705.2.1 ~~2203.1~~ TABLE 1705.2-3	ASTM A6 ASTM STANDARDS SPECIFIED IN CONSTRUCTION DOCUMENTS AISC 360 A3.1 AISC 360 N2.1		X	CERTIFIED MILL TEST REPORTS
MATERIAL VERIFICATION OF HIGH STRENGTH BOLTS, NUTS, AND WASHERS	1705.2.1.2 AISC 360 M2.5 TABLE 1705.2-1	AISC 360 A3.3 AISC 360 N3.2 ASTM STANDARDS SPECIFIED IN CONSTRUCTION DOCUMENTS RCSC 2.1		X	MANUFACTURER'S CERTIFIED TEST REPORTS
MATERIAL VERIFICATION OF ANCHOR BOLTS AND THREADED RODS		AISC 360 A3.4 AISC 360 N3.2 ASTM STANDARDS SPECIFIED IN CONSTRUCTION DOCUMENTS		X	MANUFACTURER'S CERTIFIED TEST REPORTS
MATERIAL VERIFICATION OF WELD FILLER METALS	1705.2.1.1 TABLE 1705.2-5	AISC 360 A3.5 AISC 360 N3.2 APPLICABLE AWS A5 DOCUMENTS		X	MANUFACTURER'S CERTIFIED TEST REPORTS
STRUCTURAL STEEL WELDING					
VERIFYING USE OF PROPER WPS'S	1705.2.1 AWS D1.1	AISC 360 N3.2			RETAIN A RECORD OF WELDING PROCEDURE SPECIFICATIONS
VERIFYING WELDER QUALIFICATIONS	1705.2	AWS D1.1		X	RETAIN A RECORD OF QUALIFICATION CARDS
COMPLETE AND PARTIAL JOINT PENETRATION GROOVE WELDS	TABLE 1705.2-6A	AWS D1.1 CLAUSE 6	X		
MULTIPASS FILLET WELDS			X		
SINGLE PASS FILLET WELDS GREATER THAN 5/16"			X		ALL WELDS VISUALLY INSPECTED PER AWS D1.16.9
PLUG AND SLOT WELDS			X		
SINGLE PASS FILLET WELDS LESS THAN OR EQUAL TO 5/16"				X	
VERIFICATION OF JOINT & CONNECTION DETAILS INCLUDING MEMBER AND COMPONENT LOCATIONS, BRACING, AND STIFFENERS AT EACH CONNECTION	TABLE 1705.2-7	AWS D1.1		X	
HIGH-STRENGTH BOLTING					
SNUG-TIGHT BOLT INSTALLATION	1705.2.1 TABLE 1705.2-2 AISC 360 M2.5 AISC 360 N5.6	RCSC SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS SECTION 9 AISC 360 SECTION M2.5		X	ALL CONNECTIONS VISUALLY INSPECTED AND VERIFIED SNUG
PRETENSIONED BOLT INSTALLATION USING TURN-OF-THE-NUT METHOD WITH MATCH MARKING, DIRECT TENSION INDICATOR METHOD, OR TWIST-OFF TYPE TENSION CONTROL BOLT METHOD				X	ALL CONNECTIONS VISUALLY INSPECTED. CONNECTIONS USING DIRECT TENSION INDICATORS, ALL BOLTS SHALL BE INSPECTED AFTER SNUGGING AND AFTER PRETENSIONING
PRETENSIONED BOLT INSTALLATION USING TURN-OF-THE-NUT METHOD WITHOUT MATCH MARKING OR CALIBRATED WRENCH METHOD			X		ALL CONNECTIONS VISUALLY INSPECTED
INSPECTION TASKS PRIOR TO BOLTING					
MANUFACTURER'S CERTIFICATIONS AVAILABLE FOR FASTENER MATERIALS	1705.2.1.2 TABLE 1705.2-2	AISC 360 TABLE N5.6-1 AISC 360 M2.5	X		
FASTENERS MARKED IN ACCORDANCE WITH ASTM REQUIREMENTS				X	
PROPER FASTENERS SELECTED FOR THE JOINT DETAIL (GRADE, TYPE, BOLT LENGTH, IF THREADS ARE TO BE EXCLUDED FROM THE SHEAR PLANE)				X	
PROPER BOLTING PROCEDURE SELECTED FOR JOINT DETAIL				X	
CONNECTING ELEMENTS< INCLUDING THE APPROPRIATE FAYING SURFACE CONDITION AND HOLE PREPARATION, IF SPECIFIED, MEET APPLICABLE REQUIREMENTS				X	
PRE-INSTALLATION VERIFICATION TESTING BY INSTALLATION PERSONNEL OBSERVED AND DOCUMENTED FOR FASTENER ASSEMBLIES AND METHODS USED				X	
PROPER STORAGE PROVIDED FOR BOLTS, NUTS, WASHERS AND OTHER FASTENER COMPONENTS				X	

MSC CONSULTING STRUCTURAL ENGINEERS SINCE 1925
1420 Tigard Street Phone NE Suite 210 Salem, OR 97301 503.585.2713 mscengineers.com

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VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING
0 IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY 1"

DSN. CBS
DRN. SMC
CKD. CBS
DATE: MAY 26

REGISTERED PROFESSIONAL ENGINEER 63202 DIGITALLY SIGNED OREGON
EXPIRES: JUNE 30, 2028

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
3841 Fairview Industrial Dr. S.E., Suite 100, Salem, OR 97302
Phone: (503) 585-2474 Fax: (503) 585-3986
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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

SPECIAL INSPECTION TABLES

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SPECIAL INSPECTION TABLES

STEEL - SPECIAL INSPECTIONS					
SYSTEM or MATERIAL	OSSC CODE REFERENCE	CODE or STANDARD REFERENCE	FREQUENCY (NOTE 6)		REMARKS
			CONTINUOUS/ PERFORM	PERIODIC/ OBSERVE	
INSPECTION TASKS DURING BOLTING					
FASTENER ASSEMBLIES, OF SUITABLE CONDITION, PLACED IN ALL HOLES AND WASHERS (IF REQUIRED) ARE POSITIONED AS REQUIRED	1705.2.1.2 TABLE 1705.2-2	AISC 360 TABLE N5.6-2 AISC M2.5 RCSC SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS SECTION 9		X	
JOINT BROUGHT TO THE SNUG-TIGHT CONDITION PRIOR TO THE PRETENSIONING OPERATION				X	
FASTENER COMPONENT NOT TURNED BY THE WRENCH PREVENTED FROM ROTATING				X	
FASTENERS ARE PRETENSIONED IN ACCORDANCE WITH THE RCSC SPECIFICATION, PROGRESSING SYSTEMATICALLY FROM THE MOST RIGID POINT TOWARD THE FREE EDGES				X	
INSPECTION TASKS AFTER BOLTING					
DOCUMENT ACCEPTANCE OR REJECTION OF BOLTED CONNECTIONS	1705.2.1.2 TABLE 1705.2-2	AISC 360 TABLE N5.6-3		X	

STAINLESS STEEL - SPECIAL INSPECTIONS					
SYSTEM or MATERIAL	OSSC CODE REFERENCE	CODE or STANDARD REFERENCE	FREQUENCY (NOTE 6)		REMARKS
			CONTINUOUS/ PERFORM	PERIODIC/ OBSERVE	
FABRICATION OF STAINLESS STEEL ELEMENTS	1705.2			X	REFER TO INSPECTION OF FABRICATOR REQUIREMENTS
MATERIAL VERIFICATION OF STAINLESS STEEL	1705.2			X	CERTIFIED MILL REPORTS
MATERIAL VERIFICATION OF BOLTS	1705.2			X	MANUFACTURER'S CERTIFIED TEST REPORTS
MATERIAL VERIFICATION OF WELD FILLER METALS	1705.2	ACI 318 26.6.4 AWS D1.4 SECTION 8		X	MANUFACTURER'S CERTIFIED TEST REPORTS
VERIFYING USE OF PROPER WPS'S				X	COPY OF WELDING PROCEDURE SPECIFICATIONS
VERIFYING WELDER QUALIFICATIONS				X	COPY OF QUALIFICATION CARDS
COMPLETE & PARTIAL PENETRATION GROOVE WELDS			X		ALL WELDS VISUALLY INSPECTED PER AWS D1.6 6.28.1
MULTIPASS FILLET WELDS			X		
SINGLE PASS FILLET WELDS				X	

STEEL - TESTING				
SYSTEM or MATERIAL	OSSC CODE REFERENCE	CODE or STANDARD REFERENCE	FREQUENCY (NOTE 6)	REMARKS
STEEL				
ULTRASONIC (UT) TESTING OF WELDS	1705.2.1	AWS D1.1 6.13 & 6.14.3		ALL C.J.P. WELDS 5/16" AND THICKER REQUIRE UT TESTING.
MAGNETIC PARTICLE (MT) TESTING OF WELDS	1705.2.1	AWS D1.1 6.14.4 AISC360 N5.5c		REQUIRED AT THERMALLY CUT ACCESS HOLES WHERE FLANGE THICKNESS EXCEEDS 2" FOR ROLLED SHAPES OR WHEN THE WEB THICKNESS EXCEEDS 2" FOR BUILT-UP SHAPES. REQUIRED WHERE SPECIFICALLY NOTED ON DRAWINGS
PRE-CONSTRUCTION TESTING OF WELDING STUDS, WELDED REINFORCING BARS AND DBA'S	1705.2.1	AWS D1.1 7.7.1	EACH SIZE AND TYPE OF STUD/BAR EACH SHIFT	THIS TESTING PERFORMED BY CONTRACTOR AND CONFIRMED BY SPECIAL INSPECTOR
STUD/DBA APPLICATION QUALIFICATION	1705.2.1	AWS D1.1 7.6	NON-PREQUALIFIED APPLICATIONS	THIS TESTING PERFORMED BY CONTRACTOR AND CONFIRMED BY SPECIAL INSPECTOR
PRE-INSTALLATION VERIFICATION OF PRETENSIONED HIGH STRENGTH BOLTS	1705.2.1	RCSC SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS SECTION 7	EACH COMBINATION OF DIAMETER, LENGTH, GRADE, AND LOT TO BE USED IN THE WORK	
STAINLESS STEEL				
ULTRASONIC (UT) TESTING OF WELDS		AWS D1.6 6.13 AWS D1.6.7		REQUIRED WHERE SPECIFICALLY NOTED ON DRAWINGS

ALUMINUM - SPECIAL INSPECTIONS					
SYSTEM or MATERIAL	OSSC CODE REFERENCE	CODE or STANDARD REFERENCE	FREQUENCY (NOTE 6)		REMARKS
			CONTINUOUS	PERIODIC	
MATERIAL VERIFICATION OF STRUCTURAL ALUMINUM	1705.1.1			X	CERTIFIED MILL TEST REPORTS
MATERIAL VERIFICATION OF BOLTS				X	MANUFACTURER'S CERTIFIED TEST REPORTS
MATERIAL VERIFICATION OF WELD FILLER METALS		AWS D1.2 SECTION 5		X	MANUFACTURER'S CERTIFIED TEST REPORTS
VERIFYING USE OF PROPER WPS'S				X	RETAIN A RECORD OF WELDING PROCEDURE SPECIFICATIONS
VERIFYING WELDER QUALIFICATIONS				X	RETAIN A RECORD OF QUALIFICATION CARDS
COMPLETE AND PARTIAL PENETRATION GROOVE WELDS			X		ALL WELDS VISUALLY INSPECTED PER AWS 1.2, 5.5
MULTI-PASS FILLET WELDS			X		
SINGLE PASS FILLET WELDS				X	

ALUMINUM - TESTING					
SYSTEM or MATERIAL	OSSC CODE REFERENCE	CODE or STANDARD REFERENCE	FREQUENCY (NOTE 6)		REMARKS
			CONTINUOUS	PERIODIC	
LIQUID PENETRANT (PT) AND RADIOGRAPHIC (RT) TESTING OF WELDS		PT - AWS D1.2 5.7.5 RT - AWS D1.2 5.10 & 5.15			REQUIRED WHERE SPECIFICALLY NOTED ON DRAWINGS

REQUIRED SPECIAL INSPECTIONS for SEISMIC RESISTANCE					
SYSTEM or MATERIAL	OSSC CODE REFERENCE	CODE or STANDARD REFERENCE	FREQUENCY (NOTE 6)		REMARKS
			CONTINUOUS	PERIODIC	
ARCHITECTURAL COMPONENTS					
INSTALLATION OF ANCHORAGE ACCESS FLOORS	1705.12.5.1			X	
ERECTION AND FASTENING OF EXTERIOR CLADDING, INTERIOR AND EXTERIOR NONBEARING WALLS AND INTERIOR AND EXTERIOR VENEER 30 FT AND GREATER IN HEIGHT ABOVE GRADE OR WALKING SURFACE	1705.13.5			X	
ERECTION AND FASTENING OF EXTERIOR CLADDING AND INTERIOR AND EXTERIOR VENEER WEIGHING MORE THAN 5 PSF	1705.13.5			X	
ERECTION AND FASTENING OF INTERIOR AND EXTERIOR NONBEARING WALLS WEIGHING MORE THAN 15 PSF	1705.13.5			X	
ANCHORAGE OF SUSPENDED CEILING SYSTEMS		ASCE 7-16 SECTION 13.5.6		X	REQUIRED PER STATE OF OREGON BUILDING CODES DIVISION INTERPRETATIONS
INSTALLATION OF OTHER SEISMIC SUPPORTS FOR ARCHITECTURAL SYSTEMS AND THEIR COMPONENTS	1705.13.5			X	
STORAGE RACK SYSTEMS					
MATERIALS USED, TO VERIFY COMPLIANCE WITH ONE OR MORE OF THE MATERIAL TEST REPORTS IN ACCORDANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS	1705.13.7			X	
FABRICATED STORAGE RACK ELEMENTS		IBC SECTION 1704.2.5		X	
STORAGE RACK ANCHORAGE INSTALLATION		ANSI/MH16.1 SECTION 7.3.2		X	
COMPLETED STORAGE RACK SYSTEM, TO INDICATE COMPLIANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS				X	
ELECTRICAL COMPONENTS					
INSTALLATION OF ANCHORAGE OF ELECTRICAL EQUIPMENT FOR EMERGENCY OR STANDBY POWER SYSTEMS	1705.13.6			X	
INSTALLATION OF ANCHORAGE OF OTHER ELECTRICAL EQUIPMENT				X	
INSTALLATION OF VIBRATION ISOLATION SYSTEMS WHERE THE CONSTRUCTION DOCUMENTS REQUIRE A NOMINAL CLEARANCE OF 0.25" OR LESS BETWEEN THE EQUIPMENT SUPPORT FRAME AND RESTRAINT				X	
INSTALLATION OF ELECTRICAL EQUIPMENT WHERE AUTOMATIC FIRE SPRINKLER SYSTEMS ARE INSTALLED				X	OSSC 1705.12.6.1 MINIMUM CLEARANCES PROVIDED PER ASCE 13.2.3, ASCE 1705.12.6.2, OTHER CLEARANCES BETWEEN BUILDING SPRINKLER SYSTEM AND BUILDING STRUCTURE
PLUMBING MECHANICAL COMPONENTS					
INSTALLATION OF PIPING SYSTEM MEANT TO CARRY HAZARDOUS MATERIALS AND THEIR ASSOCIATED MECHANICAL UNITS	1705.13.6			X	
INSTALLATION OF OTHER SEISMIC SUPPORTS FOR MECHANICAL SYSTEMS AND THEIR COMPONENTS				X	
INSTALLATION OF MECHANICAL EQUIPMENT, INCLUDING DUCT WORK, PIPING AND THEIR STRUCTURAL SUPPORTS WHERE AUTOMATIC FIRE SPRINKLER SYSTEMS ARE INSTALLED				X	OSSC 1705.12.6.2 CHECKING FOR MINIMUM CLEARANCES. FLEXIBLE SPRINKLER HOSE FITTINGS ARE EXEMPT FROM THIS REQUIREMENT
BUILDING MECHANICAL COMPONENTS					
INSTALLATION OF HVAC DUCTWORK THAT WILL CONTAIN HAZARDOUS MATERIALS	1705.13.6			X	
DESIGNATED SEISMIC SYSTEM VERIFICATION					
DESIGNATED SEISMIC SYSTEM VERIFICATION	1705.13.4			X	VERIFY THAT THE LABEL ANCHORAGE OR MOUNTING CONFORMS TO THE CERTIFICATE OF COMPLIANCE. DESIGNATED SEISMIC SYSTEMS SHALL BE QUALIFIED IN ACCORDANCE WITH ASCE 7-16 13.2.2
SEISMIC ISOLATION SYSTEMS					
SEISMIC ISOLATION SYSTEMS IN SEISMICALLY ISOLATED STRUCTURES	1705.13.8			X	REQUIRED DURING FABRICATION AND INSTALLATION OF ISOLATOR UNITS AND ENERGY DISSIPATING DEVICES

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VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING
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1"

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DRN. SMC
CKD. CBS
DATE: MAY '26

REGISTERED PROFESSIONAL ENGINEER
63202
DIGITALLY SIGNED
OREGON
CAMERON B. WESTRICH
RENEWAL: JUNE 30, 2028

WESTRICH ENGINEERING, INC.
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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

SPECIAL INSPECTION TABLES

DRAWING
S005
23 OF 223

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231048

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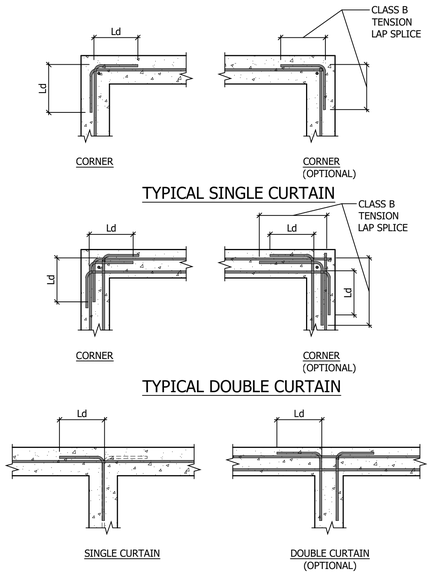
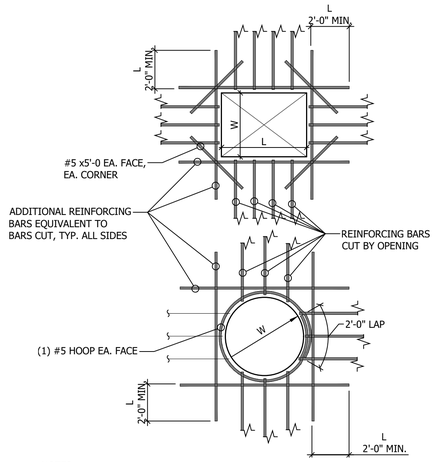
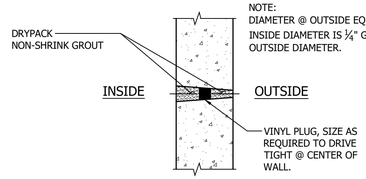


WALLS, SLABS, & FOOTINGS — Fc = 4,000, SEE NOTES 1 & 2				
BAR SIZE	Ld		CLASS B TENSION LAP	
	TOP BARS (NOTE 2)	OTHER BARS	TOP BARS (NOTE 2)	OTHER BARS
#3	18	14	24	18
#4	25	19	32	25
#5	31	24	40	31
#6	37	28	48	37
#7	54	42	70	54
#8	62	47	80	62
#9	69	53	90	69
#10	77	59	100	77
#11	85	65	110	85

WALLS, SLABS, & FOOTINGS REINFORCEMENT NOTES
1. FOR GRADE 60 UNCOATED BARS & NORMAL WEIGHT CONCRETE.
2. TOP BARS ARE HORIZONTAL BARS W/ MORE THAN 12" DEPTH OF FRESH CONCRETE CAST BELOW THEM.



NOTES:
1. REINFORCEMENT IN OTHER DIRECTION SHALL BE TREATED IN A SIMILAR MANNER.
2. "W" & "L" = DIMENSION OF OPENING. FOR CIRCULAR OPENINGS, "W"=DIAMETER.
3. ALL OPENINGS IN WALLS & SLABS THAT DISRUPT BARS IN ANY DIRECTION SHALL CONFORM TO DETAILS
4. SEE MECHANICAL & ARCHITECTURAL DRAWINGS FOR SLAB & WALL OPENINGS NOT SHOWN ON STRUCTURAL DRAWINGS.
5. OPENING DETAILS SHOWN ARE TYPICAL UNLESS NOTED OTHERWISE.



NOTE:
DIAMETER @ OUTSIDE EQUALS ONE INCH.
INSIDE DIAMETER IS ¼" GREATER THAN OUTSIDE DIAMETER.

CONSTRUCTION STEPS:
1. SANDBLAST OR MECHANICALLY ROUGHEN TAPERED TIE-HOLE SURFACES.
2. DRIVE IN VINYL PLUG.
3. PROVIDE BONDING AGENT INSIDE & DRYPACK W/ NON-SHRINK GROUT WHILE STILL TACKY.
4. PROVIDE BONDING AGENT OUTSIDE & DRYPACK W/ NON-SHRINK GROUT WHILE STILL TACKY.

REINFORCING @ WALL INTERSECTIONS
N.T.S.
1 / S006

REINFORCEMENT
DEVELOPMENT & LAP SPLICE LENGTHS
N.T.S.
2 / S006

REINFORCING @ WALL & SLAB OPENINGS
N.T.S.
3 / S006

TIE THROUGH-BOLT
N.T.S.
4 / S006

BEAMS, JOISTS, & COLUMNS — F'c = 4,000, SEE NOTES 1 & 2				
BAR SIZE	Ld		CLASS B TENSION LAP	
	TOP BARS (NOTE 2)	OTHER BARS	TOP BARS (NOTE 2)	OTHER BARS
#3	12	12	16	16
#4	18	14	24	18
#5	29	22	38	29
#6	37	28	48	37
#7	54	42	70	54
#8	62	47	80	62
#9	104	80	136	104
#10	117	90	153	117
#11	130	100	170	130

BEAMS, JOISTS, & COLUMNS REINFORCEMENT NOTES
1. FOR GRADE 60 UNCOATED BARS & NORMAL WEIGHT CONCRETE.
2. TOP BARS ARE HORIZONTAL BARS W/ MORE THAN 12" DEPTH OF FRESH CONCRETE CAST BELOW THEM.

REINFORCEMENT
DEVELOPMENT & LAP SPLICE LENGTHS
N.T.S.
5 / S006

MSC ENGINEERS
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3430 Ridgewood Place N.E.
Salem, OR 97301
503.585.2474
mscengineers.com

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	REVISIONS		

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CKD. CBS
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63202
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OREGON
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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

TYPICAL
CONCRETE DETAILS 1

DRAWING
S006
24 OF 223

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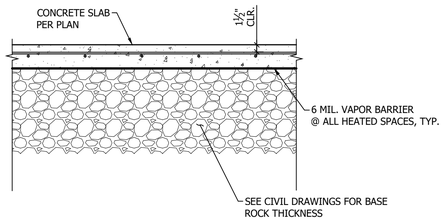
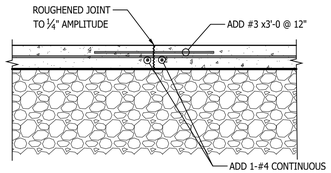
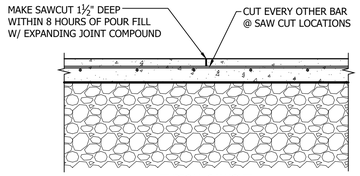


TYPICAL FLOOR SLAB CONSTRUCTION
NON-HYDRAULIC STRUCTURE



CONSTRUCTION JOINT
NON-HYDRAULIC STRUCTURE

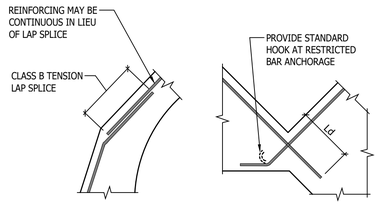


TYPICAL SAWCUT
NON-HYDRAULIC STRUCTURE

BUILDING FLOOR SLAB ON GRADE

N.T.S.

1 S007

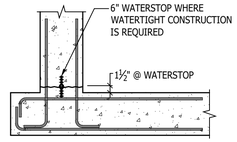


OUTSIDE CORNER INSIDE CORNER

REINFORCING @ CORNERS

N.T.S.

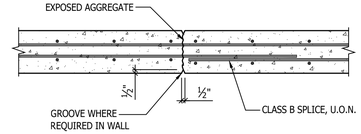
2 S007



WALL BASE CONSTRUCTION JOINT

N.T.S.

3 S007

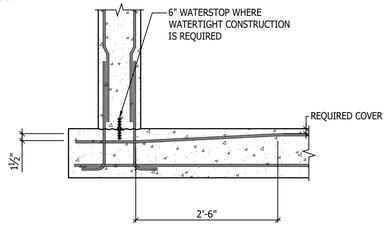


VERTICAL WALL OR SLAB CONSTRUCTION JOINT NON-HYDRAULIC STRUCTURE

N.T.S.

4 S007

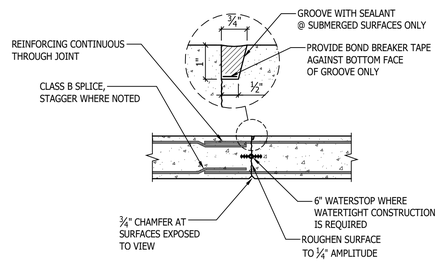
NOTE:
SEE TYPICAL BASE FOR ADDITIONAL INFORMATION.
SINGLE CURTAIN REINFORCING SIMILAR



ALTERNATIVE BASE CONSTRUCTION JOINT

N.T.S.

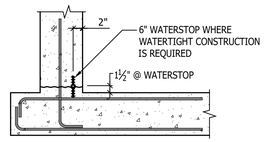
5 S007



VERTICAL WALL OR SLAB CONSTRUCTION JOINT HYDRAULIC STRUCTURES

N.T.S.

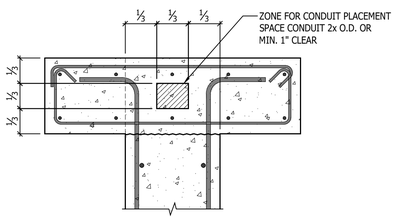
6 S007



WALL BASE CONSTRUCTION JOINT W/ SINGLE CURTAIN REINFORCEMENT

N.T.S.

7 S007



WALKWAY CONDUIT

N.T.S.

8 S007

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345 Trapper Place NE
Salem, OR 97301
503-585-2474
msceng@msceng.com

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CKD. CBS
DATE: MAY '26

REGISTERED PROFESSIONAL ENGINEER
63202
DIGITALLY SIGNED
OREGON
CAMERON B. WEATHERLY
2026
EXPIRES: JUNE 30, 2028

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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

TYPICAL CONCRETE DETAILS 2

DRAWING
S007
25 OF 223

JOB NUMBER
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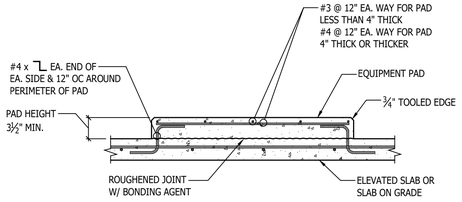


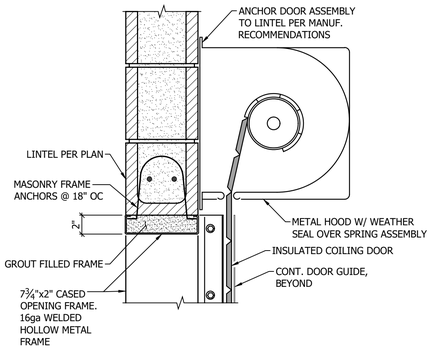
TYPE C

NOTE:
SEE EQUIPMENT PAD NOTES

EQUIPMENT PAD

N.T.S.

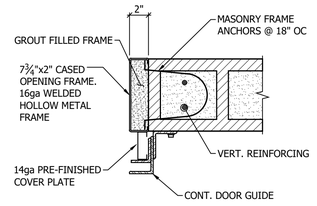
1 / S008



TYPICAL COILING DOOR HEAD

1 1/2" = 1'-0"

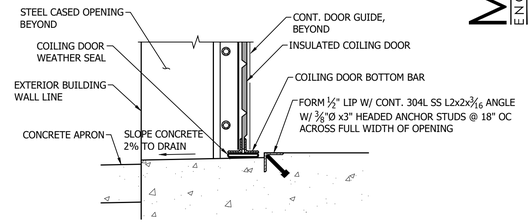
2 / S008



TYPICAL COILING DOOR JAMB

1 1/2" = 1'-0"

3 / S008



NOTES:
1. EASE THE EDGE OF THE SS EMBEDDED ANGLE & REMOVE ALL BURRS AFTER FABRICATION

TYPICAL COILING DOOR SILL

1 1/2" = 1'-0"

4 / S008

EQUIPMENT PAD NOTES

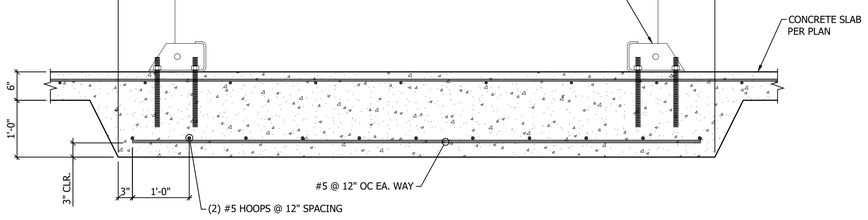
1. COORDINATE EQUIPMENT PADS FOR ALL EQUIPMENT WITH MECHANICAL & ELECTRICAL DRAWINGS.
2. PROVIDE EQUIPMENT PAD DIMENSIONS, HEIGHT, AND LOCATION AS REQUIRED BY THE EQUIPMENT MANUFACTURER AND APPROVED BY THE ENGINEER. VERIFY EQUIPMENT PAD DIMENSIONS, HEIGHT, AND LOCATION WITH THE EQUIPMENT MANUFACTURER'S REVIEWED SHOP DRAWINGS BEFORE THE PAD IS INSTALLED.
3. PROVIDE ANCHOR BOLT SIZE, TYPE, QUANTITY, LOCATION, AND THREAD PROJECTION AS REQUIRED BY THE EQUIPMENT MANUFACTURER AND APPROVED BY THE ENGINEER OF RECORD. PROVIDE MINIMUM DIAMETER ANCHOR BOLTS. VERIFY LOADS ON ANCHOR BOLTS DO NOT EXCEED ALLOWABLE WORKING LOADS SHOWN IN MANUFACTURERS LITERATURE. IF LOADS EXCEED THE MANUFACTURERS TABULATED VALUES, PROVIDE SPECIAL ANCHORAGE DETAILS APPROVED BY THE EQUIPMENT MANUFACTURER.
4. PROVIDE ANCHOR BOLT EDGE DISTANCE NOT LESS THAN THE MINIMUM TABULATED BELOW. INSTALL ANCHOR BOLTS TO PROVIDE A MINIMUM OF HORIZONTAL MOVEMENT IN ALL DIRECTIONS.
5. INSTALL EQUIPMENT PADS LEVEL UNLESS NOTED OTHERWISE.
6. SUPPORT THE EQUIPMENT BASE WITH WEDGES OR SHIMS DURING GROUTING. REMOVE TEMPORARY LEVELING NUTS BEFORE FINAL EQUIPMENT INSTALLATION. WEDGES OR SHIMS LEFT IN PLACE SHALL NOT BE EXPOSED TO VIEW.

EQUIPMENT PAD DIMENSIONS						
ANCHOR BOLT (A.B.) DIAMETER	½	⅝	¾	⅞	1	1¼
MINIMUM ANCHOR BOLT EDGE DISTANCE	3	3¾	4½	5¼	6	7½

EQUIPMENT PAD TABLE

N.T.S.

5 / S008



THICKENED SLAB @ EQUIPMENT/TANK

N.T.S.

6 / S008

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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

EQUIPMENT PAD & COILING DOOR DETAILS

DRAWING
S008
26 OF 223

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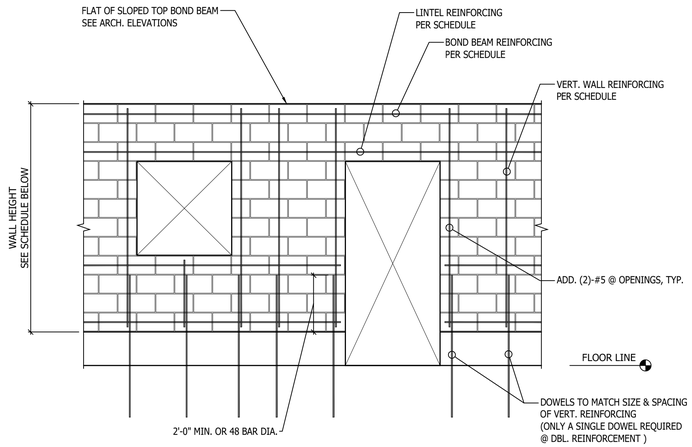
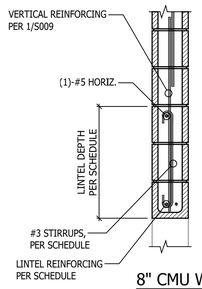


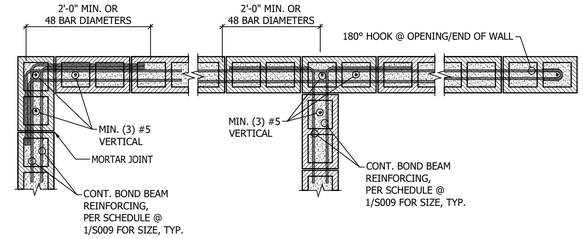
ELEVATION



8" CMU WALL

LINTEL REINFORCING SCHEDULE				
WALL	CLEAR SPAN	DEPTH	HORIZONTAL REINFORCING	STIRRUP
8"	4'-0" MAX.	8"	(2)-#4 BOTTOM	N/A
8"	4'-6" TO 6'-4"	16"	(2)-#4 BOTTOM	#3 @ 12"
8"	6'-6" TO 10'-0"	24"	(2)-#4 BOTTOM	#3 @ 12"

NOTES:
1. SCHEDULE APPLIES FOR LINTEL REINFORCING NOT SPECIFIED ELSEWHERE.
2. EXTEND HORIZONTAL REINFORCING A MINIMUM OF 2'-0" BEYOND BEARING. WHERE ANCHORAGE DISTANCE IS RESTRICTED, TERMINATE WITH 90 DEG STANDARD HOOK.

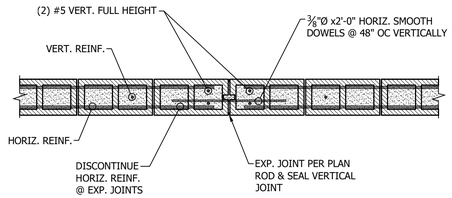


CORNER INTERSECTION END/JAMB

TYPICAL BOND BEAM REINFORCING DETAILS

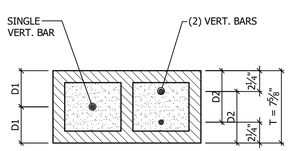
N.T.S.

3 / S009



MASONRY SHEARWALL REINFORCEMENT			
WALL THICKNESS	WALL HEIGHT	VERTICAL REINFORCING, SEE NOTE 5	BOND BEAM REINFORCING, SEE NOTE 5
8"	≤10'-0"	#5 @ 40"	(2)-#4 CONT. @ 48"

NOTES:
1. SPECIAL INSPECTION REQUIRED ON ALL MASONRY WORK.
2. SCHEDULE APPLIES FOR MASONRY WALL REINFORCING NOT SPECIFIED ELSEWHERE.
3. ALL MASONRY WALLS ARE SHEAR WALLS.
4. LAY MASONRY IN 48" MAXIMUM LIFTS.
5. TYP BOND BEAM AND VERTICAL REINFORCING DETAILS, SEE 3/S009
6. IN SHEAR WALLS, HORIZONTAL REINFORCING SHALL BE ANCHORED AROUND VERTICAL BARS AT ENDS OF WALL/WALL PIER WITH A STANDARD 180° HOOK.
7. HORIZONTAL REINFORCING SHALL CONFORM TO SCHEDULE ABOVE UNLESS NOTED OTHERWISE ON PLAN.
8. PLACE BARS AS SHOWN BELOW WHERE 2 VERTICAL BARS ARE REQUIRED. BARS SHALL BE CENTERED WHERE ONE BAR IS REQUIRED.



D1 = 3⅞"±
D2 = 5⅜"

TYPICAL MASONRY WALL REINFORCEMENT

N.T.S.

1 / S009

LINTEL REINFORCING

N.T.S.

2 / S009

TYPICAL MASONRY EXPANSION JOINT (E.J.)

N.T.S.

4 / S009

CONSULTING STRUCTURAL ENGINEERS
MSC ENGINEERS SINCE 1925
345 Trapper Road NE, Suite 100, Salem, OR 97301
503.585.2474 FAX 503.585.3986
msceng@msceng.com

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

DSN. CBS
DRN. SMC
CKD. CBS
DATE: MAY '26

REGISTERED PROFESSIONAL ENGINEER
63202
DIGITALLY SIGNED
OREGON
CAMERON B. SWEARINGIN
EXPIRES: JUNE 30, 2028

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
3841 Fabriview Industrial Dr. S.E., Suite 100, Salem, OR 97302
Phone: (503) 585-2474 Fax: (503) 585-3986
E-mail: westech@westech-eng.com

CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

TYPICAL MASONRY DETAILS

DRAWING
S009
27 OF 223

JOB NUMBER
231048

5/19/2026 7:25:56 AM
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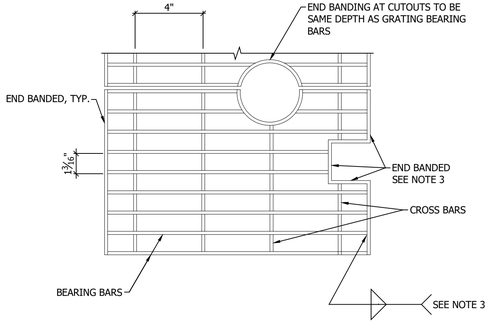
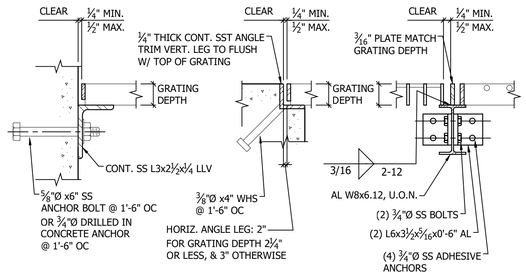
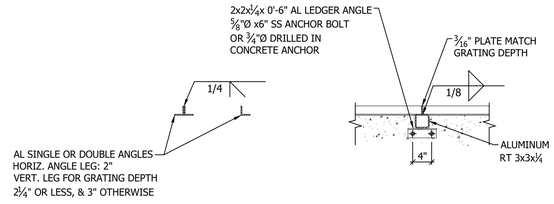






TYPE 1 TYPE 2 TYPE 3 TYPE 4 TYPE 5

SECTION ANGLE CROSS SUPPORTS

SECTION TUBE STOCK CROSS SUPPORT

ALUMINUM GRATING SUPPORT

N.T.S.

2 S010

ALUMINUM GRATING SCHEDULE (100 PSF OR 300#)			
MAXIMUM SPAN	BEARING BAR SIZE	MAXIMUM SPAN	BEARING BAR SIZE
3'-6"	1¼" x 3/16"	5'-6"	2" x 3/16"
4'-6"	1¾" x 3/16"	6'-6"	2½" x 3/16"

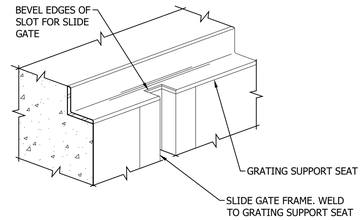
NOTES:

1. GRATING SHALL CONFORM TO METAL BAR GRATING MANUAL OF N.A.A.M.M. MARK P-19-4.
2. GRATING SHALL BE SWAGE LOCKED ALUMINUM. ALL SUPPORTS SHALL BE STAINLESS STEEL AS SHOWN IN 2/010.
3. GRATING SHALL BE SERRATED BARS.
4. END BAND SHALL BE ¼" LESS THAN GRATING DEPTH AND FLUSH WITH TOP OF GRATING. WELD ALL BEARING AND CROSS BARS TO END BANDS.
5. PROVIDE 4 SST GRATING HOLD DOWN CLIPS, ONE AT EACH CORNER, TYPICAL EACH PIECE.
6. MAXIMUM WEIGHT OF ANY ONE REMOVABLE PANEL TO BE 80 POUNDS.

ALUMINUM GRATING SCHEDULE

N.T.S.

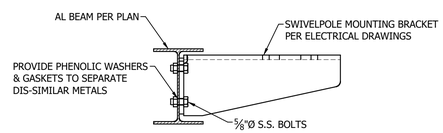
1 S010



GRATING @ SLIDE GATE

N.T.S.

5 S010



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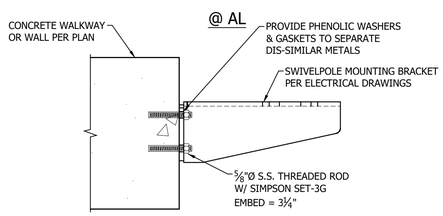
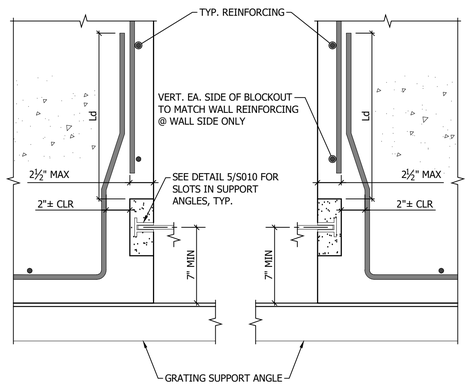


@ CONC.

LIGHT POLE MOUNT

1 1/2" = 1'-0"

8 S010



METAL WIDE FLANGE MOUNTING

1 1/2" = 1'-0"

9 S010

MSC CONSULTING STRUCTURAL ENGINEERS SINCE 1925
3427 Ryan Court Phone NE Suite 100 Salem, OR 97301 503.585.0747 msceng@msceng.com

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

DSN. CBS
DRN. SMC
CKD. CBS
DATE: MAY '26

REGISTERED PROFESSIONAL ENGINEER
63202
DIGITALLY SIGNED
OREGON
CAMERON B. WEAVER
EXPIRES: JUNE 30, 2028

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
3841 Fairview Industrial Dr. S.E., Suite 100, Salem, OR 97302
Phone: (503) 585-2474 Fax: (503) 585-3986
E-mail: westech@westech-eng.com

CITY OF AUMSVILLE, OREGON

WASTEWATER TREATMENT PLANT IMPROVEMENTS

TYPICAL METAL DETAILS

DRAWING
S010
28 OF 223

JOB NUMBER
231048

5/19/2026 7:25:58 AM
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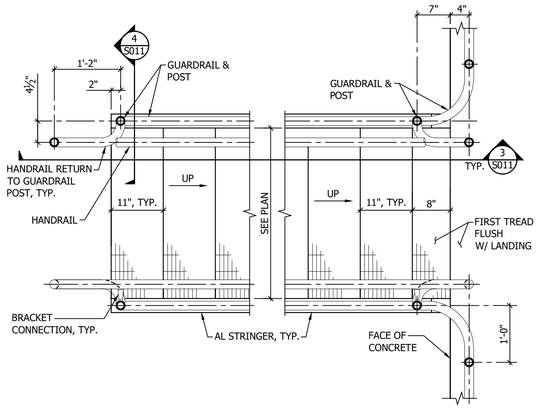
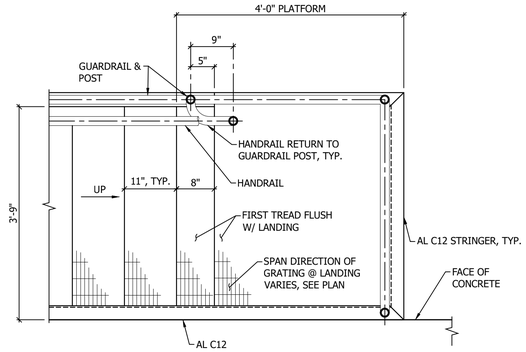


TYPICAL METAL STAIR

3/4" = 1'-0"

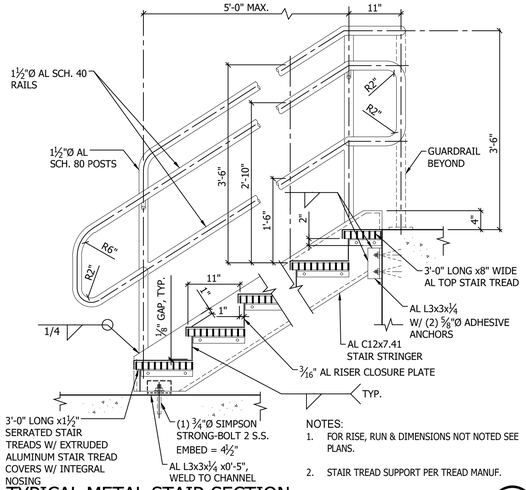
1 S011



TYPICAL METAL STAIR TO UPPER PLATFORM

3/4" = 1'-0"

2 S011

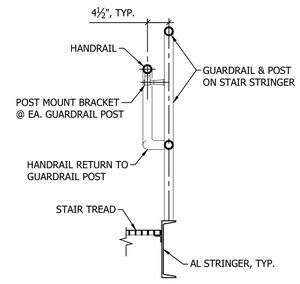


NOTES:
1. FOR RISE, RUN & DIMENSIONS NOT NOTED SEE PLANS.
2. STAIR TREAD SUPPORT PER TREAD MANUF.

TYPICAL METAL STAIR SECTION

3/4" = 1'-0"

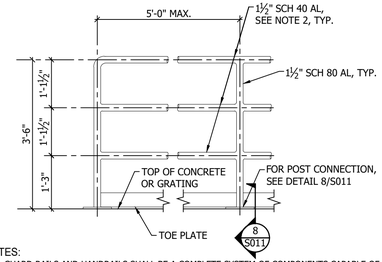
3 S011



HANDRAIL TO GUARDRAIL POST CONNECTION

3/4" = 1'-0"

4 S011

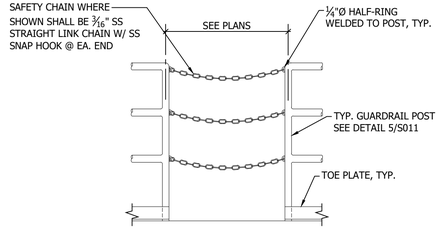


NOTES:
1. GUARD RAILS AND HANDRAILS SHALL BE A COMPLETE SYSTEM OF COMPONENTS CAPABLE OF WITHSTANDING A 200 LB LOAD AT ANY POINT HORIZONTAL OR VERTICAL ON THE RAILING SYSTEM OR 50 LB PER FOOT HORIZONTAL FORCE TOP RAIL.
2. ALUMINUM RAILING SYSTEM IS BASED ON ALUMAGUARD AND IS ILLUSTRATED FOR DESIGN INTENT.

TYPICAL GUARDRAIL

N.T.S.

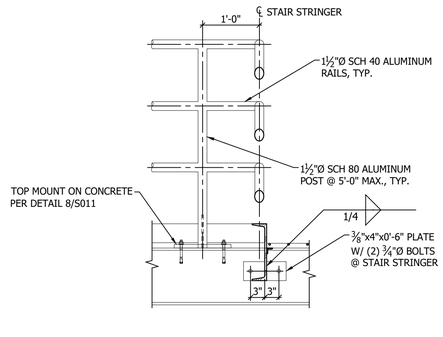
5 S011



GUARDRAIL SAFETY CHAIN

N.T.S.

6 S011

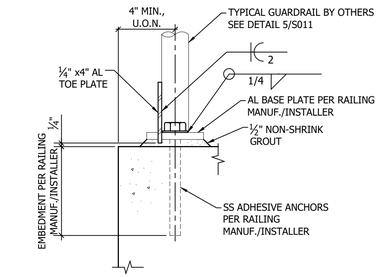


NOTES:
DETAIL PROVIDED FOR DESIGN INTENT.
FINAL DESIGN BY RAILING MANUFACTURER/INSTALLER.

TYPICAL GUARDRAIL SECTION

3/4" = 1'-0"

7 S011



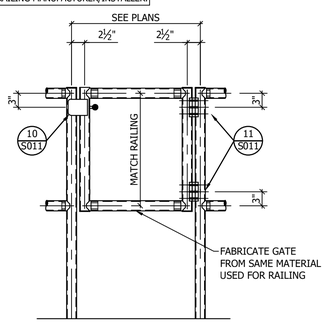
NOTES:
DETAIL PROVIDED FOR DESIGN INTENT.
FINAL DESIGN BY RAILING MANUFACTURER/INSTALLER.

CONCRETE TOP MOUNTING

N.T.S.

8 S011

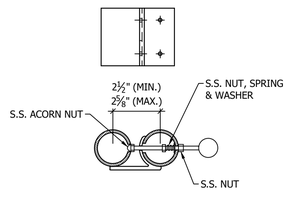
NOTES:
DETAIL PROVIDED FOR DESIGN INTENT.
FINAL DESIGN BY RAILING MANUFACTURER/INSTALLER.



TYPICAL HANDRAIL GATE

N.T.S.

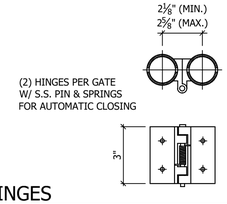
9 S011



GATE LATCH & STOP

N.T.S.

10 S011



GATE HINGES

N.T.S.

11 S011

MSC ENGINEERS
CONSULTING STRUCTURAL ENGINEERS
SINCE 1925
3430 Ridgewood Place NE
Salem, OR 97301
503.585.0787
mscengineers.com

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

VERIFY SCALE
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0 1"
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DSN. CBS
DRN. SMC
CKD. CBS
DATE: MAY 26

REGISTERED PROFESSIONAL ENGINEER
63202
DIGITALLY SIGNED
OREGON
CAMERON B. SWARTWOUT
2026
EXPIRES: JUNE 30, 2028

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
3841 Fairview Industrial Dr. S.E., Suite 100, Salem, OR 97302
Phone: (503) 585-2474 Fax: (503) 585-3986
E-mail: westech@westech-eng.com

CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

TYPICAL METAL DETAILS

DRAWING
S011
29 OF 223

JOB NUMBER
231048

5/19/2026 7:26:00 AM
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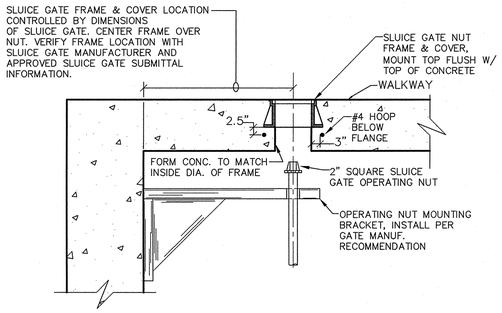
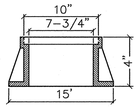


SLUICE GATE SECTION–DETAIL

NOTES:

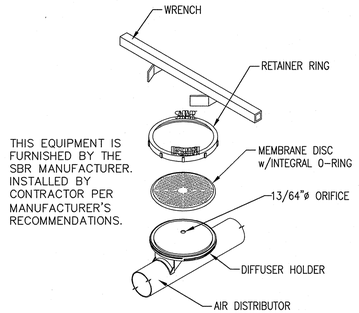
1. USE OLYMPIC FOUNDRY MODEL M107 8" VALVE FRAME & COVER.
2. COVER AND FRAME SHALL BE GRAY CAST IRON ASTM A–48, CLASS 30.
3. COVER AND FRAME TO BE MACHINED TO A TRUE BEARING ALL AROUND.



FRAME & COVER DETAIL

SLUICE GATE NUT FRAME & COVER DETAIL

N.T.S. 1 M001

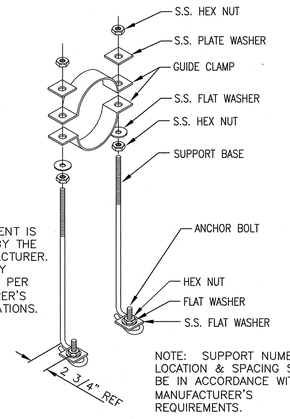


THIS EQUIPMENT IS FURNISHED BY THE SBR MANUFACTURER. INSTALLED BY CONTRACTOR PER MANUFACTURER'S RECOMMENDATIONS.

NOTE: DIFFUSER NUMBER, LOCATION & SPACING SHALL BE IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS.

EPDM DIFFUSER ASSEMBLY

N.T.S. 2 M001



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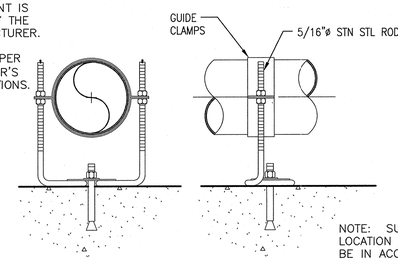
NOTE: SUPPORT NUMBER, LOCATION & SPACING SHALL BE IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS.

SIMPLE SUPPORT DETAIL

N.T.S. 3 M001



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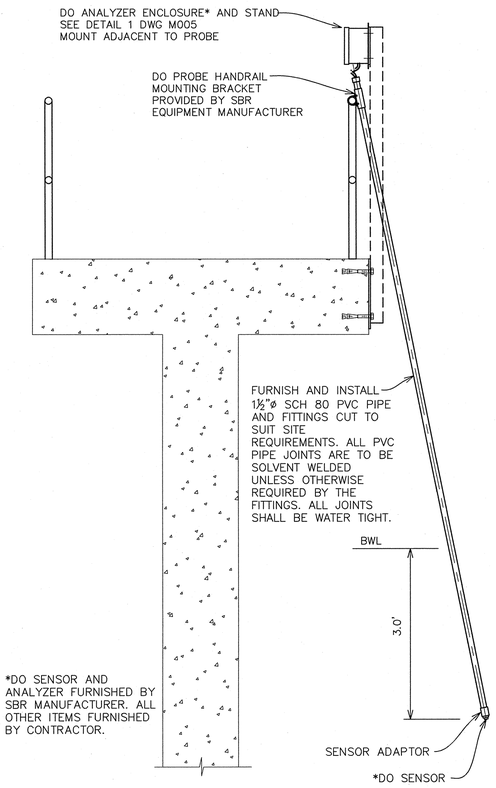
NOTE: SUPPORT NUMBER, LOCATION & SPACING SHALL BE IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS.

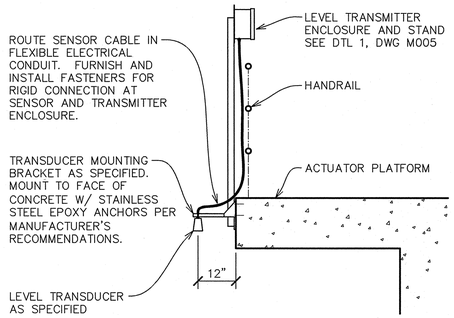
GUIDE SUPPORT DETAIL

N.T.S. 4 M001



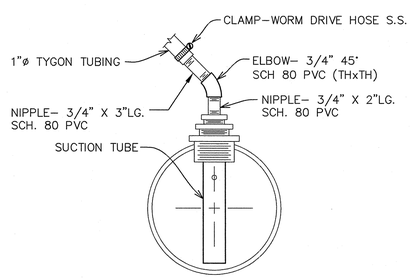
D.O. PROBE & ANALYZER DETAIL

N.T.S. 5 M001



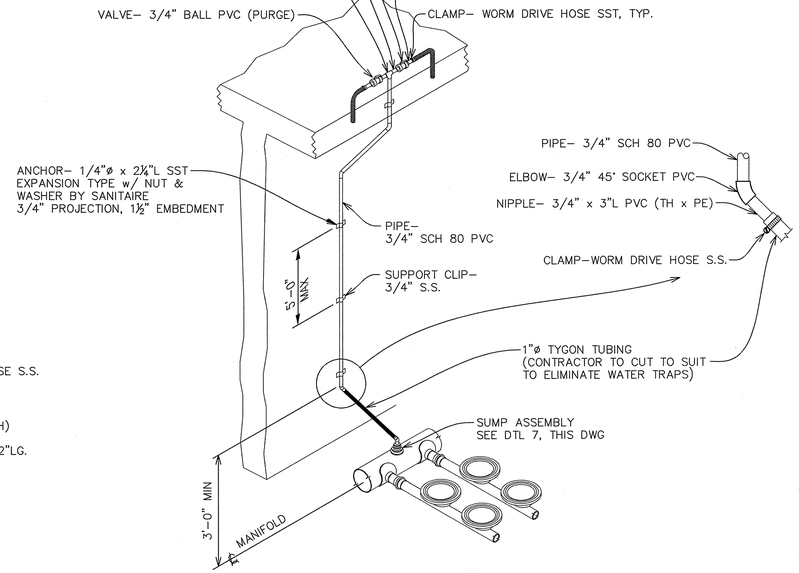
EQ BASIN LEVEL TRANSDUCER

N.T.S. 6 M001



PURGE SUMP DETAIL

N.T.S. 7 M001



PURGE SUMP ASSEMBLY

N.T.S. 8 M001

NO.	DATE	DESCRIPTION	BY
1		REVISIONS	

VERIFY SCALE BAR IS ONE INCH ON ORIGINAL DRAWING. IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY. 0 1"

DSN: CB
DRN: TMT
CKD: CB
DATE: MAY 2026

REGISTERED PROFESSIONAL ENGINEER OREGON JULY 14, 2006 CHRISTOPHER J. BRUCK 75647PE RENEWS: 12/31/2027

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
3841 Fairview Industrial Dr. S.E., Suite 100, Salem, OR 97302
Phone: (503) 585–2474 Fax: (503) 585–3986
E–mail: westech@westech–eng.com

CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

SBR MECHANICAL DETAILS

DRAWING M001
30 OF 223

JOB NUMBER 2599.3220.0

5/26/2026 12:14:12 PM
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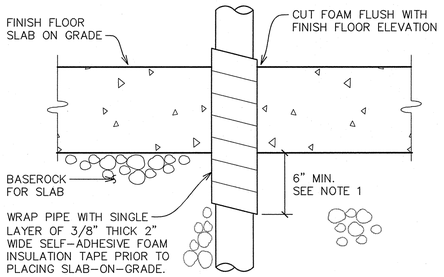
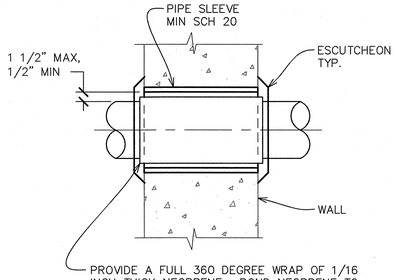


NOTES:

1. WRAP PIPE TO PREVENT CONCRETE FROM CONTACTING PIPE DURING PLACEMENT OF CONCRETE SLAB.

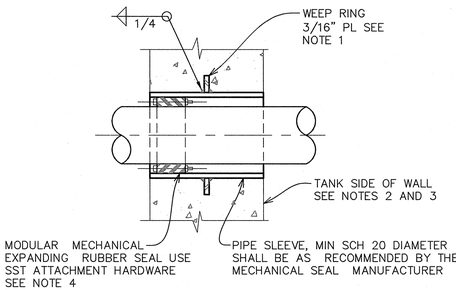
TYPE A PIPE PENETRATION

FOR FLOORS N.T.S. — 1 / M002



TYPE B PIPE PENETRATION

FOR WALLS N.T.S. — 2 / M002

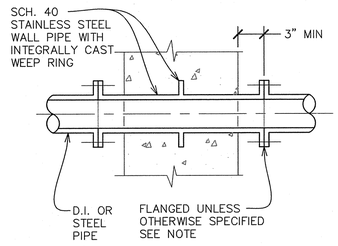


NOTES:

1. WEEP RINGS SHALL HAVE A MINIMUM DIAMETER 3 INCHES GREATER THAN THE OUTSIDE PIPE DIAMETER.
2. "TANK SIDE OF WALL" SHALL MEAN SIDE OF WALL NORMALLY EXPOSED TO LIQUID, EARTH, OR OUTSIDE ATMOSPHERE.
3. SEAL WITH MASTIC SEALANT WHERE WALL IS EXPOSED TO LIQUID, EARTH OR AN EXPLOSION HAZARD AREA.
4. WHEN MODULAR MECHANICAL EXPANDING RUBBER SEAL IS USED ON COPPER PIPE, PROVIDE GLASS REINFORCED NYLON PRESSURE PLATES IN PLACE OF STANDARD STEEL UNITS.

TYPE D PIPE PENETRATION

FOR WALLS N.T.S. — 3 / M002



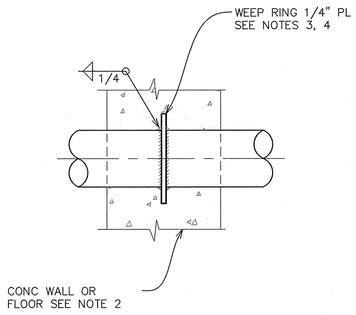
NOTE: FLANGE BOLT HOLES SHALL EQUALLY STRADDLE THE VERTICAL CENTER-LINE OF THE FLANGE TO ASSURE PROPER CONNECTION TO ADJOINING PIPE, VALVES AND FITTINGS.

TYPE F PIPE PENETRATION

FOR WALLS N.T.S. — 4 / M002

PIPE PENETRATION NOTES:

1. ALL STEEL SLEEVES SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION.
2. PROVIDE A MINIMUM OF 3" CLEARANCE BETWEEN REINFORCING STEEL AND FERROUS METAL PENETRATIONS.
3. INSULATION SHALL NOT EXTEND THROUGH SLEEVES, UNLESS OTHERWISE SPECIFIED.

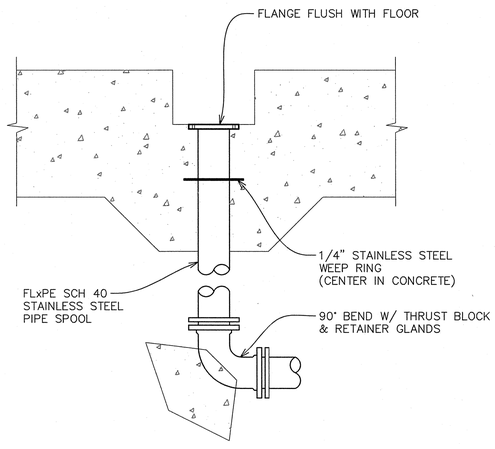


NOTES:

1. PROVIDE A MINIMUM OF 3" CLEARANCE BETWEEN REINFORCING STEEL AND FERROUS METAL PENETRATIONS.
2. WEEP RINGS SHALL HAVE A MINIMUM DIAMETER 3 INCHES GREATER THAN THE OUTSIDE PIPE DIAMETER.
3. PROVIDE A FULL 360 DEGREE WRAP OF 1/16 INCH THICK NEOPRENE. BOND NEOPRENE TO PIPE WITH A COMPATIBLE WATERPROOF ADHESIVE. EXTEND NEOPRENE 1 INCH MINIMUM BEYOND LIMITS OF PENETRATION SLEEVE.

TYPE K PIPE PENETRATION

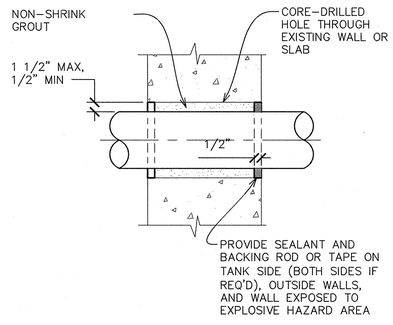
FOR FLOORS, WALLS & CEILINGS N.T.S. — 5 / M002



NOTE: PROVIDE A MINIMUM OF 3" CLEARANCE BETWEEN REINFORCING STEEL AND FERROUS METAL PENETRATIONS.

TYPE N PIPE PENETRATION

FOR FLOORS N.T.S. — 6 / M002



TYPE X1 PIPE PENETRATION

FOR EXTG FLOORS, WALLS & CEILINGS N.T.S. — 7 / M002

NO.	DATE	DESCRIPTION	BY
1		REVISIONS	

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING 0 1"
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

DSN. CB
DRN. TMT
CKD. CB
DATE: MAY 2026

REGISTERED PROFESSIONAL ENGINEER — OREGON — JAN. 14, 2005 — CHRISTOPHER J. BUDAYTO — 85473PE
RENEWS: 12/31/2027

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

PIPE PENETRATION DETAILS

DRAWING
M002
31 OF 223

JOB NUMBER
2599.3220.0

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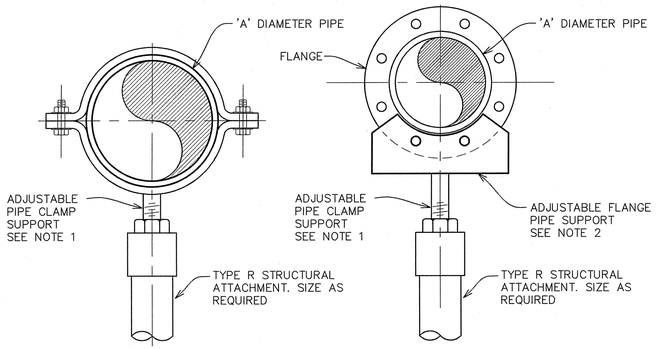


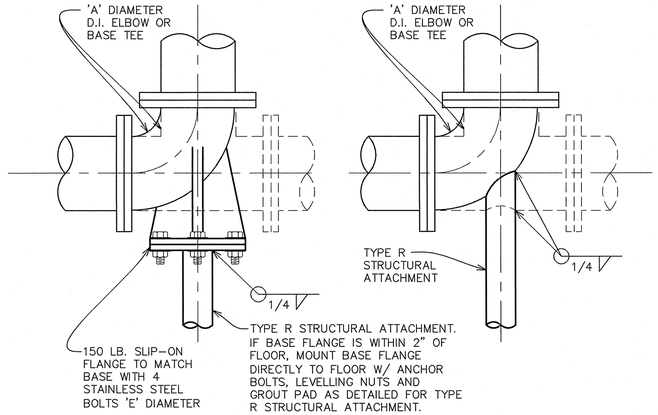
NOTES:

1. WHERE STAINLESS SUPPORT REQUIRED, CLAMP SUPPORT SHALL BE TOLCO FIGURE 318A STAINLESS STEEL. GALVANIZED SUPPORT SHALL BE MODEL C92 AS MANUFACTURED BY STANDON OR APPROVED EQUAL.
2. WHERE STAINLESS SUPPORT REQUIRED, FLANGE SUPPORT SHALL BE TOLCO FIGURE 314 STAINLESS STEEL OR APPROVED EQUAL. GALVANIZED SUPORT SHALL BE STANDON MODEL S-89 OR EQUAL.
3. PROVIDE PIPE SUPPORTS AT A MAXIMUM SPACING OF 10 FEET.

TYPE A PIPE SUPPORT

N.T.S.

1 M003



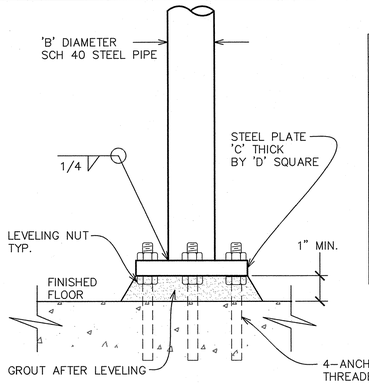
DUCTILE IRON STEEL

4" THROUGH 24" PIPE

TYPE B PIPE SUPPORT

N.T.S.

2 M003



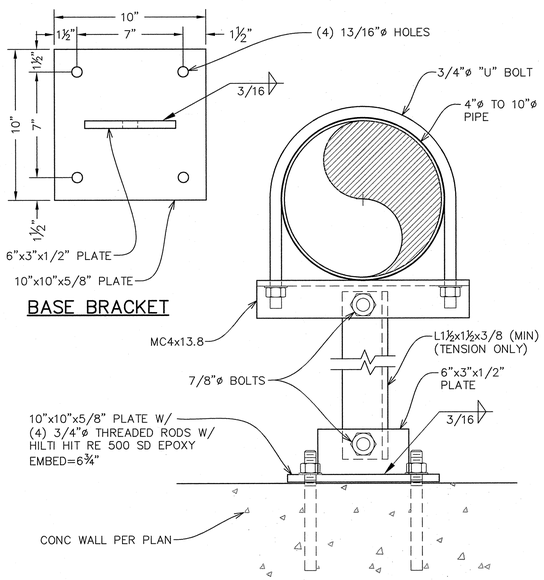
4" THROUGH 24" PIPE

DIMENSIONS IN INCHES				
PIPE 'A' DIAMETER	'B' DIAMETER	'C' THICK	'D' SQUARE ± 1/8	'E' DIAMETER
4	2	3/8	6	5/8
6	2½	3/8	7	5/8
8	4	1/2	9	5/8
10	4	1/2	9	5/8
12	6	1/2	11	3/4
14	6	1/2	11	3/4
16	6	1/2	11	3/4
18	8	1/2	13½	3/4
20	8	1/2	13½	3/4
24	8	1/2	13½	3/4

TYPE R STRUCTURAL ATTACHMENT

N.T.S.

3 M003



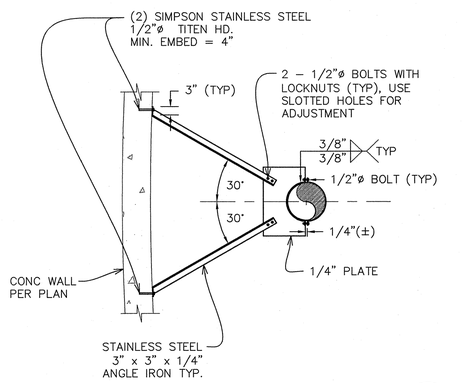
NOTES:

1. WHERE SUPPORT IS USED TO BRACE TWO PIPES TOGETHER, OMIT BASE BRACKET AND SUBSTITUTE WITH PIPE BRACKET AND U-BOLT.

TYPE C PIPE SUPPORT

N.T.S.

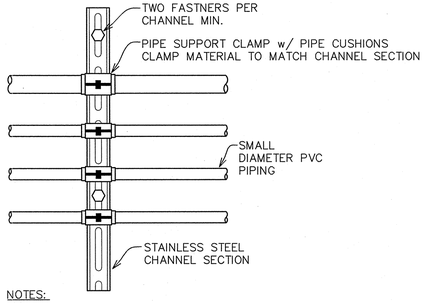
4 M003



TYPE D PIPE SUPPORT

N.T.S.

5 M003



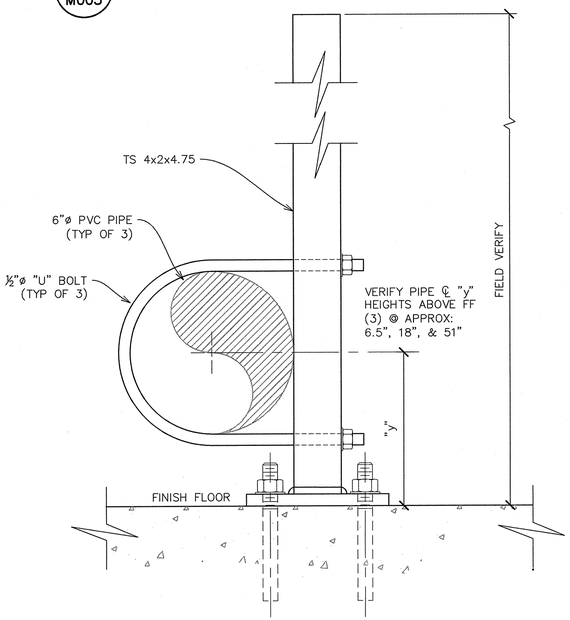
NOTES:

1. SECURE CHANNEL SECTION TO CONCRETE WALL WITH EPOXY ANCHORS AS APPLICABLE.
2. MAXIMUM SPACING OF CHANNEL SUPPORT SHALL BE 5-FEET.

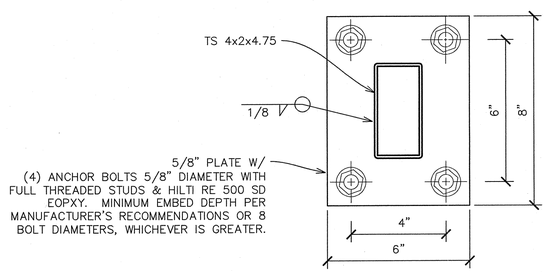
TYPE F PIPE SUPPORT

N.T.S.

7 M003



ELEVATION



BASE PLAN

TYPE G PIPE SUPPORT

N.T.S.

8 M003

PIPE SUPPORT NOTES:

1. OUTSIDE OF WATER HOLDING STRUCTURES, ALL PIPE SUPPORT MATERIALS AND HARDWARE SHALL BE EITHER 316 STAINLESS STEEL OR GALVANIZED STEEL, UNLESS SPECIFICALLY NOTED OTHERWISE ON THE PLANS.
2. WITHIN WATER HOLDING STRUCTURES, ALL PIPE SUPPORT MATERIALS AND HARDWARE SHALL BE 316 STAINLESS STEEL. STAINLESS STEEL MATERIALS ARE REQUIRED WHETHER THE SUPPORT IS SUBMERGED OR NOT. THE REQUIREMENT FOR STAINLESS STEEL MATERIALS WILL NOT BE WAIVED IF ANY PART OF THE SUPPORT IS ABOVE THE TOP OF THE WALL FOR OPEN-TOP BASINS.
3. ALL FRAMING CHANNEL AND MOUNTING HARDWARE SHALL BE STAINLESS STEEL REGARDLESS OF LOCATION.
4. ALL SUPPORTS AND ASSOCIATED HARDWARE USED TO SUPPORT STAINLESS STEEL PIPE SHALL ALSO BE STAINLESS STEEL REGARDLESS OF LOCATION.
5. AT LEAST ONE PIPE SUPPORT SHALL BE LOCATED IMMEDIATELY ADJACENT TO THE JOINT OF ANY CONCENTRATED LOAD OR BEND IN THE PIPE, SUCH AS VALVES, FITTINGS, ETC., IN ADDITION TO THE MAXIMUM SPANS NOTED ON THE SUPPORT DETAILS.
6. PROVIDE MINIMUM EDGE DISTANCE COVER AND SPACING AND EMBEDMENT DEPTH IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS FOR ALL EXPANSION AND EPOXY ANCHORS. NOTIFY ENGINEER IF THESE REQUIREMENTS CANNOT BE ACHIEVED AT A PARTICULAR LOCATION.
7. SEE DWG M005 FOR ADDITIONAL PIPE SUPPORT DETAILS.

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

VERIFY SCALE
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0 1"
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DSN. CB
DRN. TMT
CKD. CB
DATE: MAY 2026

REGISTERED PROFESSIONAL ENGINEER
OREGON JAN. 14, 2005
CHRISTOPHER J. BRUCH
25473PE
RENEWS: 12/31/2027

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

PIPE SUPPORT DETAILS

DRAWING M003
32 OF 223

JOB NUMBER 2599.3220.0

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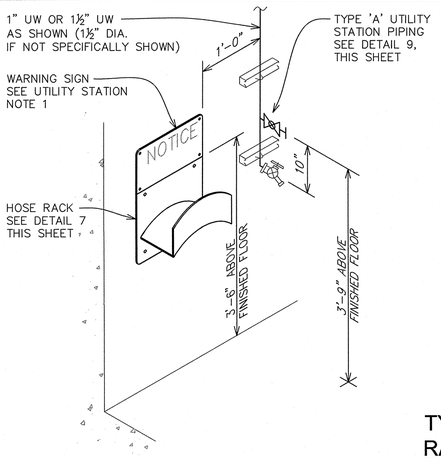
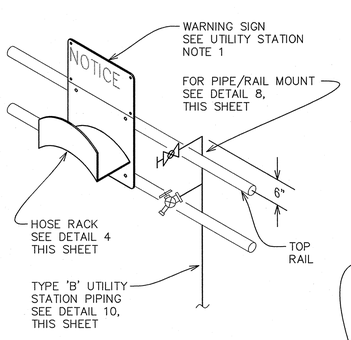


SEE NOTE 2 FOR EXTERIOR STATIONS

TYPE A UTILITY STATION WALL MOUNTED

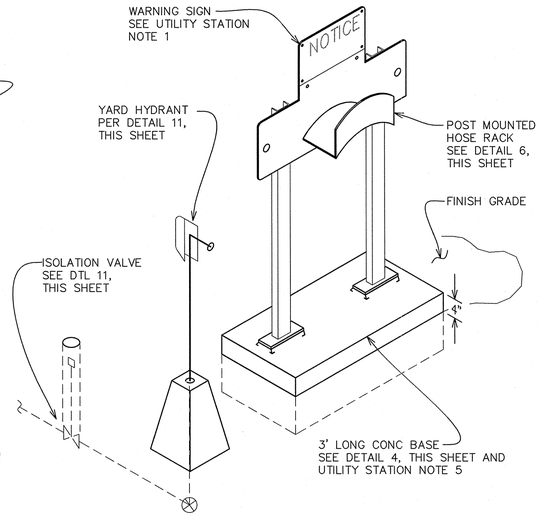
N.T.S. — 1 / M004



SEE NOTE 2 FOR EXTERIOR STATIONS

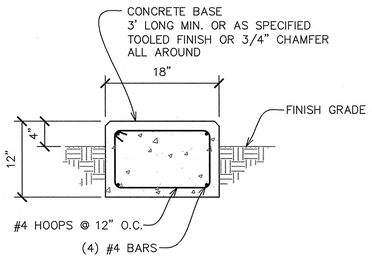
TYPE B UTILITY STATION RAIL MOUNTED

N.T.S. — 2 / M004



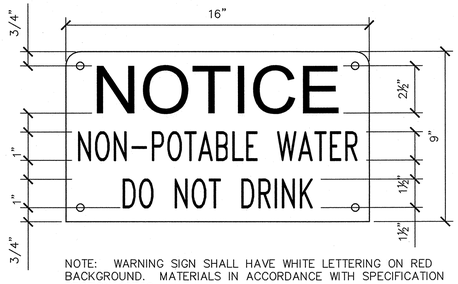
TYPE C OUTDOOR UTILITY STATION POST MOUNTED

N.T.S. — 3 / M004



CONCRETE BASE DETAIL

N.T.S. — 4 / M004



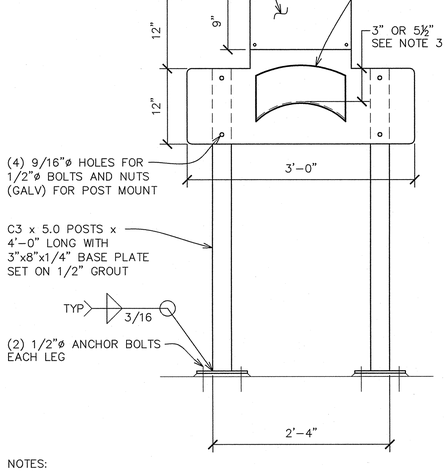
NOTE: WARNING SIGN SHALL HAVE WHITE LETTERING ON RED BACKGROUND. MATERIALS IN ACCORDANCE WITH SPECIFICATION SECTION 10702.

WARNING SIGN DETAIL

N.T.S. — 5 / M004

UTILITY STATION NOTES:

1. PROVIDE ALL UTILITY STATIONS WITH WARNING SIGN THAT READS "NOTICE NON-POTABLE WATER DO NOT DRINK" DISPLAYED IN A PROMINENT PLACE AT THE UTILITY STATION SEE DETAIL 5 THIS SHEET.
2. PROVIDE OUTDOOR UTILITY STATIONS (TYPE C) WATER PIPING WITH WINTER DRAINS TO PREVENT FREEZING. FOR EXPOSED PIPES THAT ARE SUPPLIED FROM BURIED WATER PIPES, SLOPE EXPOSED PIPE BACK TO BURIED DRAIN VALVE. PROVIDE ISOLATION VALVE, DRAIN VALVE AND ROCK SUMP SIMILAR TO TYPE C UTILITY STATION. FOR EXPOSED PIPES THAT ARE SUPPLIED FROM A ROOM, GALLERY, TUNNEL OR OTHER OCCUPIED AREA, PROVIDE ISOLATION VALVE, DRAIN VALVE AND DRAIN LINE IN OCCUPIED AREA. ROUTE DRAIN PIPE TO 1 INCH ABOVE FLOOR AT NEAREST WALL AT NEAREST FLOOR DRAIN.
3. INSTALL ISOLATING VALVE WITH EXTENSION STEM AND VALVE BOX WITH COVER MARKED "WATER".
4. INSTALL DRAIN VALVE WITH EXTENSION STEM AND VALVE BOX WITH COVER MARKED "DRAIN".
5. PROVIDE TYPE C UTILITY STATION WITH CONCRETE BASE AS SHOWN.
6. PROVIDE DIELECTRIC ISOLATION BETWEEN PIPE AND HANDRAIL FOR ALL METAL PIPING. WRAP 1/16 INCH THICK NEOPRENE A FULL 360° AROUND PIPE. BOND TO PIPE WITH A COMPATIBLE WATERPROOF ADHESIVE. EXTEND NEOPRENE 1/2 INCH BEYOND STEEL CLAMP PLATE ON EACH SIDE.



NOTES:

1. HOSE RACK AND MOUNTING SHALL BE WELDED CONSTRUCTION. MATERIAL MIN. 3/16" STEEL PLATE, HOT DIP GALVANIZED AFTER FABRICATION. ALL BOLTS AND NUTS SHALL BE GALVANIZED.
2. ROUND ALL CORNERS (3/4" RADIUS).

POST MOUNTED HOSE RACK DETAIL

N.T.S. — 6 / M004

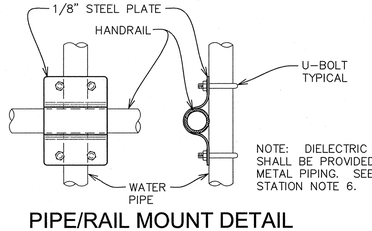
WALL AND RAIL MOUNT — SIDE VIEW RAIL MOUNT

NOTES:

1. ALL HOSE RACKS AND MOUNTINGS SHALL BE WELDED CONSTRUCTION. MATERIAL MIN. 3/16" STEEL PLATE, HOT DIP GALVANIZED AFTER FABRICATION. ALL BOLTS AND NUTS SHALL BE GALVANIZED.
2. CONTRACTOR SHALL COORDINATE BOLTS AND BOLT HOLE LOCATION WITH HANDRAIL DIMENSIONS.
3. ROUND ALL CORNERS (3/4" RADIUS).
4. RAIL MOUNTING SHOWN, WALL MOUNTING SIMILAR. FASTEN RACK TO WALL W/ 3/8"ø EXPANSION ANCHORS.
5. USE SMALLER DIMENSION WHERE WATER SERVICE TO THE UTILITY STATION IS 1"ø OR LESS, AND LARGER DIMENSION FOR 1½"ø OR LARGER

HOSE RACK DETAIL

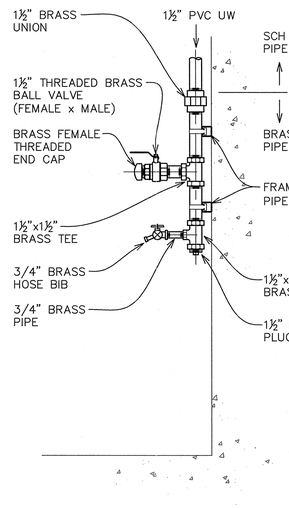
N.T.S. — 7 / M004



NOTE: DIELECTRIC ISOLATION SHALL BE PROVIDED FOR ALL METAL PIPING. SEE UTILITY STATION NOTE 6.

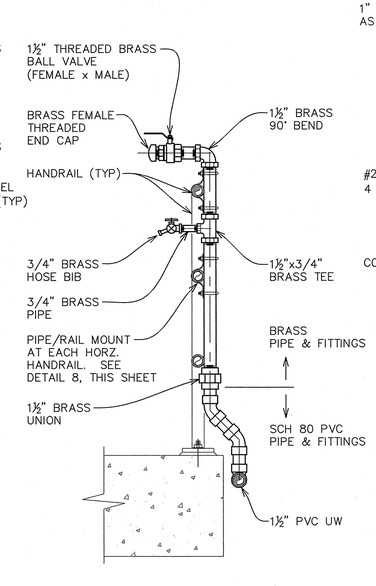
PIPE/RAIL MOUNT DETAIL

N.T.S. — 8 / M004



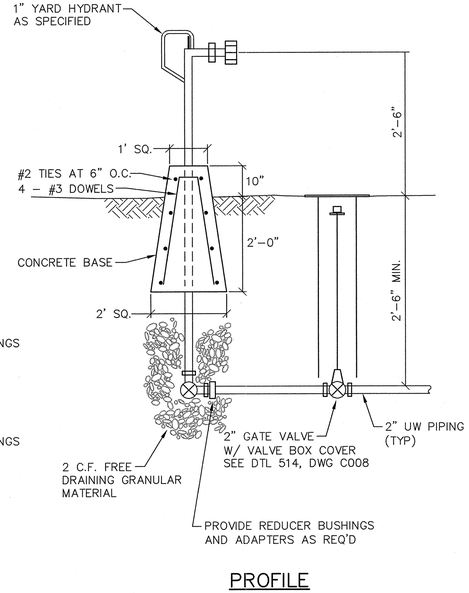
TYPE 'A' UTILITY STATION PIPING DETAIL

N.T.S. — 9 / M004



TYPE 'B' UTILITY STATION PIPING DETAIL

N.T.S. — 10 / M004



PROFILE

YARD HYDRANT DETAIL

N.T.S. — 11 / M004

NO.	DATE	DESCRIPTION	BY
1		REVISIONS	

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

DSN.: CB
DRN.: TMT
CKD.: CB
DATE: MAY 2026

REGISTERED PROFESSIONAL ENGINEER — OREGON — JAN. 14, 2000 — CHRISTOPHER J. BUCKLO — 86417PE
RENEWS: 12/31/2027

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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

UTILITY STATION DETAILS

DRAWING M004
33 OF 223

JOB NUMBER 2599.3220.0

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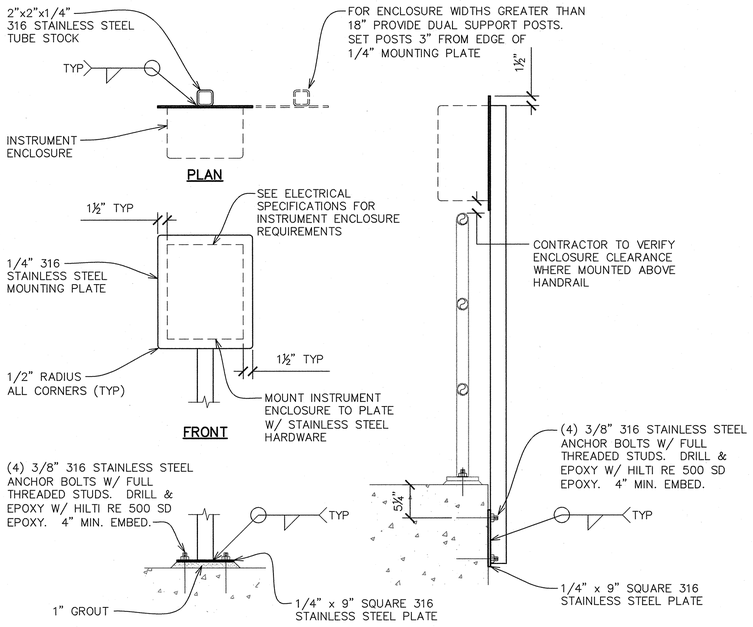
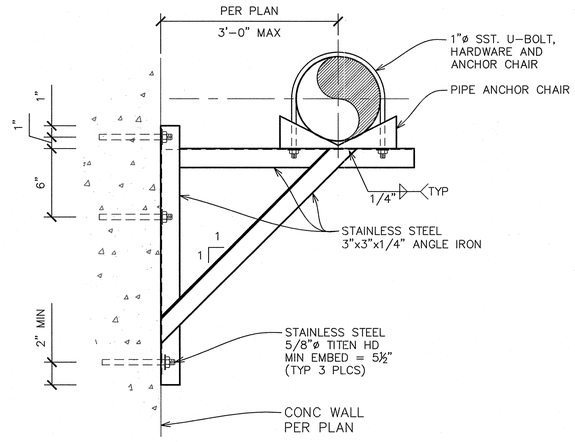


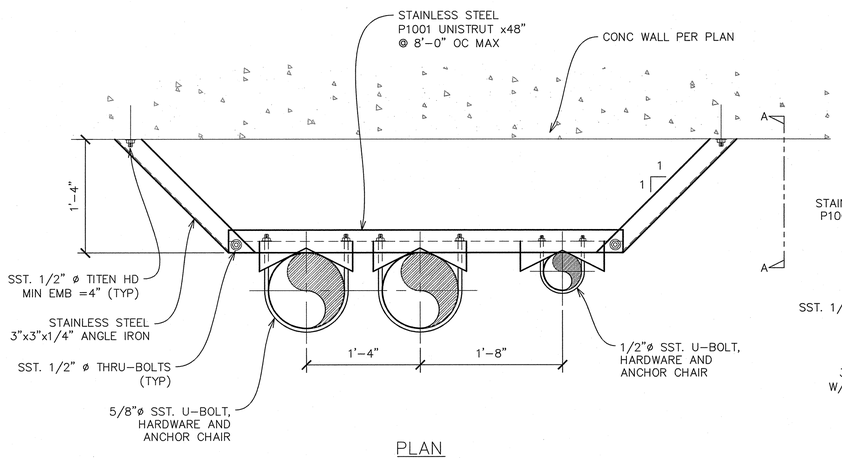
TYPICAL INSTRUMENT ENCLOSURE STAND

N.T.S. — 1 / M005



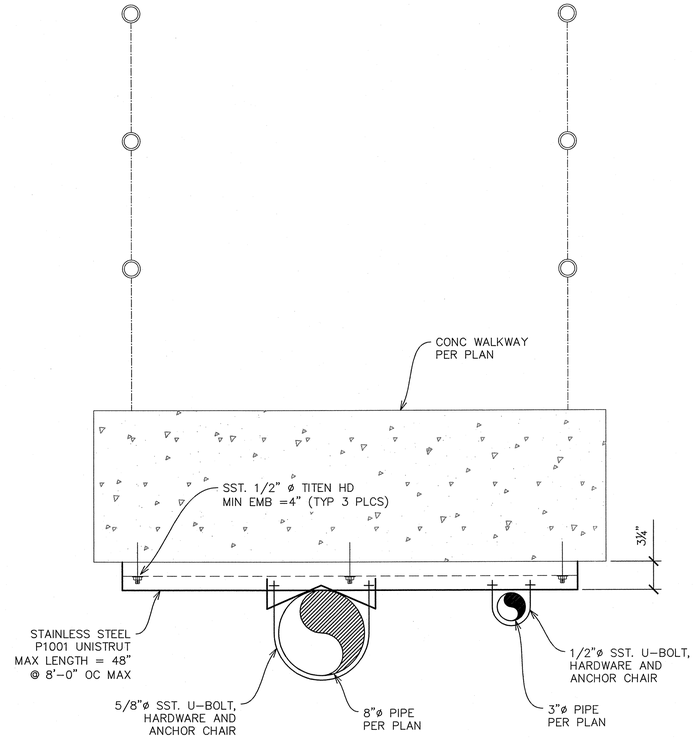
TYPE H PIPE SUPPORT

N.T.S. — 2 / M005



TYPE J PIPE SUPPORT

N.T.S. — 3 / M005



TYPE M PIPE SUPPORT

N.T.S. — 4 / M005

NO.	DATE	DESCRIPTION	BY
1		REVISIONS	

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

DSN. CB
DRN. TMT
CKD. CB
DATE: MAY 2026

REGISTERED PROFESSIONAL ENGINEER — OREGON — JAN. 14, 2005 — CHRISTOPHER T. BUDIKTO — 56473PE
RENEWS: 12/31/2027

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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

PIPE SUPPORTS & MISC. DETAILS

DRAWING M005
34 OF 223

JOB NUMBER 2599.3220.0

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2007 S.E. Ash St.
Portland, OR 97214
PHN: (503) 234-0548
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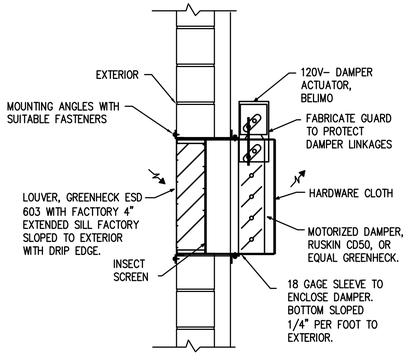
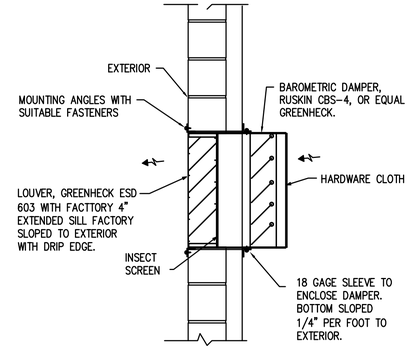
WWW.MFIA-ENG.COM
CONTACT: TAKAKO BAKER



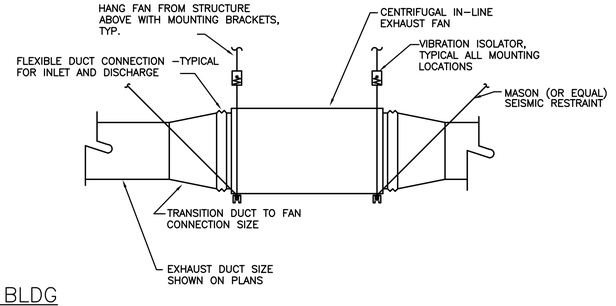
OSA INTAKE @ DAF BLDG



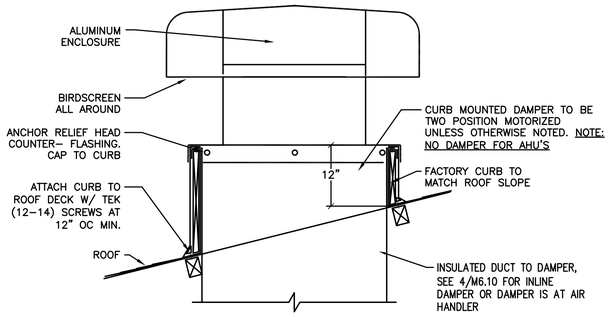
NOTES:
SEAL LOUVER TO SLEEVE AND SLEEVE TO CMU CONTINUOUSLY. DO NOT OBSTRUCT SILL DRAINAGE.

RELIEF LOUVER @ BLOWER BLDG

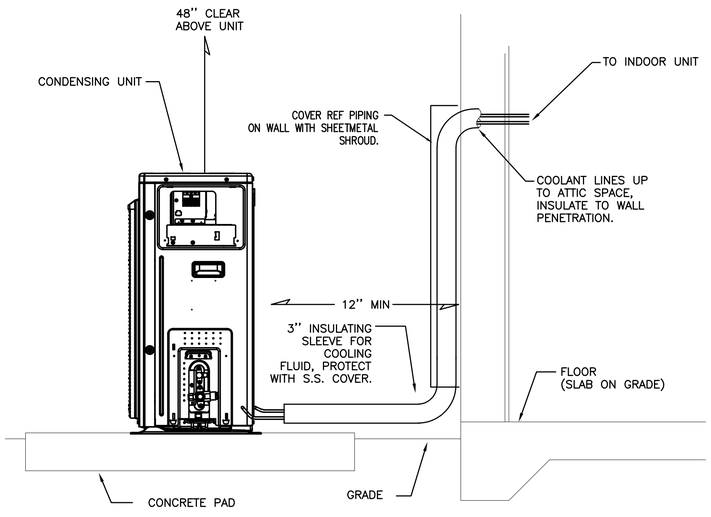
1 M006 — LOUVER DETAIL
SCALE: DETAIL



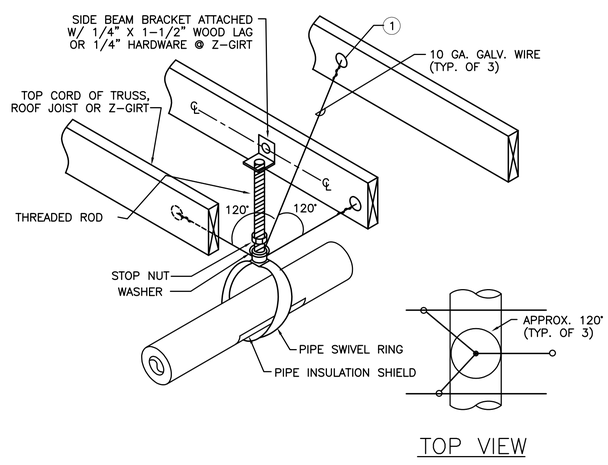
2 M006 — IN-LINE EXH FAN
SCALE: DETAIL



3 M006 — RELIEF VENT
SCALE: DETAIL



4 M006 — OAC INSTALLATION
DETAIL



TOP VIEW

5/M006 NOTES

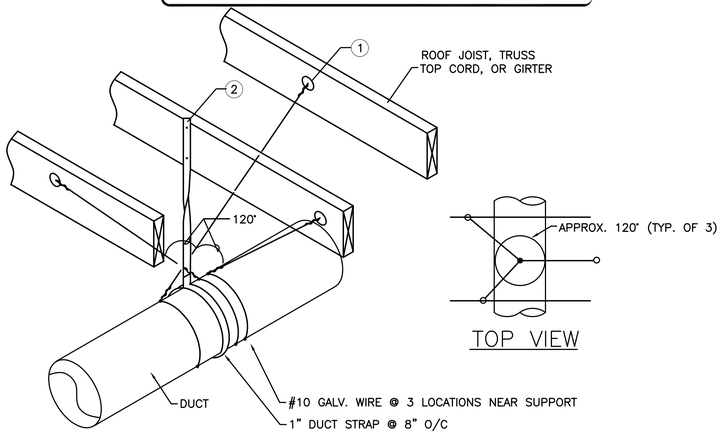
1. 1/4" GALV. THREADED EYE BOLT @ CENTER OF WOOD MEMBER (TYP. OF 3). FOR 2 GIRT USE MACHINE THREAD EYE BOLT W/ JAMB NUT & 1/4" WASHER @ EACH SIDE OF GIRT

- FOR SINGLE 1-1/2" TO 3" STEEL LINES
- FOR SINGLE 2" COPPER LINES

5 M006 — PIPE SUPPORT
DETAIL

DETAIL NOTES

1. 1/4" GALV. THREADED EYE BOLT @ CENTER OF WOOD MEMBER (TYP. OF 3). FOR Z-GIRT USE MACHINE THREAD EYE BOLT W/ JAMB NUT & 1/4" WASHER @ EACH SIDE OF GIRT. FOR METAL DECK USE 12 SHEETMETAL SCREWS & 16 GA. MIN STRUT ANGLE CLIP
2. ATTACH TO TOP CORD. OF TRUSS ONLY OR WOOD JOIST W/ #12 X 1-5/8 DECK SCREW @ MIN. 1" FROM WOOD MATERIAL EDGE. ATTACH TO Z-GIRT W/ (2) #12 TEK SCREWS. FOR METAL DECK USE (2) 12-14 SHEETMETAL SCREWS



TOP VIEW

- FOR SHEETMETAL DUCTS 11" TO 27" IN DIAMETER & ALL SQUARE OR RECTANGULAR DUCTS (STRAP ALONE IS SUFFICIENT FOR DUCTS SMALLER THAN 11" IN DIAMETER)
- STRAP INTERVAL MAY BE DECREASED (LESS THAN 96" O/C TO REDUCE THE NEED FOR WIRE TIES AS DETAILED. CONSULT ENGINEER OR SMACNA STANDARDS

6 M006 — DUCT SUPPORT
SCALE: DETAIL

NO.	DATE	DESCRIPTION
		REVISIONS
		BY

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

DSN. DESIGN
DRN. DRAWN
CKD. CHECK
DATE: MAY 2026

REGISTERED PROFESSIONAL ENGINEER
OREGON
JULY 9, 1982
TAKAKO A. BAKER
EXPIRES: 12/31/27

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
3841 Fairview Industrial Dr. S.E., Suite 100, Salem, OR 97302
Phone: (503) 585-2474 Fax: (503) 585-3986
E-mail: westech@westech-eng.com

CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

HVAC DETAILS

DRAWING
M006
35 OF 223

JOB NUMBER
2599.3220.0

5/18/2026 11:36:28 AM
G:\Westech Engineering Inc\10651 Aumsville Waste Water Building\Mech\M310 DAF HVAC.dwg, (m006 tab)

MFIA INC. Consulting Engineers
2007 S.E. Ash St.
Portland, OR 97214
PHN: (503) 234-0548
FAX: (503) 234-0677
WWW.MFIA-ENG.COM
CONTACT: TAKAKO BAKER

ELECTRIC UNIT HEATERS			
MARK		UH	NOTES
NUMBER		1,2,3,4	
TYPE		INDOOR	
LOCATION		DAF BUILDING	
H	WATTS	7500	
E	VOLT./PH	208/1	
A	AMPS	14.5	
T	CFM	700	
E-POWER		NO	
INTEGRAL		SET TO 40 DEG F	
OPERATING WEIGHT (LBS)		55	
BASIS OF DESIGN: MARKEL		F2F5107CA1L	
NOTES: 1. MOUNT UNIT @ 10'-0"A.F.F.			

EXHAUST FAN SCHEDULE		
MARK		EF
NUMBER		1
TYPE		IN-LINE
LOCATION		DAF
CFM		1800
EXT. STATIC PRESS (IN.WC)		0.5
MOTOR	MOTOR HP	4-Mar
	RPM	903
	VOLTAGE/PH	120/1
	MCA	12.5
	DRIVE	DD
	CONTROL	-
INTERLOCK WITH		OSA DAMPER
DAMPER TYPE		BDD
CONTROLS		NOTE 3
INLET SONES (DBA)		7.2
OPERATING WEIGHT (LBS)		105
BASIS OF DESIGN:		GREENHECK SQ-160-VG
NOTES:		1,2,3
NOTES: 1 ECM MOTOR. 2 PROVIDE ELECTRICAL DISCONNECT. 3 CONTROL FROM TMER SWITCH, SEE DIV 26		

DUCTLESS SPLIT COOLING ONLY SYSTEMS		
MARK	IAC-1/OAC-1	IAC-2/OAC-2
SYSTEM	DAF BUILDING	BLOWER BLDG
TYPE	COOLING ONLY	COOLING ONLY
INDOOR UNIT TYPE	WALL MOUNTED	WALL MOUNTED
NOMINAL CAPACITY, TONS	3.0	3.0
INDOOR UNIT DIMENSIONS, (H X W X D) INCHES	13-3/8 X 47-1/4 X 10-3/16	13-3/8 X 47-1/4 X 10-3/16
RATED COOLING CAPACITY, BTUH	33,200	33,200
DESIGN COOLING OPERATING RANGE, DEG. F	-22-115(1)(2)	-22-115(1)(2)
REFRIGERANT TYPE	R-410A (3)	R-410A (3)
AIRFLOW CFM (SL/HIGH)	512/915	512/915
SEER2/EER2	15.9/9.10	15.9/9.10
MAX PIPING LENGTH, FEET	99	99
MAX PIPE LENGTH (VERTICAL), FEET	66	66
CONDENSATE PUMP/PIPE CONNECTION, INCHES	NO/ 5/8"	NO/ 5/8"
INDOOR/OUTDOOR UNIT DESIGN WEIGHT,LBS	38/132	38/132
OUTDOOR UNIT LOCATION / MOUNTING	HOUSE KEEPING PAD	HOUSE KEEPING PAD
ELECTRIAL CONNECTION, V/PH/MCA/MOP, A	208-230/1/16.3/20	208-230/1/16.3/20
BASIS OF DESIGN: DAIKIN	FTX36WVJU9/ RK36WMVJU9	FTX36WVJU9/ RK36WMVJU9
NOTES:		
1. PROVIDE LOW AMBIENT KIT FOR THE DESIGN COOLING OPERATING RANGE.		
2. PROVIDE DAIKIN ONE TOUCH SMART THERMOSTAT.		
3. R-32 IS APPROVED.		

MECHANICAL GENERAL NOTES

A. THE DRAWINGS ARE DIAGRAMMATIC. PROVIDE ALL MATERIAL (NEW AND UNDAMAGED) AND LABOR FOR A COMPLETE AND OPERABLE SYSTEM. VERIFY ALL BUILDING MEASUREMENTS DIMENSIONS AND EQUIPMENT LOCATIONS BEFORE

B. ALL INSTALLATIONS SHALL COMPLY WITH APPLICABLE FEDERAL AND STATE CODES INCLUDING, 2025 OREGON STRUCTURAL SPECIALTY CODE (OSSC) INCLUDING APPENDIX N FOR OREGON FIRE CODE REGULATIONS, 2023 OREGON PLUMBING SPECIALTY CODE (OPSC), 2025 OREGON MECHANICAL SPECIALTY CODE (OMSC), 2025 OREGON ENERGY EFFICIENCY SPECIALTY CODE (OEESC), AND NATIONAL FIRE PROTECTION ASSOCIATION (NFPA). WHERE TWO CODES DIFFER THE MORE STRICT OF THE TWO SHALL BE FOLLOWED.

C. OBTAIN ALL NECESSARY PERMITS AND INSPECTIONS REQUIRED BY THE GOVERNING AUTHORITIES HAVING JURISDICTION. SUBMIT ALL CERTIFICATES PRIOR TO ACCEPTANCE.

D. COORDINATE WITH OTHER CRAFTS AS REQUIRED TO COMPLETE WORK IN ACCORDANCE WITH CONSTRUCTION SCHEDULE.

E. PROVIDE OWNER INSTRUCTION BY QUALIFIED PERSONNEL ON EQUIPMENT AND SYSTEMS AT OWNER'S REQUEST.

F. AIR BALANCE DIFFUSERS AND GRILLES TO THE CFM INDICATED ON FLOOR PLANS. TESTING AND BALANCING SHALL BE IN ACCORDANCE WITH OWNER GUIDELINES. SUBMIT TAB REPORT FOR ENGINEER'S REVIEW AND APPROVAL.

G. INSULATE SUPPLY AIR, OUTSIDE AIR AND RETURN AIR DUCTWORK OR INTERNALLY LINE SUPPLY AIR AND RETURN AIR DUCTWORK AS SHOWN ON PLANS AND PER ASHRAE 90.1-2022.

H. ALL DUCTWORK SHALL BE GALVANIZED STEEL, UNLESS OTHERWISE INDICATED, CONFORMING TO LATEST SMACNA, ASHRAE, OMSC, NFPA, AND UL STANDARDS.

I. MANUFACTURERS AND MODEL NUMBERS LISTED IN THE EQUIPMENT SCHEDULES ARE THE BASIS OF DESIGN.

J. INSTALL LABELS ON ALL MECHANICAL EQUIPMENT.

K. CONTROLS AND WIRING SHALL MEET ALL ELECTRICAL REQUIREMENTS OF APPLICABLE ELECTRICAL SPECIFICATIONS AND REQUIREMENTS OF OWNER, BUILDING OFFICIALS AND EQUIPMENT SUPPLIERS OF EQUIPMENT INSTALLED ON PROJECT.

L. ELECTRIC MOTORS SHALL HAVE BUILT-IN THERMAL OVERLOAD PROTECTION OR BE PROTECTED EXTERNALLY WITH SEPARATE THERMAL OVERLOAD DEVICES, WITH LOW-VOLTAGE RELEASE OR LOCK OUT AS REQUIRED.

M. ALL NEW EQUIPMENT, PIPING, CONDUIT, AND DUCTWORK SHALL BE INSTALLED PER CURRENT OREGON SEISMIC CODE REQUIREMENTS.

N. PROVIDE LOW LEAK AUTOMATIC DAMPERS ON OUTSIDE AIR, EXHAUST AIR AND RELIEF AIR CONTROL DAMPERS WHERE THESE ARE INDICATED, PER ASHRAE 90.1-2022.

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING 1"
0
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

DSN. TAKAKO BAKER
DRN. TAKAKO BAKER
CKD. TAKAKO BAKER
DATE: MAY 2026

REGISTERED PROFESSIONAL ENGINEER
OREGON
JULY 1, 2005
TAKAKO BAKER
70846PE
EXPIRES: 12/31/27

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
3841 Fairview Industrial Dr. S.E., Suite 100, Salem, OR 97302
Phone: (503) 585-2474 Fax: (503) 585-3986
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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

HVAC SCHEDULES

DRAWING
M007
36 OF 223

JOB NUMBER
2599.3220.0

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LAGOON CELL 1

LAGOON CELL 2

Beaver Creek

CONSTRUCT COFFER DAM AS NEEDED FOR CONSTRUCTION

BSC:3 349.07 SPIKE MAG

CONSTRUCT NEW CELL 1 SUPERNATANT CONTROL STRUCTURE FOR ROUTING SUPERNATANT TO PLANT PUMP STATION SEE DWG C119

EXTG CELL 1–3 TRANSFER STRUCTURE SEE DWG C112 FOR MODIFICATIONS

CONSTRUCT NEW 24" SBR EFFLUENT SUMMER DISCHARGE SEE DWG C113

NO CONSTRUCTION ACCESS PERMITTED

EXTG CELL 2–3 TRANSFER STRUCTURE SEE DWG C114 FOR MODIFICATIONS

CONSTRUCT NEW 18" EQ BASIN BYPASS PIPE SEE DWG C113

NEW SLUDGE DISCHARGE PIPE

EXTG CELL 1–2 TRANSFER STRUCTURE SEE DWG C114 FOR MODIFICATIONS

500 YR FLOOD LIMITS

NEW SLUDGE DISCHARGE PIPE

CONSTRUCT NEW INFLUENT FORCEMAIN & SLUDGE PIPE SEE DWG C103

DIKE ROADWAYS THAT MAY BE USED BY CONTRACTOR.
NOTE, DIKE ROADWAYS ARE NOT DESIGNED FOR HEAVY CONSTRUCTION TRAFFIC. NO ACCESS BEYOND SHADED ROADWAYS IS PERMITTED. UPON COMPLETION OF CONSTRUCTION, EXCAVATE AND REPAIR ALL RUTTED AREAS BY REGRADING AND RECOMPACTING. PLACE, GRADE, AND COMPACT A MINIMUM OF 3" OF 1"–0 CRUSHED ROCK TO MATCH THE PRE–EXISTING GRAVEL ROADWAY LIMITS.

CONSTRUCT NEW CELL 1 SUPERNATANT CONTROL STRUCTURE FOR ROUTING SUPERNATANT TO CELL 2 SEE DWG C120

NEW SLUDGE DISCHARGE PIPE

CONSTRUCT COFFER DAM AS NEEDED FOR CONSTRUCTION

CONSTRUCT COFFER DAM AS NEEDED FOR CONSTRUCTION

BSC:2 350.83 SPIKE MAG

EXTG HEADWORKS (PROTECT)

EXISTING INFLUENT DISCHARGE HEADER (PROTECT)

EXISTING INFLUENT DISCHARGE HEADER (PROTECT)

500 YR FLOOD LIMITS

NO CONSTRUCTION ACCESS PERMITTED

500 YR FLOOD LIMITS

EXTG MAIN PUMP STATION (PROTECT)

0 25 50 100
FEET

NO.	DATE	DESCRIPTION	BY
1		REVISIONS	

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

DSN. CB
DRN. TMT
CKD. CB
DATE: MAY 2026

REGISTERED PROFESSIONAL ENGINEER
CHRISTOPHER J. BRUSKOTO
OREGON
JAN. 14, 2005
RENEWS: 12/31/2027

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
3841 Fairview Industrial Dr. S.E., Suite 100, Salem, OR 97302
Phone: (503) 585-2474 Fax: (503) 585-3986
E-mail: westech@westech-eng.com

CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

LAGOON CELL 1 & 2 IMPROVEMENT PLAN

DRAWING
C101
37 OF 223

JOB NUMBER
2599.3220.0

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DIKE ROADWAYS THAT MAY BE USED BY CONTRACTOR.
NOTE, DIKE ROADWAYS ARE NOT DESIGNED FOR HEAVY CONSTRUCTION TRAFFIC. NO ACCESS BEYOND SHADED ROADWAYS IS PERMITTED. UPON COMPLETION OF CONSTRUCTION, EXCAVATE AND REPAIR ALL RUTTED AREAS BY REGRADING AND RECOMPACTING. PLACE, GRADE, AND COMPACT A MINIMUM OF 3" OF 1"-0 CRUSHED ROCK TO MATCH THE PRE-EXISTING GRAVEL ROADWAY LIMITS.

NO CONSTRUCTION ACCESS PERMITTED

NORTH SANTIAM HIGHWAY — OR HWY 22

0 25 50 100
FEET

EXTG CELL 3-4 TRANSFER STRUCTURE SEE DWG C114 FOR MODIFICATIONS

LAGOON CELL 4

LAGOON CELL 3

CONSTRUCT NEW CHLORINE CONTACT CHAMBER SEE C300 SERIES DRAWINGS

500 YR FLOOD LIMITS SEE NOTE 1

EXISTING DECHLORINATION BUILDING

OVERFLOW OUTFALL (PROTECT)

BSC:7 348.37 SPIKE

EXTG OUTLET STRUCTURE (PROTECT)

CONSTRUCT NEW DAF BUILDING SEE C300 SERIES DRAWINGS

EXTG WINTER OUTFALL TO BEAVER CREEK (PROTECT)

EXISTING IRRIGATION PUMP STATION

24" SBR DISCHARGE (AUGER BORE CREEK CROSSING) SEE DWG C118

NEW IRRIGATION PUMP STATION

EXTG IRRIGATION EFFLUENT LINE

2" POTABLE WATER (PIPE BURST EXTG CREEK CROSSING) SEE DWG C116

Beaver Creek

NO CONSTRUCTION ACCESS PERMITTED

500 YR FLOOD LIMITS

IR 5/8" W/YPC BARKER PLS686 FLUSH

BSC:2135 347.48 HT FND

CONSTRUCT NEW SBR SEE C200 SERIES DRAWINGS

BSC:8 351.81 SPIKE MAG

EXTG IRRIGATION PIPE CONVERT TO SLUDGE DISCHARGE SEE DWG C106

EXTG TRANSFER PIPE FROM CELL 2 (PROTECT)

NOTES:

1. STORAGE OF MATERIALS AND STOCKPILING OF TRENCH AND EXCAVATION SPOILS IS PROHIBITED WITHIN THE 500 YEAR FLOOD LIMITS.

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

DSN.: CB
DRN.: TMT
CKD.: CB
DATE: MAY 2026

REGISTERED PROFESSIONAL ENGINEER
86473PE
OREGON
JAN. 14, 2005
CHRISTOPHER T. BADOKATO
RENEWS: 12/31/2027

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
3841 Fairview Industrial Dr. S.E., Suite 100, Salem, OR 97302
Phone: (503) 585-2474 Fax: (503) 585-3986
E-mail: westech@westech-eng.com

CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

LAGOON CELL 3 & 4 IMPROVEMENT PLAN

DRAWING
C102
38 OF 223

JOB NUMBER
2599.3220.0

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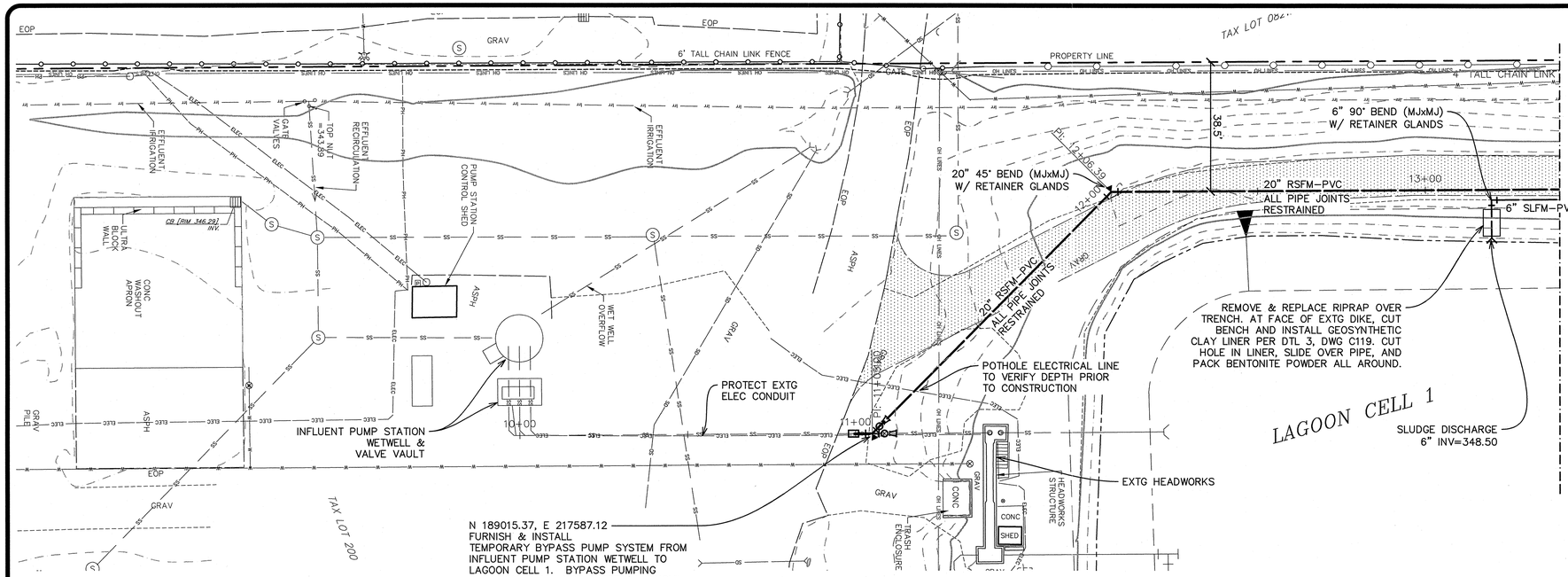
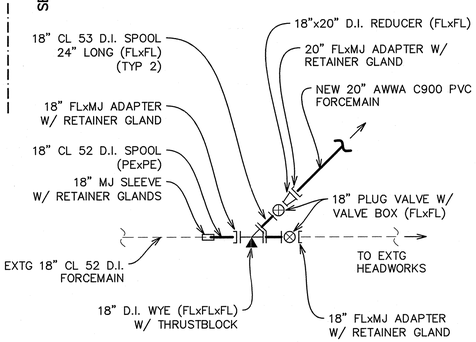


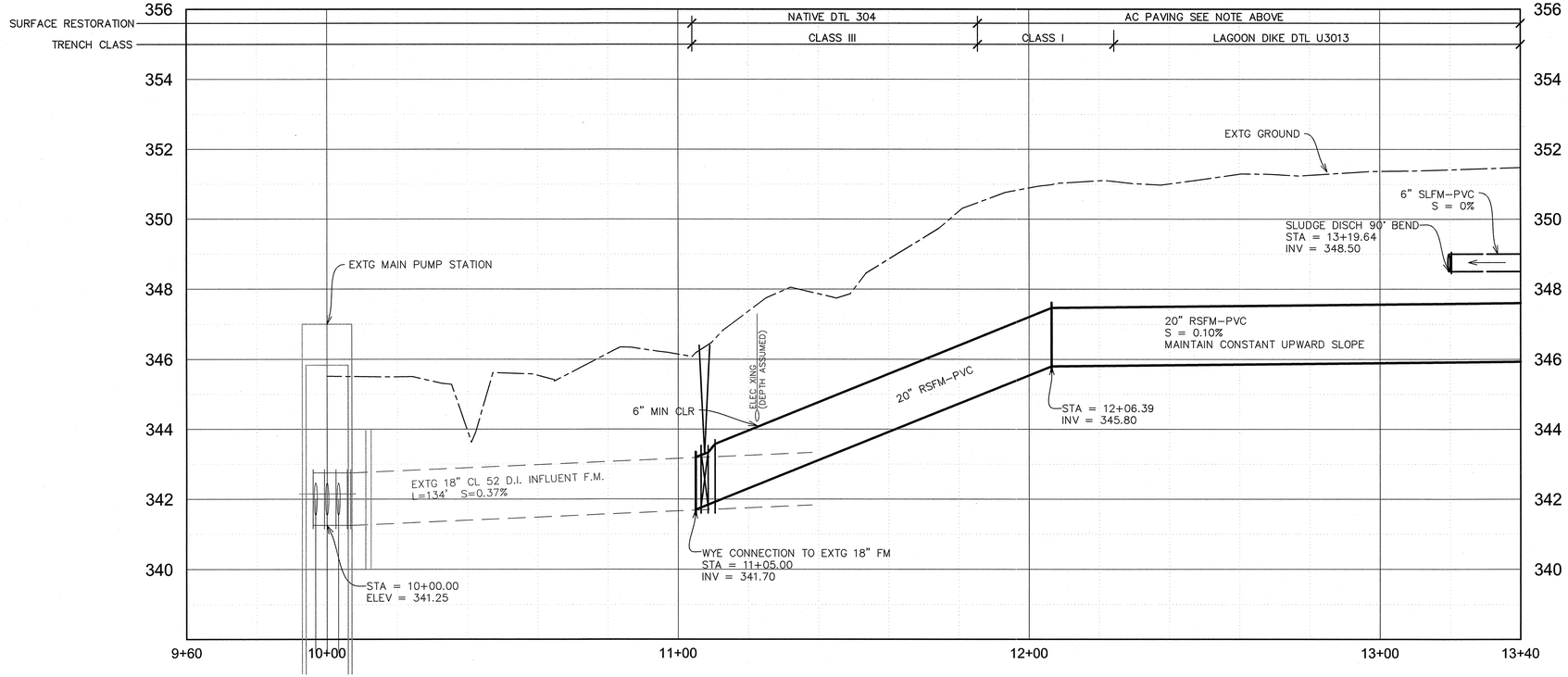
INFLUENT FORCEMAIN PLAN
STA 10+00 to 13+20
1" = 20'

0 10 20 40
FEET

CONTRACTOR SHALL MAINTAIN THE MAIN ACCESS ROAD IN A CONDITION SUITABLE FOR PASSENGER VEHICLES AT ALL TIMES. ANY RUTTING SHALL BE IMMEDIATELY REPAIRED TO THE SATISFACTION OF THE ENGINEER. UPON COMPLETION OF CONSTRUCTION, REGRADE ROADWAY TO RE-ESTABLISH CROWN. PLACE, GRADE, AND COMPACT A MINIMUM OF 2" OF 1"-0 CRUSHED ROCK, AND PAVE WITH 4" OF CLASS B A.C. (IN TWO 2-INCH LIFTS). PLACE, GRADE, AND COMPACT 18" WIDE GRAVEL SHOULDER ON EACH SIDE OF PAVED SURFACE TO TRANSITION TO EXISTING GROUND SURFACE.



CONNECTION DETAIL 1
N.T.S.



INFLUENT FORCEMAIN PROFILE
1" = 20' H, 1" = 2' V

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY
0 1"
DSN. CB
DRN. TMT
CKD. CB
DATE: MAY 2026

REGISTERED PROFESSIONAL ENGINEER
OREGON
JAN. 14, 2005
CHRISTOPHER J. BRUCKO
86473PE
RENEWS: 12/31/2027

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
3841 Fairview Industrial Dr. S.E., Suite 100, Salem, OR 97302
Phone: (503) 585-2474 Fax: (503) 585-3986
E-mail: westech@westech-eng.com

CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

INFLUENT FORCEMAIN PLAN-PROFILE STA 10+00 to 13+40

DRAWING
C103
39 OF 223

JOB NUMBER
2599.3220.0

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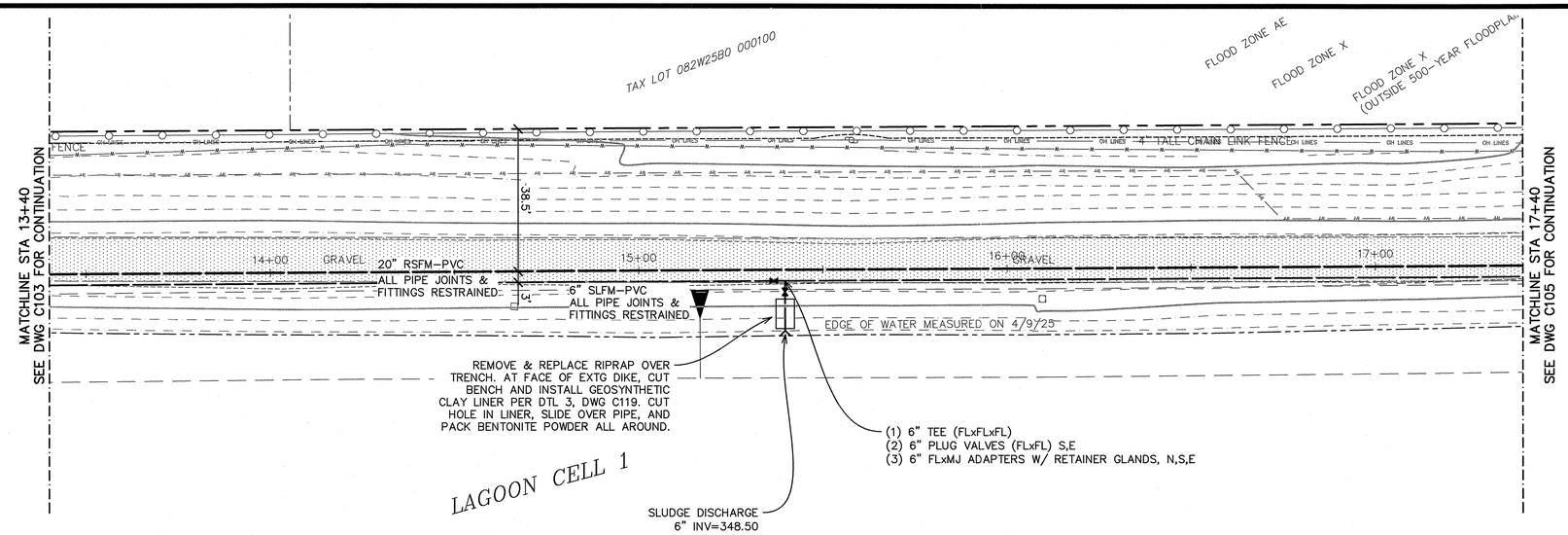
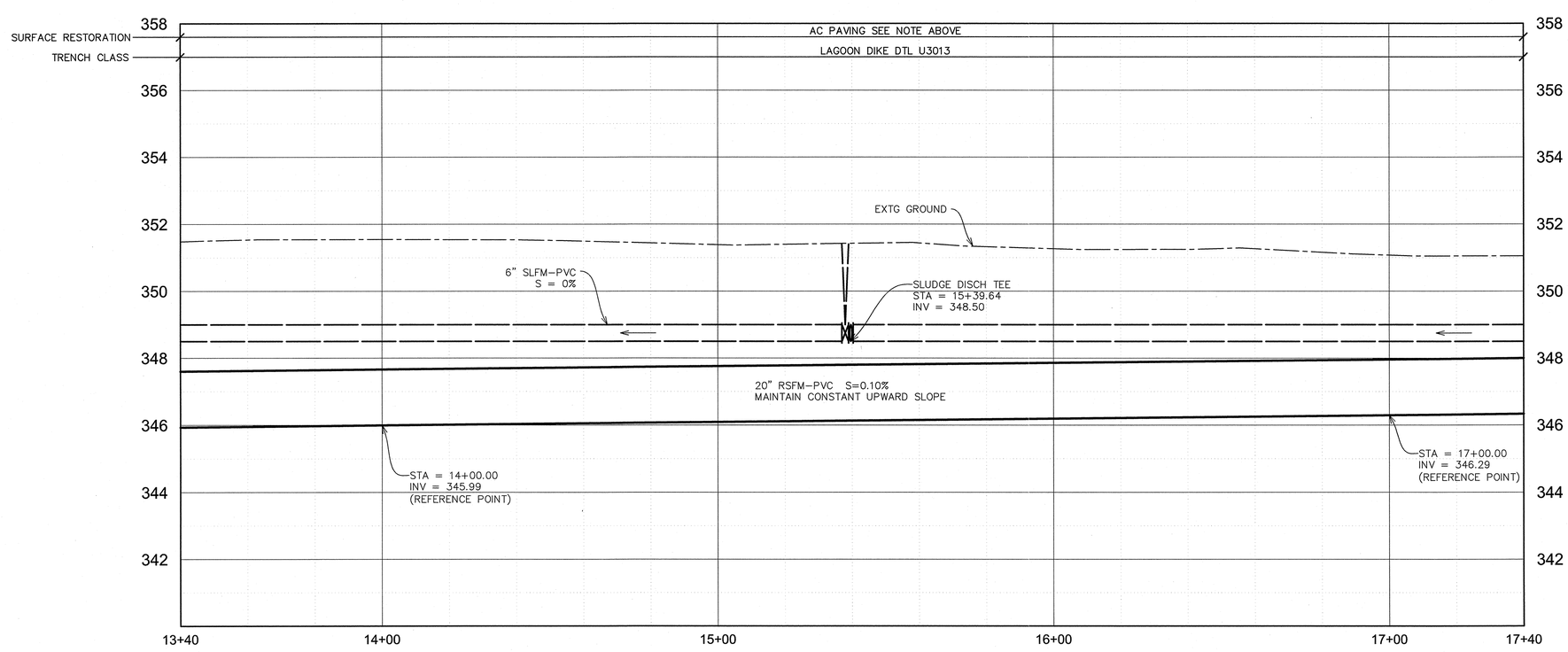


INFLUENT FORCEMAIN PLAN
STA 13+40 to 17+40

1" = 20'

0 10 20 40
FEET

CONTRACTOR SHALL MAINTAIN THE MAIN ACCESS ROAD IN A CONDITION SUITABLE FOR PASSENGER VEHICLES AT ALL TIMES. ANY RUTTING SHALL BE IMMEDIATELY REPAIRED TO THE SATISFACTION OF THE ENGINEER. UPON COMPLETION OF CONSTRUCTION, REGRADE ROADWAY TO RE-ESTABLISH CROWN. PLACE, GRADE, AND COMPACT A MINIMUM OF 2" OF 1"-0 CRUSHED ROCK, AND PAVE WITH 4" OF CLASS B A.C. (IN TWO 2-INCH LIFTS). PLACE, GRADE, AND COMPACT 18" WIDE GRAVEL SHOULDER ON EACH SIDE OF PAVED SURFACE TO TRANSITION TO EXISTING GROUND SURFACE.



INFLUENT FORCEMAIN PROFILE
1" = 20' H, 1" = 2' V

NO.	DATE	DESCRIPTION REVISIONS	BY
1			

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

DSN. CB
DRN. TMT
CKD. CB
DATE: MAY 2026

REGISTERED PROFESSIONAL ENGINEER
CHRISTOPHER T. BRUSCATO
56473PE
OREGON
JULY 15, 2005
RENEWS: 12/31/2027

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
3841 Fairview Industrial Dr. S.E., Suite 100, Salem, OR 97302
Phone: (503) 585-2474 Fax: (503) 585-3986
E-mail: westech@westech-eng.com

CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

INFLUENT FORCEMAIN PLAN-PROFILE STA 13+40 to 17+40

DRAWING
C104
40 OF 223

JOB NUMBER
2599.3220.0

5/26/2026 12:14:39 PM
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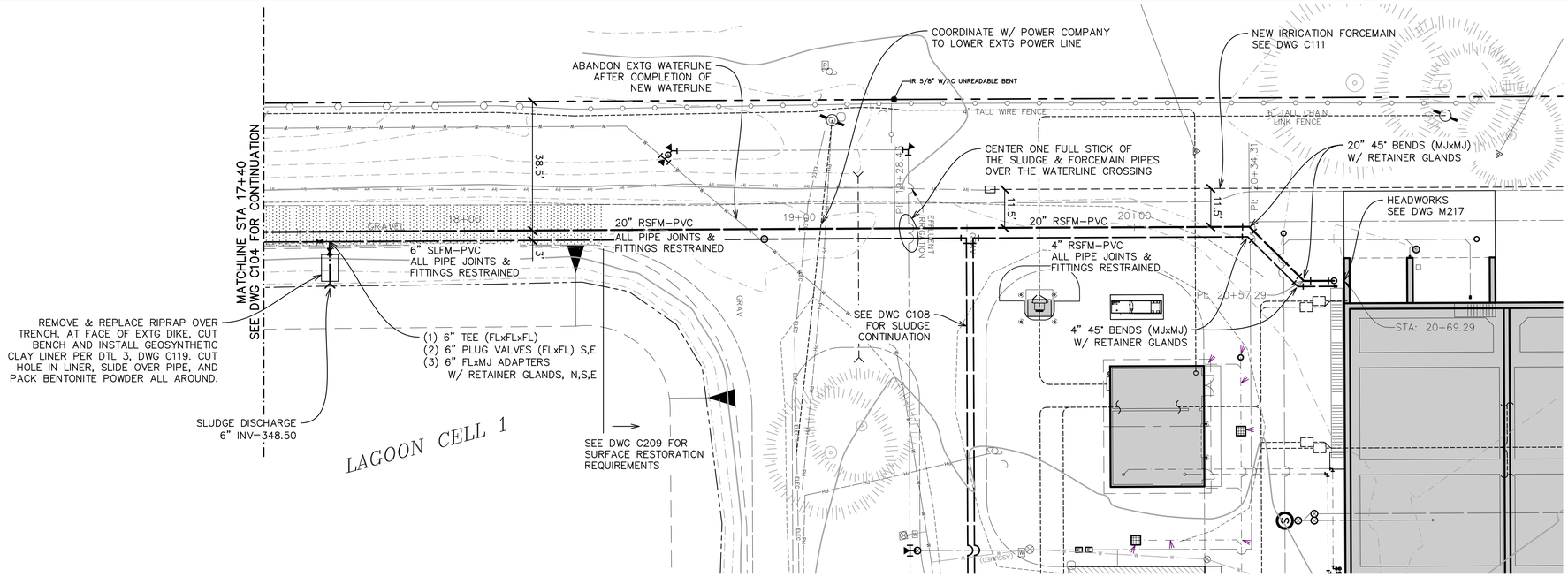
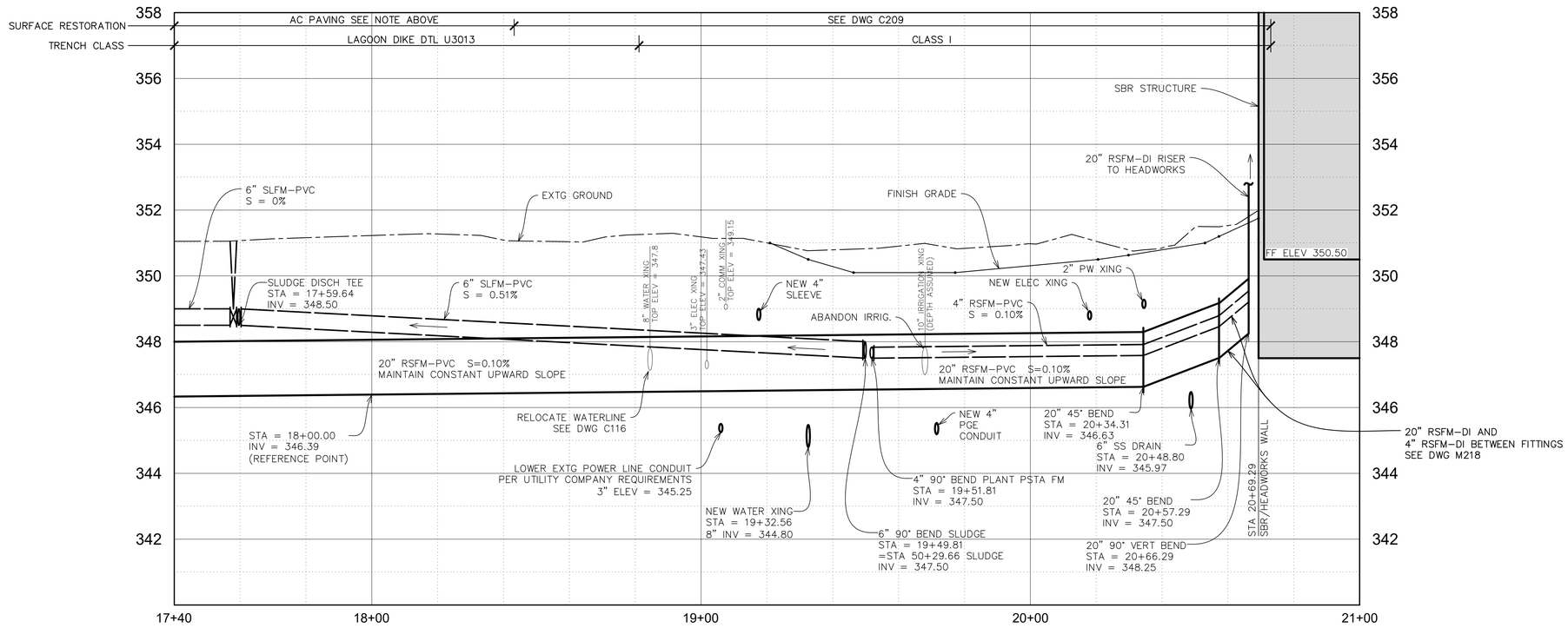


INFLUENT FORCEMAIN PLAN
STA 17+40 to 20+73
1" = 20'

CONTRACTOR SHALL MAINTAIN THE MAIN ACCESS ROAD IN A CONDITION SUITABLE FOR PASSENGER VEHICLES AT ALL TIMES. ANY RUTTING SHALL BE IMMEDIATELY REPAIRED TO THE SATISFACTION OF THE ENGINEER. UPON COMPLETION OF CONSTRUCTION, REGRADE ROADWAY TO RE-ESTABLISH CROWN. PLACE, GRADE, AND COMPACT A MINIMUM OF 2" OF 1"-0 CRUSHED ROCK, AND PAVE WITH 4" OF CLASS B A.C. (IN TWO 2-INCH LIFTS). PLACE, GRADE, AND COMPACT 18" WIDE GRAVEL SHOULDER ON EACH SIDE OF PAVED SURFACE TO TRANSITION TO EXISTING GROUND SURFACE.



INFLUENT FORCEMAIN PROFILE
1" = 20' H, 1" = 2' V

BY	DESCRIPTION	NO.	DATE
TMT	ELEC. CONDUITS	2	6/5/2026
	REVISIONS		

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

DSN. CB
DRN. TMT
CKD. CB
DATE: MAY 2026

REGISTERED PROFESSIONAL ENGINEER
OREGON JULY 14, 2015
CHRISTOPHER T. BROCKATO
56473PE
RENEWS: 12/31/2027

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
3841 Fairview Industrial Dr. S.E., Suite 100, Salem, OR 97302
Phone: (503) 585-2474 Fax: (503) 585-3986
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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS
INFLUENT FORCEMAIN PLAN-PROFILE
STA 17+40 to 20+73

DRAWING
C105
41 OF 223

JOB NUMBER
2599.3220.0

6/8/2026 10:00:32 AM
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MATCHLINE STA 44+00
SEE DWG C107 FOR CONTINUATION

REMOVE AND REPLACE 6" DUCTILE IRON PIPE MOUNTED ON BRIDGE. REPLACE WITH 6" CL 52 RESTRAINED JOINT PUSH-ON PIPE AS SPECIFIED (FIELD LOCK GASKETS). LAY OUT PIPE SO BELLS ARE LOCATED BETWEEN PAIRS OF EXISTING SUPPORTS SPACED AT 6 FT. HEAT TRACE AND INSULATE EXPOSED PIPE AS SPECIFIED. PULL PIPE TO EXTEND AND SET FIELD LOCK GASKETS PRIOR TO PRESSURE TESTING.

SALVAGE AND REUSE EXTG PIPE SUPPORTS AND STRAPS (TYP OF 17)

BRIDGE
GAURD RAIL
GAURD RAIL

PI: 43+42.83

346.43
DP 6" ELBOW INTO GROUND

VERTICAL BENDS

STRADDLE BLOCK

SEE CONNECTION DTL 2, THIS DWG

BSC:2135
347.48
HT FND

WETLANDS

WETLANDS

6' TALL CHAIN LINK FENCE

6' TALL CHAIN LINK FENCE

43+00

42+90.39

PI: 42+90.39

PI: 42+41.73

PROTECT EXISTING 6" IRRIGATION LINE
PIPE TO BE RE-USED FOR SLUDGE FORCEMAIN

CONNECTION TO
EXTG 6" IRRIGATION LINE
SEE DTL 1, DWG C308

PI: 40+24.66

2" PW

42+00

41+00

40+00

GRAV

GRAV

GRAV

NEW DAF
BUILDING

POND #3

POND #4

SLUDGE PIPING PLAN
STA 40+00 to 44+00
1" = 20'

0 10 20 40
FEET

352
350
348
346
344
342
340
338
336

SURFACE RESTORATION
TRENCH CLASS
AC PAVING SEE NOTE ABOVE
CLASS I
NATIVE DTL 304
NATIVE DTL 304
CLASS III
SEE DWG C311
CLASS I
WITHIN 5' OF BLDG
LAGOON DIKE
DTL U3013
DAF BUILDING
FF 348.95

NEW 6" SLFM-DI
ON EXTG BRIDGE BRACKETS

EXTG 6" BEND
STA = 43+41.78
TOP ELEV = 346.43

BRIDGE DECK

REMOVE EXTG
6" IRRIGATION
/SLUDGE LINE HUNG
ON BRIDGE

22.5° BEND VERTICAL
STA = 43+41.50
6" INV = 345.93±

COUPLING CONNECTION
STA = 43+24.00
6" INV = 342.80±

22.5° BEND VERTICAL
STA = 43+34.00
6" INV = 342.80±

EXTG 6" 45° BEND
STA = 42+90.39
DEPTH ASSUMED

EXTG 6" 45° BEND
STA = 42+41.73
DEPTH ASSUMED

PROTECT EXTG 6" IRRIGATION/SLUDGE LINE
(DEPTH ASSUMED)

EXTG GROUND

NEW ELEC XING

ELEC XING
(DEPTH ASSUMED)

6" IRR XING
(DEPTH ASSUMED)

4" SL XING
(DEPTH ASSUMED)

SEE BLDG
MECHANICAL PLANS

2" PW XING

NEW 4"
PGE
CONDUIT

POTHOLE PRIOR TO
CONSTRUCTION.
VERIFY LOCATION,
SIZE & DEPTH.
6" MIN CLEAR

STA = 40+00.00
4" INV = 345.15

TEE CONNECTION
STA = 40+24.66
6" INV = 343.50± ASSUMED

44+00 43+00 42+00 41+00 40+00 39+60

SLUDGE PIPING PROFILE
1" = 20' H, 1" = 2' V

6" 22.5° BEND (MJxMJ)
W/ RETAINER GLANDS
ROLL AS REQ'D TO ADJUST
FOR ANY HORIZONTAL OFFSET

BRIDGE DECK

6" SLFM-DI

FG @ BRIDGE

FG @ PIPE

EXTG SUPPORT
BRACKET (TYP)

6" CL 52 D.I. SPOOL
(PExPE)

STRADDLE BLOCK
PER DTL 511, DWG C008

6" ROMAC ALPHA COUPLING OR EQUAL

EXTG 6" PIPE. POTHOLE & VERIFY SIZE,
DEPTH, AND PIPE MATERIAL PRIOR TO
CONSTRUCTION. NOTIFY ENGINEER OF ANY
CONFLICTS.

BRIDGE PROFILE

CONNECTION DETAIL 2
N.T.S.

NO.	DATE	DESCRIPTION	BY
1		REVISIONS	

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

DSN. CB
DRN. TMT
CKD. CB
DATE: MAY 2026

REGISTERED PROFESSIONAL ENGINEER
OREGON
JULY 14, 2006
CHRISTOPHER T. BROUGHTON
RENEWS: 12/31/2027

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

SLUDGE PIPING PLAN–PROFILE STA 40+00 to 44+00

DRAWING
C106
42 OF 223

JOB NUMBER
2599.3220.0

5/26/2026 12:14:49 PM
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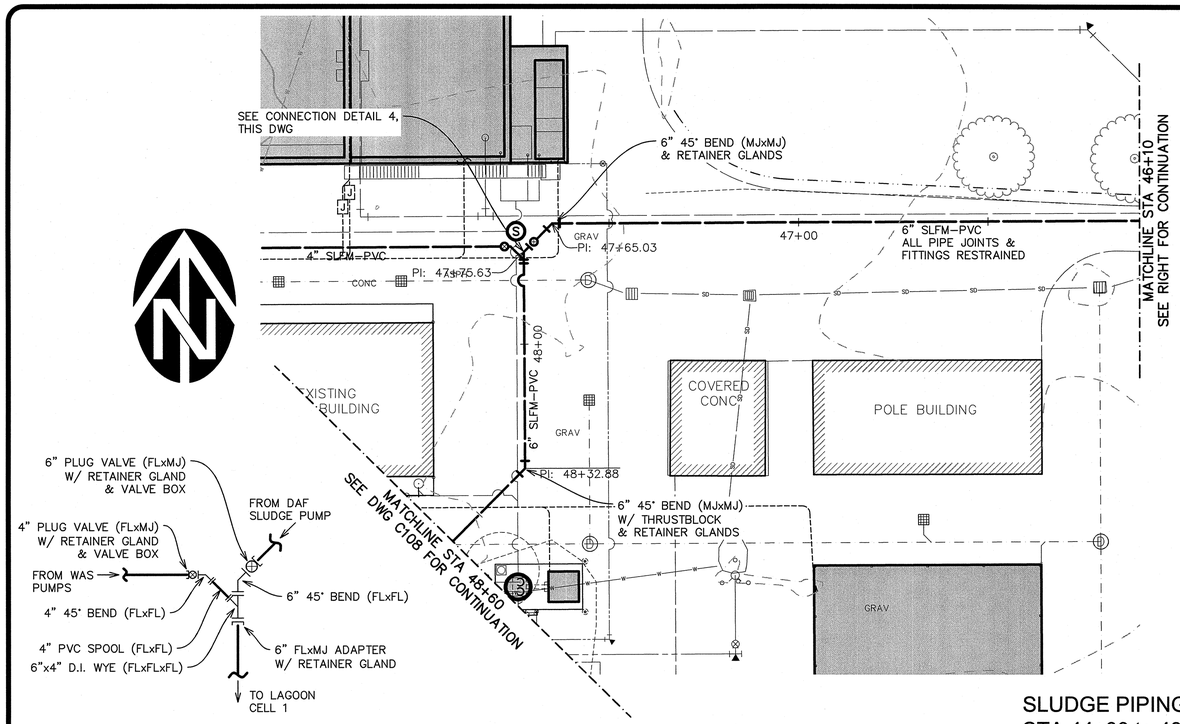
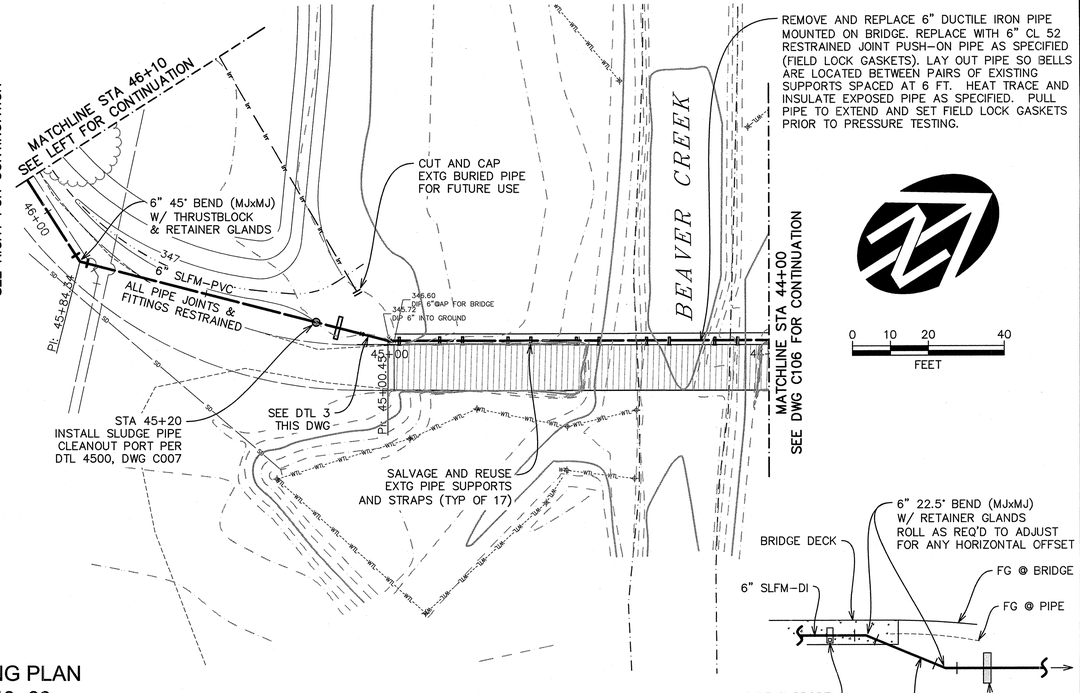
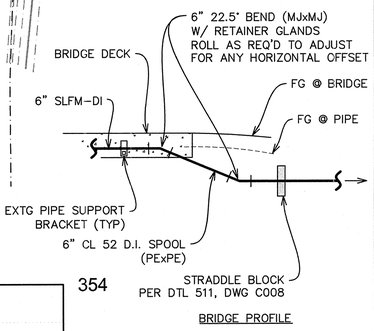


SLUDGE PIPING PLAN
STA 44+00 to 48+60
1" = 20'

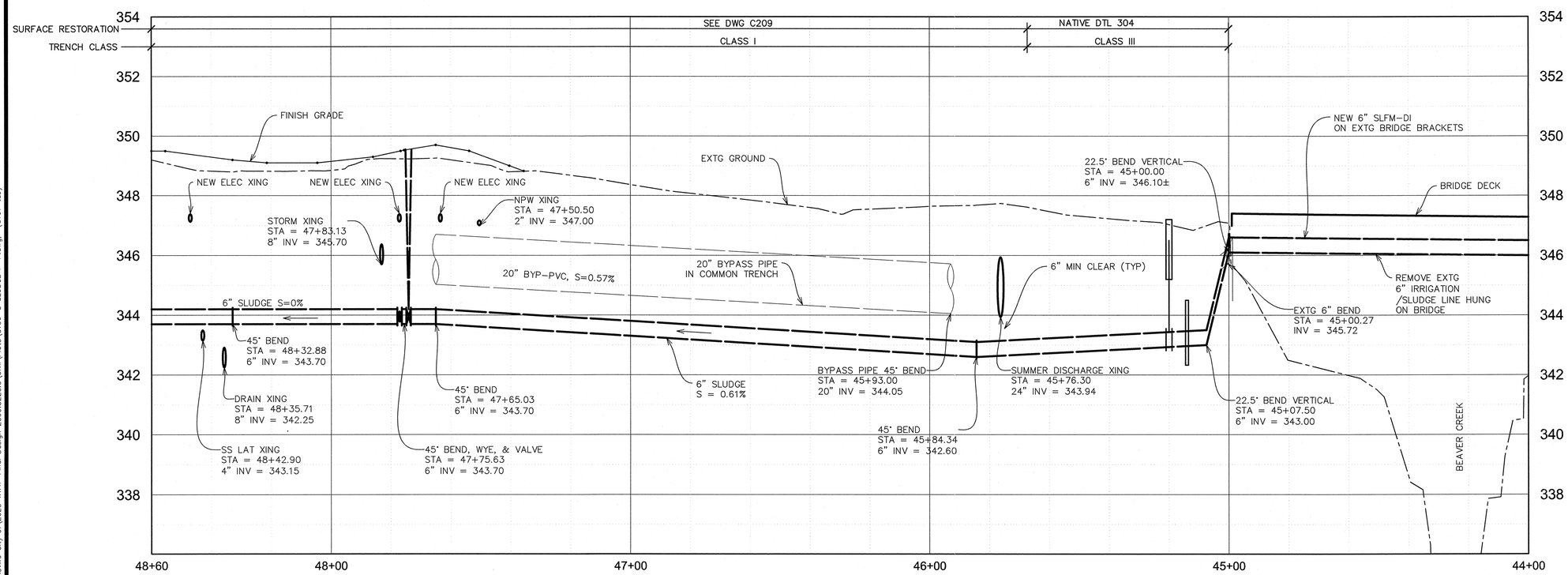
CONNECTION DETAIL 4
N.T.S.





BRIDGE PROFILE

DETAIL 3
N.T.S.



SLUDGE PIPING PROFILE
1" = 20' H, 1" = 2' V

NO.	DATE	DESCRIPTION	BY
1		REVISIONS	

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

DSN. CB
DRN. TMT
CKD. CB
DATE: MAY 2026

REGISTERED PROFESSIONAL ENGINEER
OREGON
JAN. 14, 2005
CHRISTOPHER J. BHUKYO
86473PE
RENEWS: 12/31/2027

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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

SLUDGE PIPING PLAN–PROFILE STA 44+00 to 48+60

DRAWING
C107
43 OF 223

JOB NUMBER
2599.3220.0

5/26/2026 12:14:53 PM
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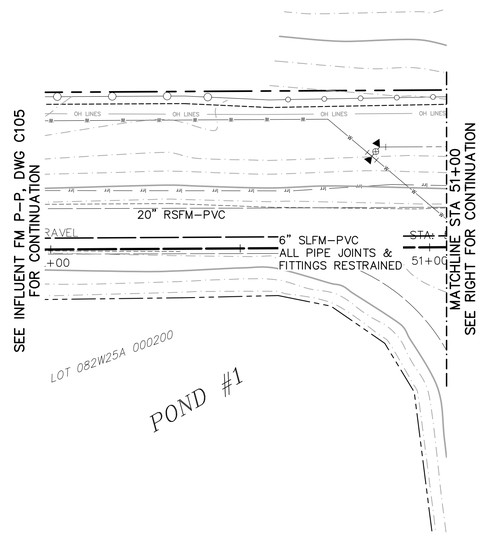
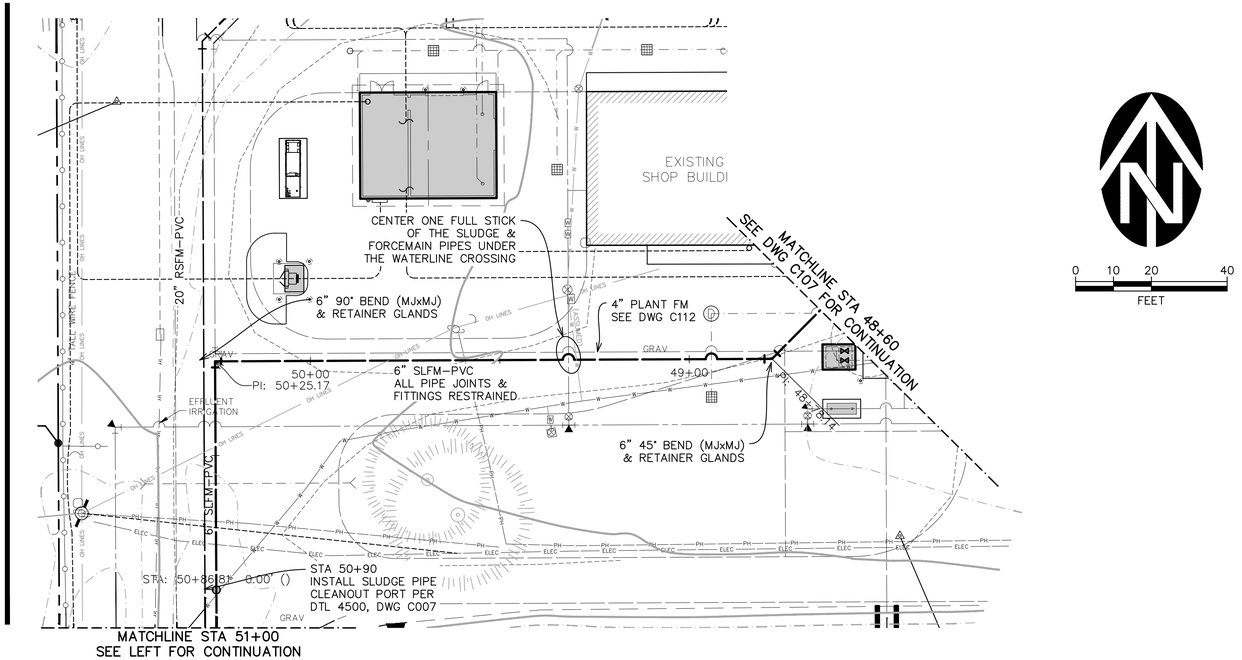
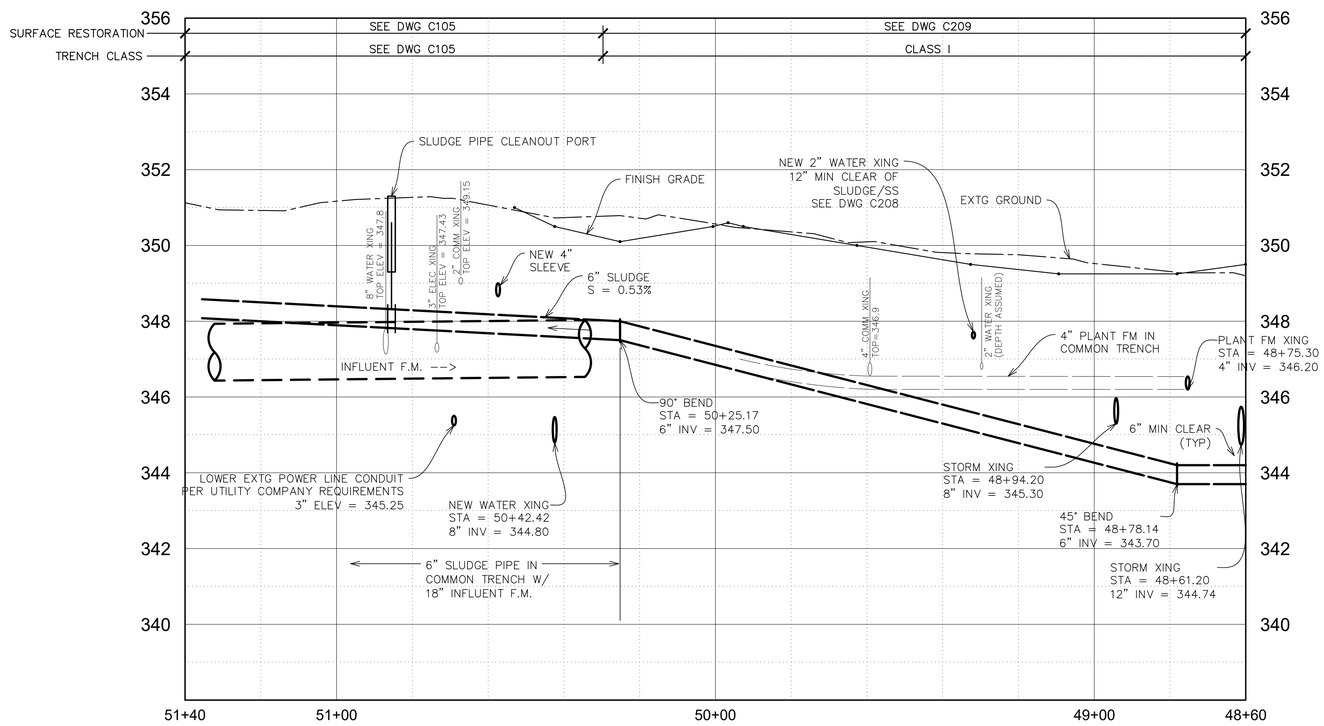




SLUDGE PIPING PLAN
STA 44+00 to 48+60

1" = 20'



SLUDGE PIPING PROFILE

1" = 20' H, 1" = 2' V

NO.	DATE	DESCRIPTION	BY
2	6/5/2026	ELEC CONDUITS	TMT

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

DSN. CB
DRN. TMT
CKD. CB
DATE: MAY 2026

REGISTERED PROFESSIONAL ENGINEER
OREGON JULY 14, 1981
CHRISTOPHER T. BUDCAT
56473PE
RENEWS: 12/31/2027

WESTECH ENGINEERING, INC.
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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

SLUDGE PIPING
PLAN–PROFILE
STA 48+60 to 51+40

DRAWING
C108
44 OF 223

JOB NUMBER
2599.3220.0

6/8/2026 10:00:38 AM
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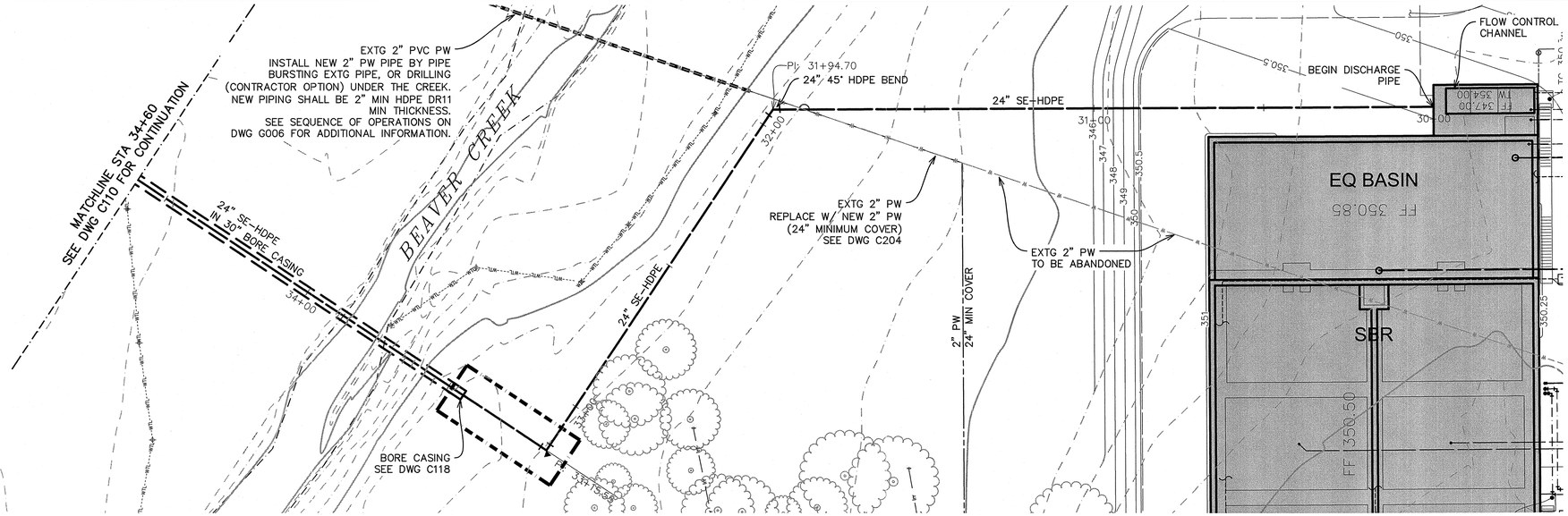
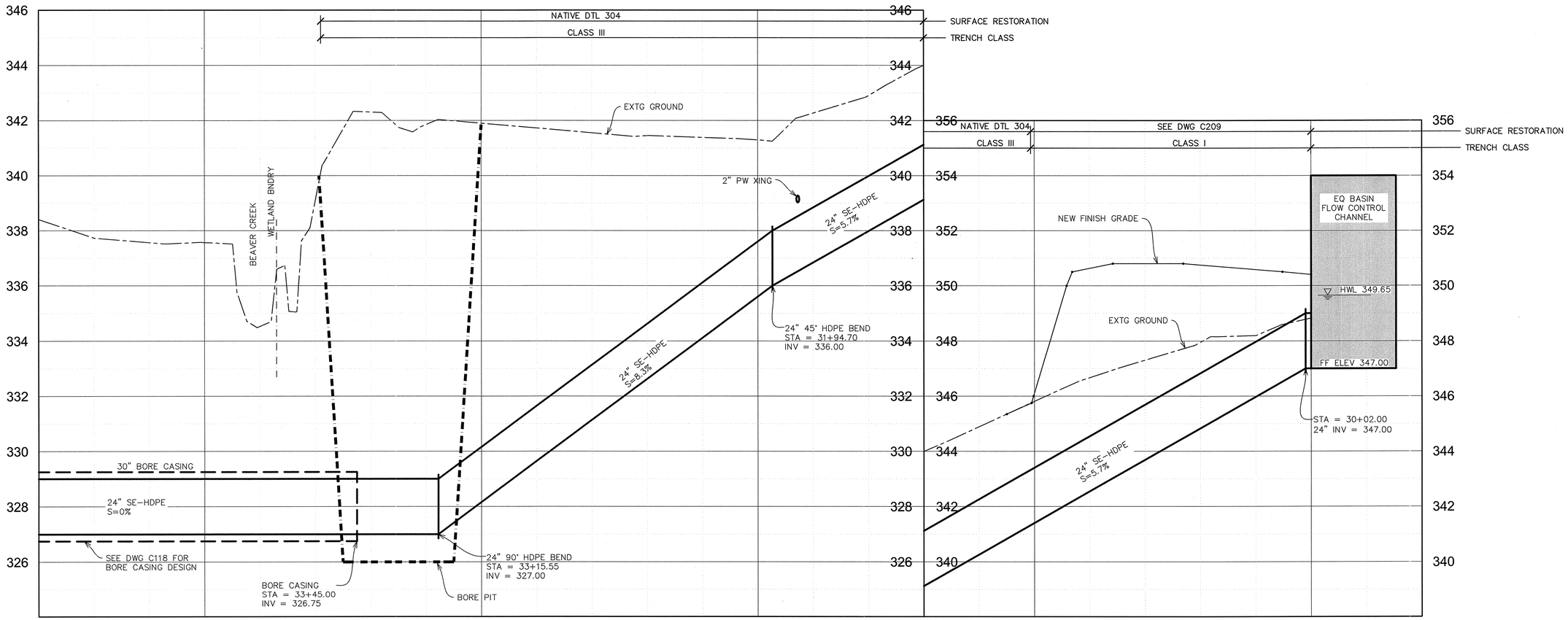


WINTER DISCHARGE PIPING PLAN
STA 30+00 to 34+00
1" = 20'



WINTER DISCHARGE PIPING PROFILE
1" = 20' H, 1" = 2' V

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NO.	DESCRIPTION	DATE	BY
1	REVISIONS		

VERIFY SCALE
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0 1"
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DSN. CB
DRN. TMT
CKD. CB
DATE: MAY 2026

REGISTERED PROFESSIONAL ENGINEER
OREGON
JAN. 14, 2005
CHRISTOPHER J. BUDICH
86473PE
RENEWS: 12/31/2027

WESTECH ENGINEERING, INC.
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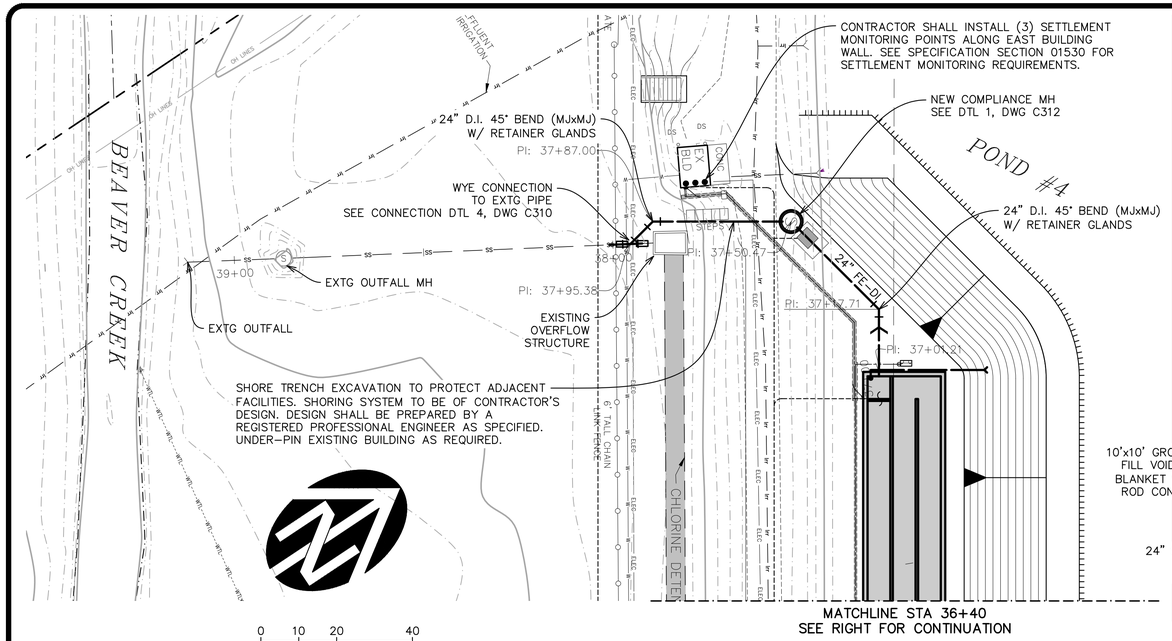
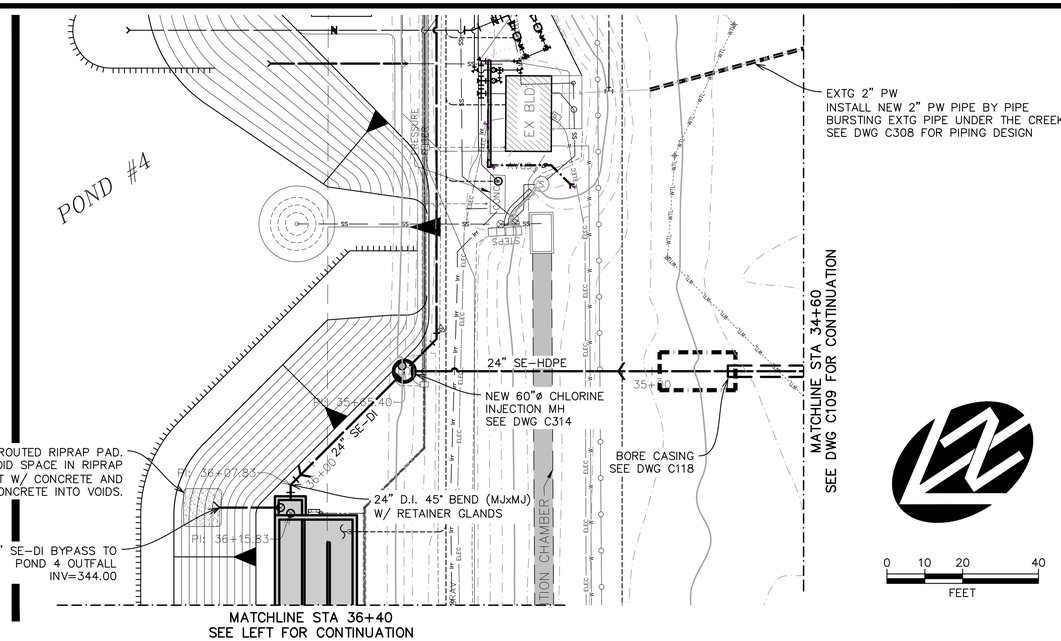
CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

WINTER DISCHARGE PIPING PLAN–PROFILE
STA 30+00 to 34+60

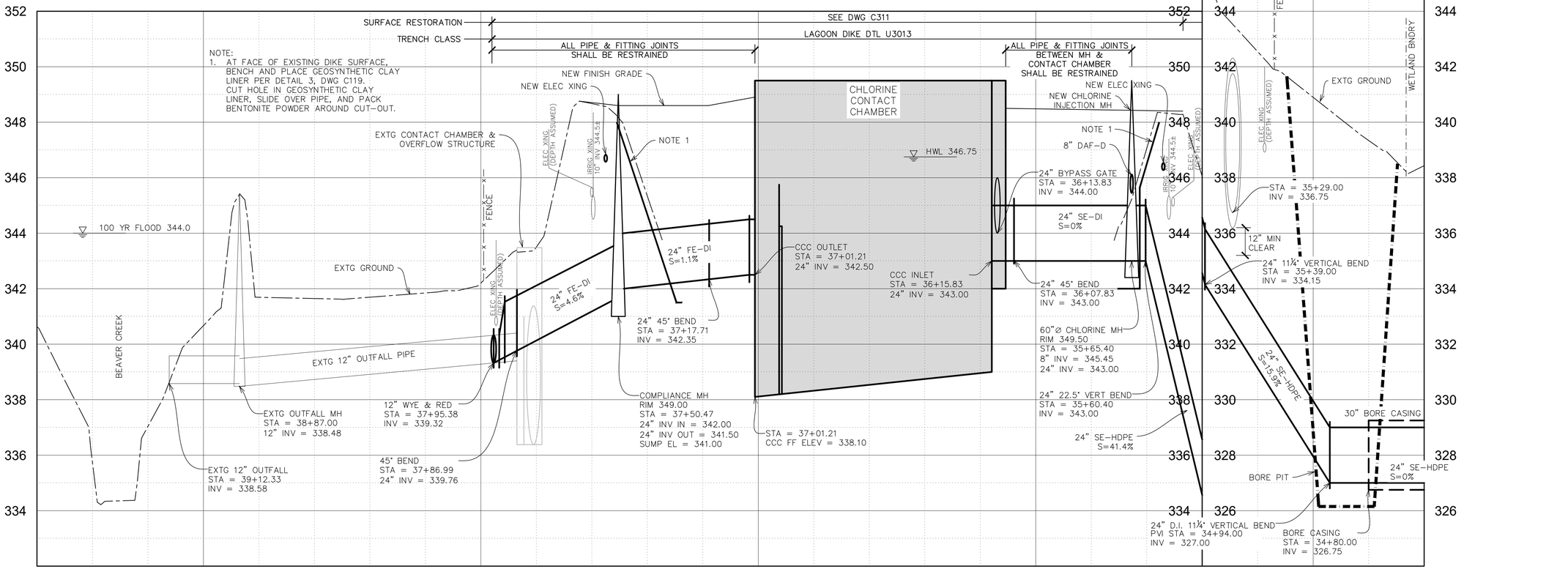
DRAWING
C109
45 OF 223

JOB NUMBER
2599.3220.0





WINTER DISCHARGE PIPING PLAN
STA 34+60 to 39+12
1" = 20'



WINTER DISCHARGE PIPING PROFILE
1" = 20' H, 1" = 2' V

				BY
				TMT
REVISIONS				
NO.	DATE	DESCRIPTION		
2	6/5/2026	ELEC CONDUITS		

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

DSN. CB
DRN. TMT
CKD. CB
DATE: MAY 2026

REGISTERED PROFESSIONAL ENGINEER
OREGON JULY 14, 2009
CHRISTOPHER T. BROCKETT
56473PE
RENEWS: 12/31/2027

WESTECH ENGINEERING, INC.
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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS
WINTER DISCHARGE PIPING PLAN–PROFILE
STA 34+60 to 39+12

DRAWING
C110
46 OF 223

JOB NUMBER
2599.3220.0

6/8/2026 10:00:45 AM
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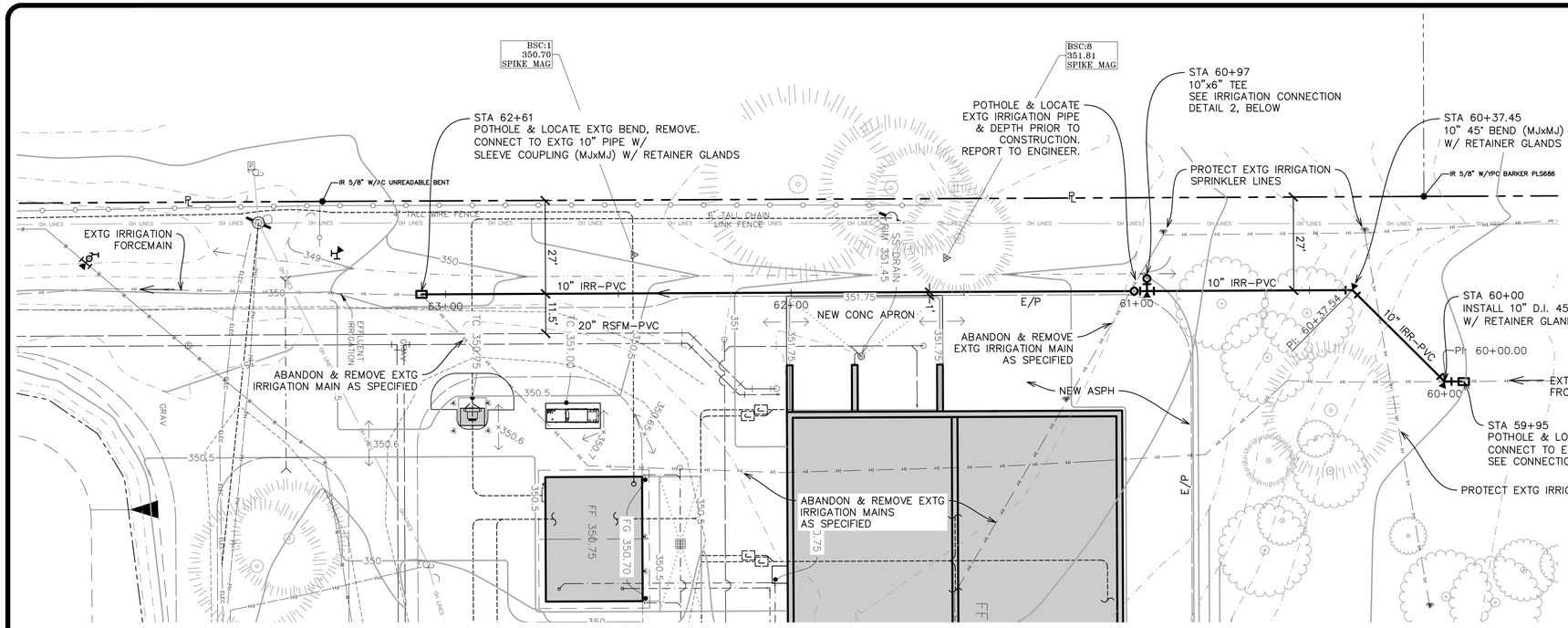
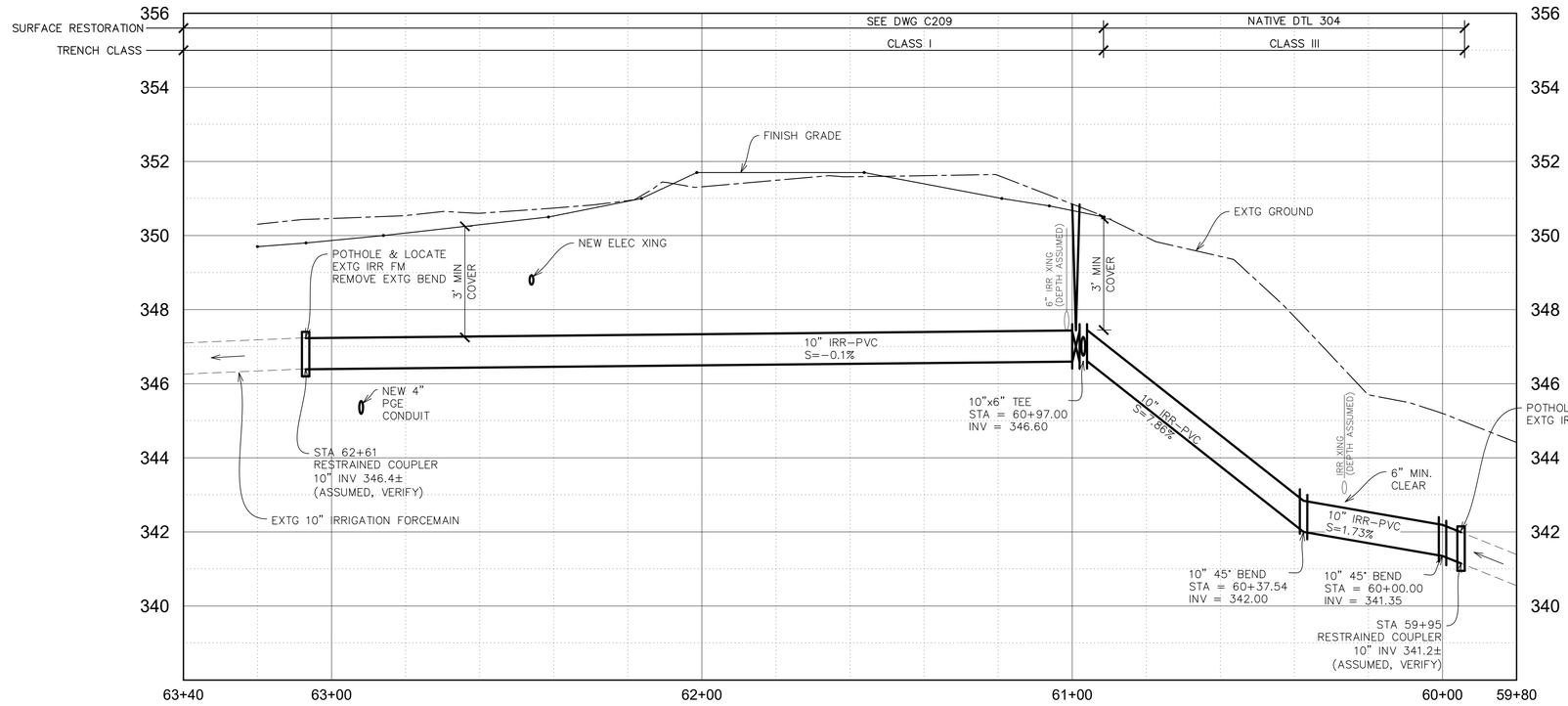


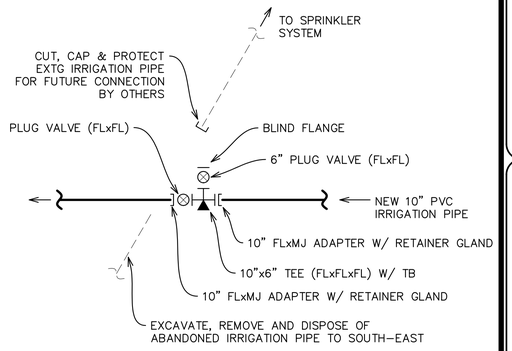
NOTE: SEE SEQUENCE OF OPERATIONS ON DWG G006 FOR ADDITIONAL INFORMATION.

IRRIGATION FORCEMAIN RELOCATION PLAN
STA 60+00 to 62+61

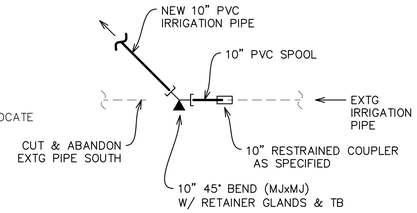
1" = 20'



IRRIGATION FORCEMAIN RELOCATION PROFILE
1" = 20' H, 1" = 2' V



IRRIGATION CONNECTION DETAIL 2
N.T.S.



IRRIGATION CONNECTION DETAIL 1
N.T.S.

NO.	DATE	DESCRIPTION	BY
2	6/5/2026	ELEC. CONDUITS	TMT

REVISIONS

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY
0 1"

DSN. CB
DRN. TMT
CKD. CB
DATE: MAY 2026

REGISTERED PROFESSIONAL ENGINEER
OREGON JULY 14, 1981
CHRISTOPHER T. BROCATO
56473PE
RENEWS: 12/31/2027

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CITY OF AUMSVILLE, OREGON

WASTEWATER TREATMENT PLANT IMPROVEMENTS

IRRIGATION FORCEMAIN RELOCATION PLAN-PROFILE STA 60+00 to 62+61

DRAWING
C111
47 OF 223

JOB NUMBER
2599.3220.0

6/8/2026 10:00:50 AM
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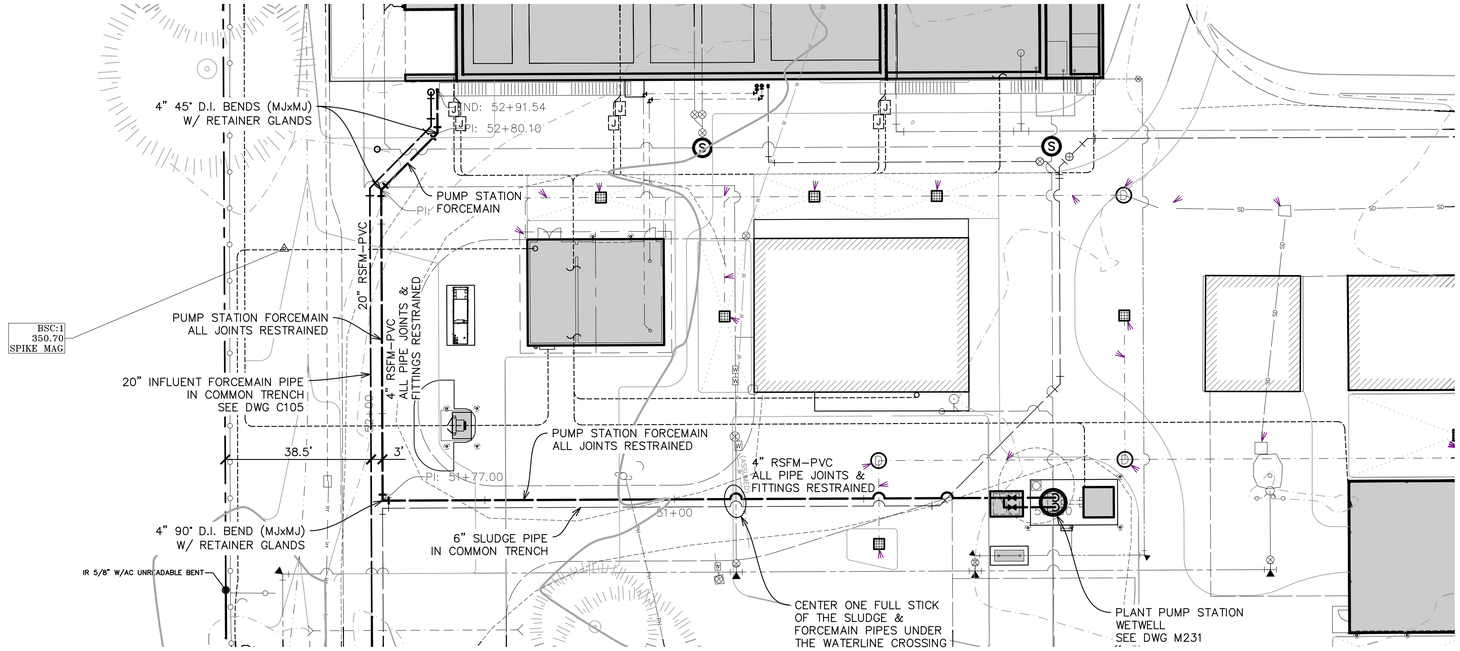
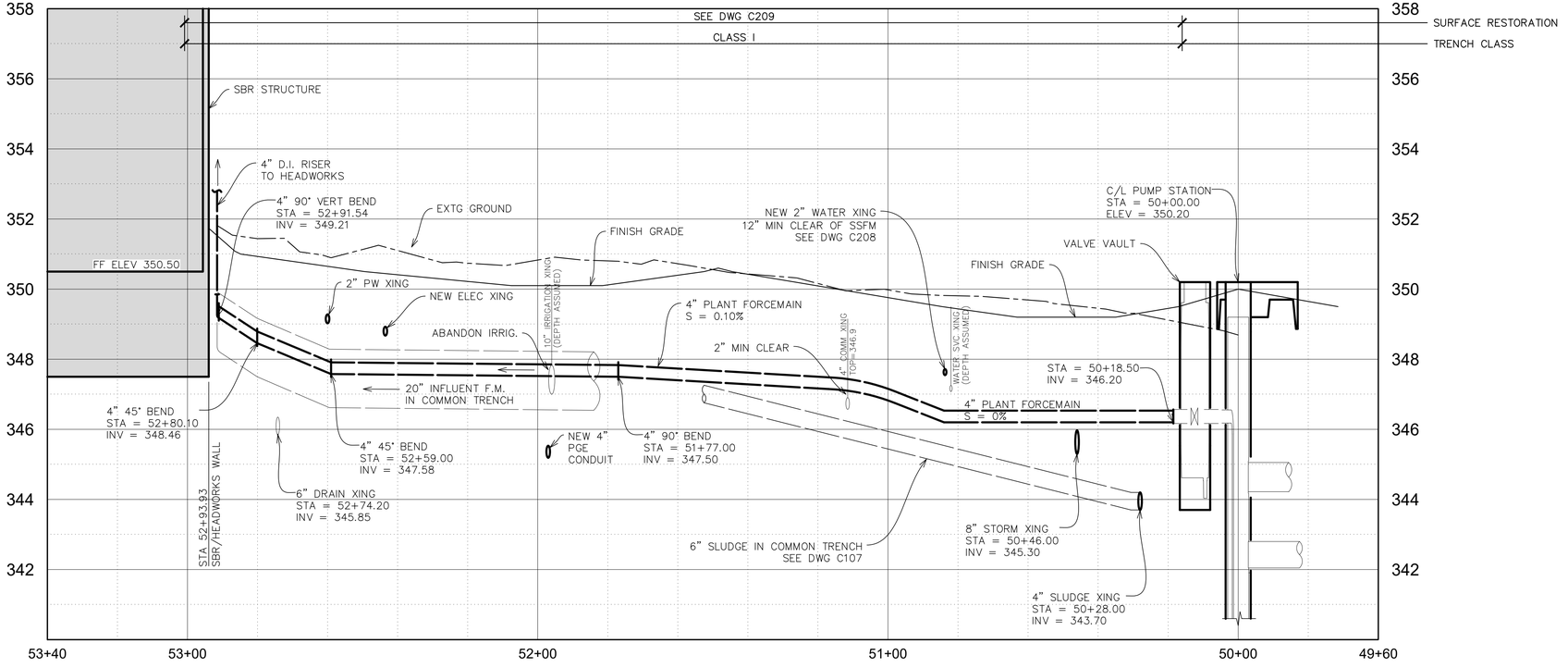


PLANT PUMP STATION FORCEMAIN PLAN
STA 50+00 to 53+00

1" = 20'



PLANT PUMP STATION FORCEMAIN PROFILE

1" = 20' H, 1" = 2' V

NO.	DATE	DESCRIPTION	BY
2	6/5/2026	ELEC. CONDUITS	TMT

REVISIONS

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH, ADJUST THIS SHEET, ADJUST SCALES ACCORDINGLY

DSN. CB
DRN. TMT
CKD. CB
DATE: MAY 2026

REGISTERED PROFESSIONAL ENGINEER
56473PE
OREGON JULY 14, 2023
CHRISTOPHER J. BRUCKER
RENEWS: 12/31/2027

WESTECH ENGINEERING, INC.
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CITY OF AUMSVILLE, OREGON

WASTEWATER TREATMENT PLANT IMPROVEMENTS

PLANT PUMP STATION
FORCEMAIN PLAN-PROFILE
STA 50+00 to 53+00

DRAWING
C112
48 OF 223

JOB NUMBER
2599.3220.0

6/8/2026 10:00:55 AM
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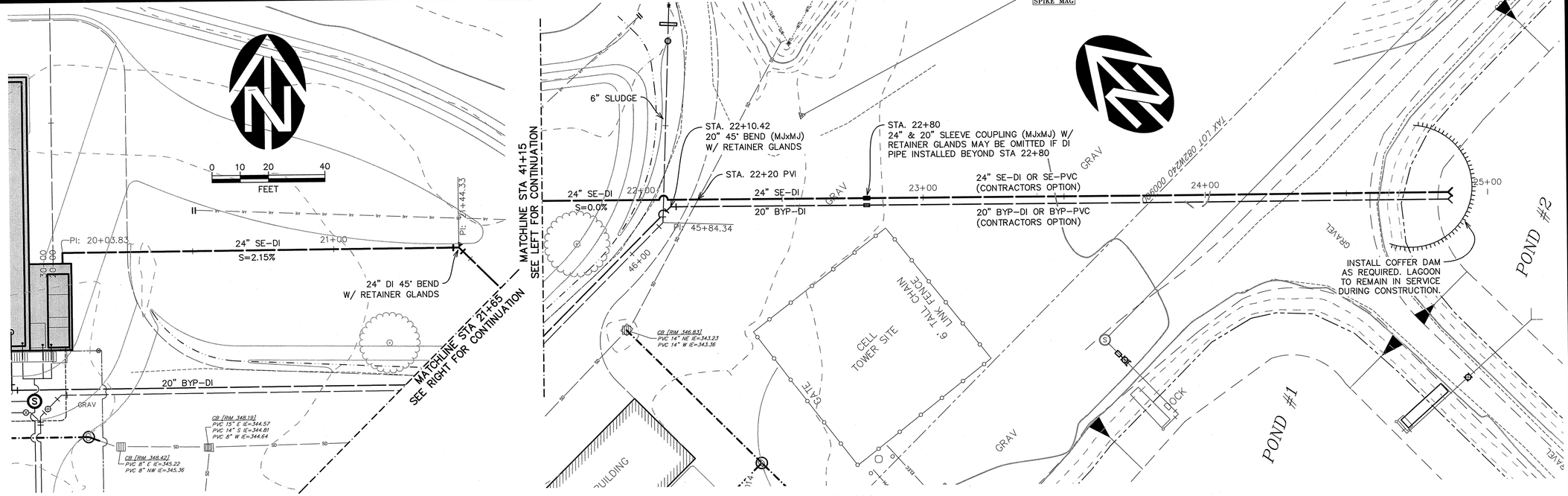
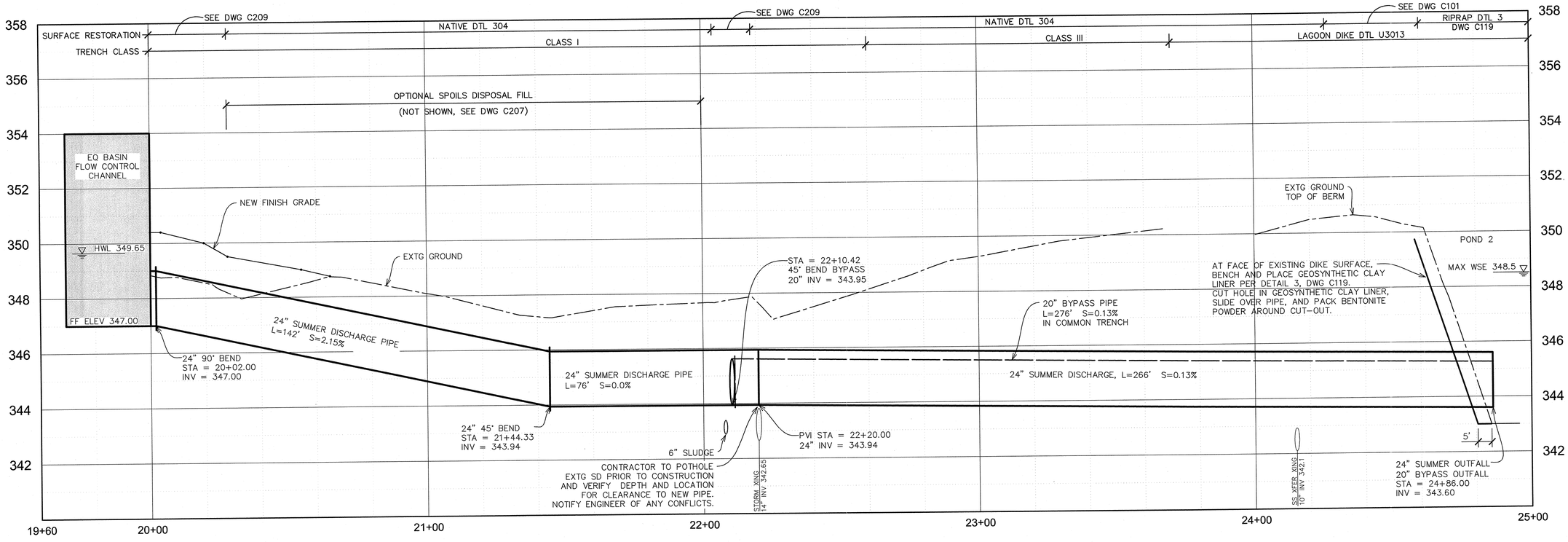


SUMMER DISCHARGE PIPING PLAN
STA 20+00 to 24+86

1" = 20'



SUMMER DISCHARGE PIPING PROFILE
1" = 20' H, 1" = 2' V

NO.	DATE	DESCRIPTION	BY
1		REVISIONS	

VERIFY SCALE
BAR IS ONE INCH ON
ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON
THIS SHEET ADJUST
SCALE ACCORDINGLY

DSN. CB
DRN. TMT/TN
CKD. CB
DATE: MAY 2026

REGISTERED PROFESSIONAL ENGINEER
CHRISTOPHER T. BUCKLEY
OREGON JULY 14, 2006
RENEWS: 12/31/2027

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
3841 Fairview Industrial Dr. S.E., Suite 100, Salem, OR 97302
Phone: (503) 585-2474 Fax: (503) 585-3986
E-mail: westech@westech-eng.com

CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

SUMMER DISCHARGE PIPING PLAN–PROFILE STA 20+00 to 24+86

DRAWING
C113
49 OF 223

JOB NUMBER
2599.3220.0

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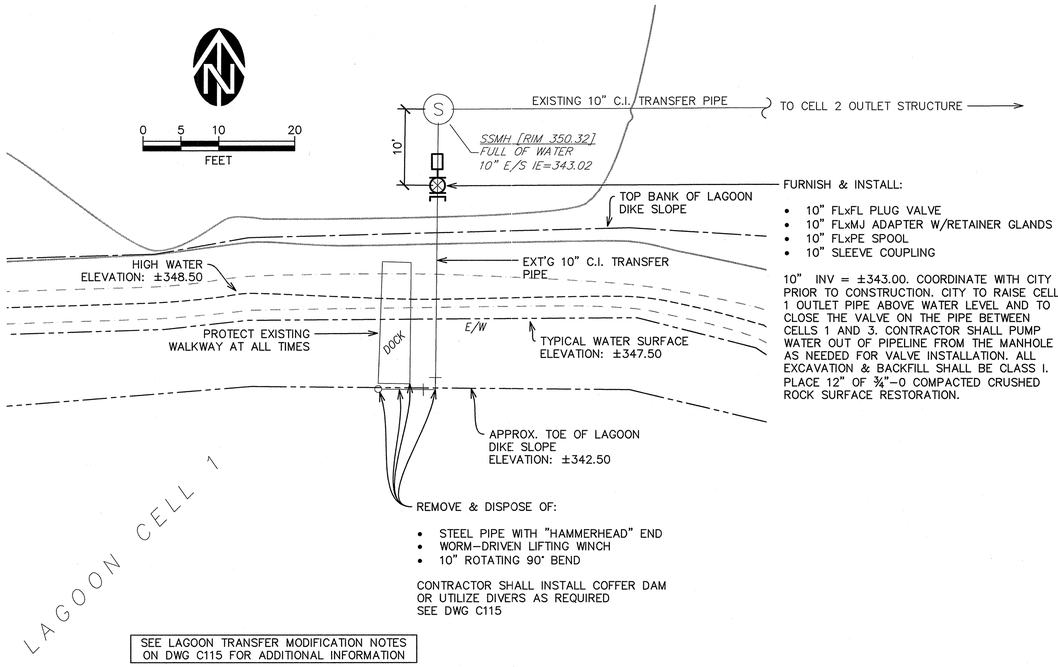
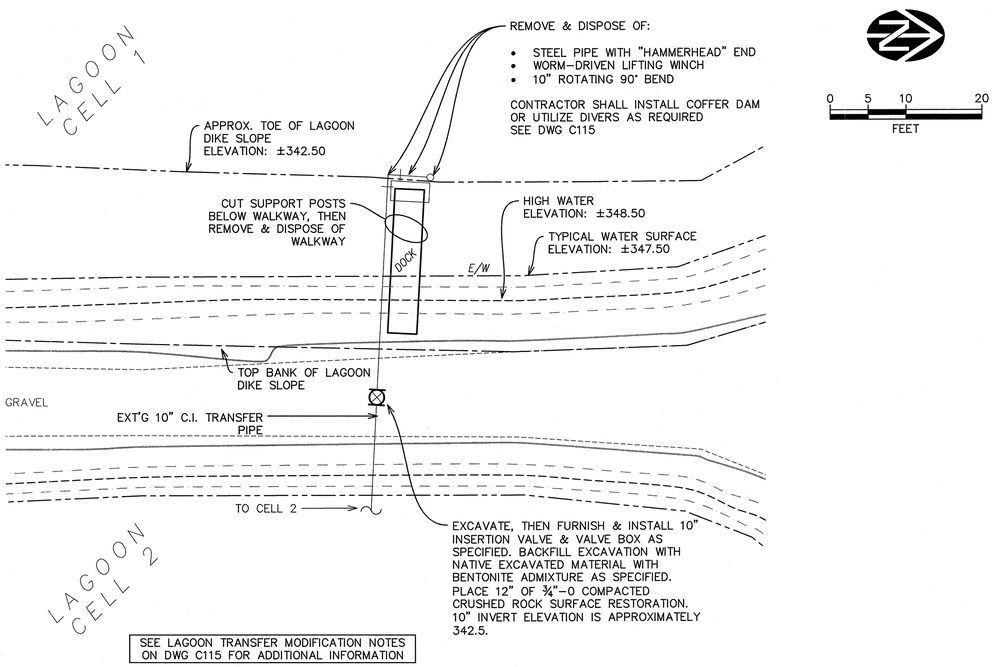


CELL 1-3 TRANSFER PIPE MODIFICATIONS

1" = 10'

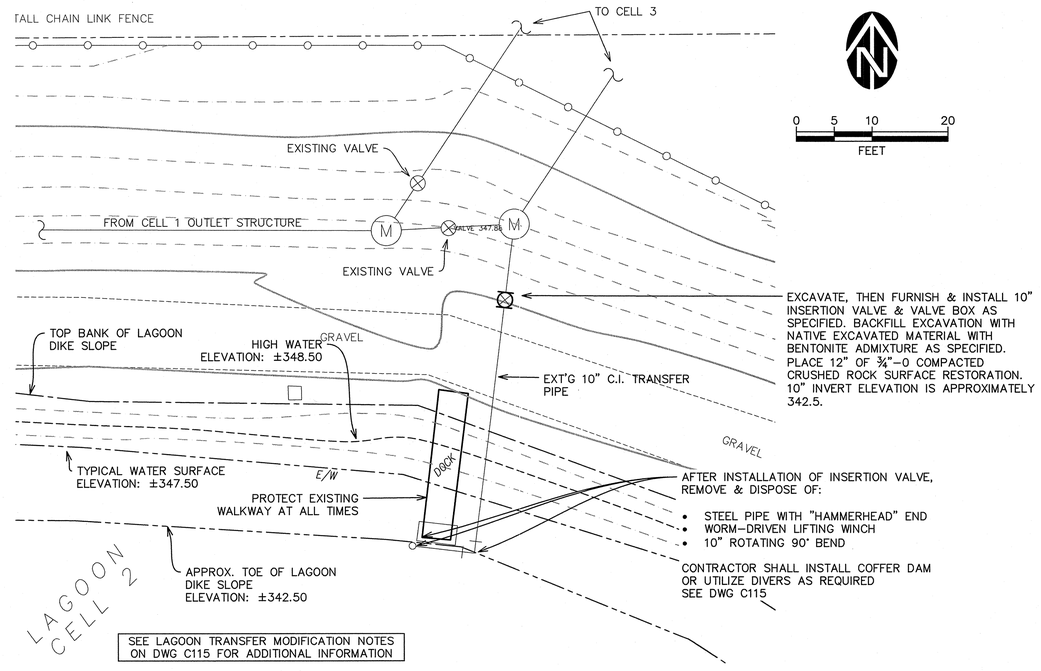
1



CELL 1-2 TRANSFER PIPE MODIFICATIONS

1" = 10'

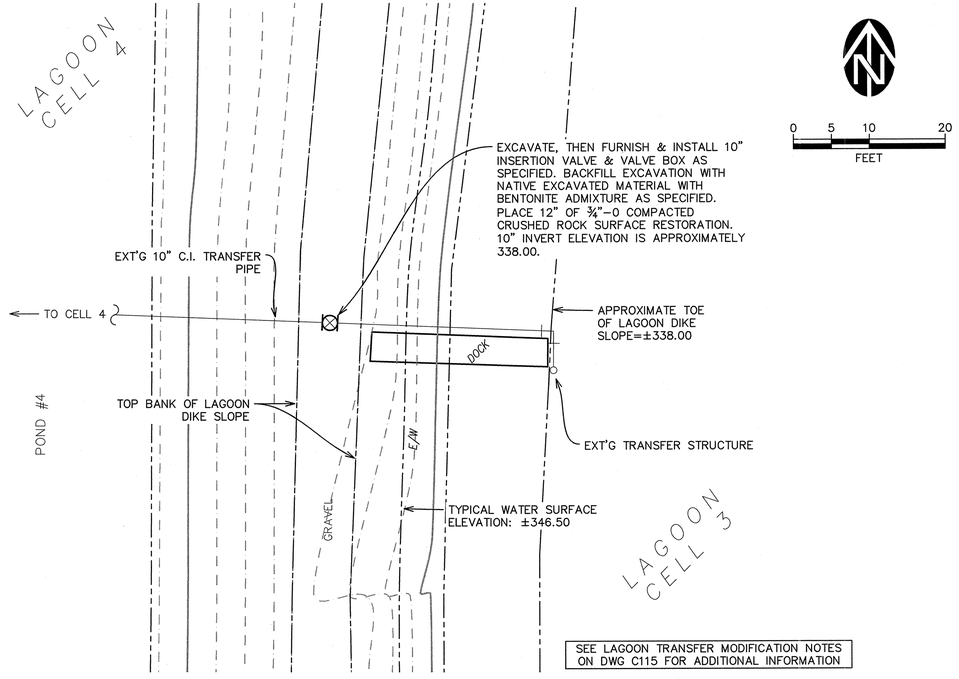
2



CELL 2-3 TRANSFER PIPE MODIFICATIONS

1" = 10'

3



CELL 3-4 TRANSFER PIPE MODIFICATIONS

1" = 10'

4

NO.	DATE	DESCRIPTION	BY
1		REVISIONS	

VERIFY SCALE
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0 1"
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DSN. CB
DRN. RS
CKD. CB
DATE: MAY 2026

REGISTERED PROFESSIONAL ENGINEER
OREGON JULY 14, 2006
CHRISTOPHER J. BRUCKER
RENEWS: 12/31/2027

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

EXISTING LAGOON TRANSFER PIPE MODIFICATIONS

DRAWING
C114
50 OF 223

JOB NUMBER
2599.3220.0

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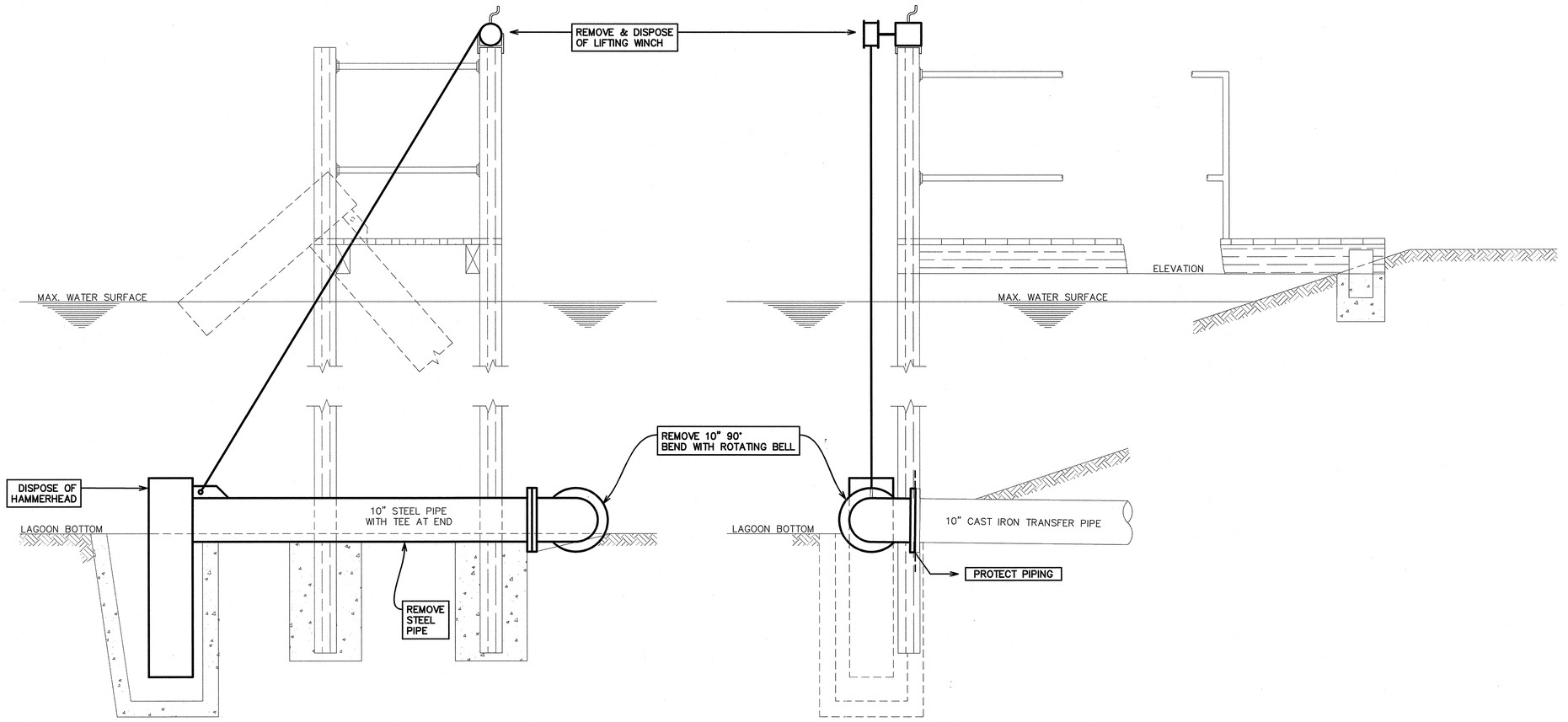
LAGOON ELEVATION TABLE				
LAGOON CELL	1	2	3	4
TOP OF DIKE ELEVATION (APPROXIMATE)	350.50	350.50	348.50	348.50
HIGH WATER ELEVATION (APPROXIMATE)	348.50	348.50	346.50	346.50
BOTTOM ELEVATION (APPROXIMATE)	342.50	342.50	338.00	338.00

LAGOON TRANSFER PIPING MODIFICATION NOTE

THE WATER DEPTHS IN THE LAGOONS ARE TYPICALLY LOWEST IN LATE APRIL OF EACH YEAR AND GRADUALLY RISE TO MAXIMUM LEVELS BY THE END OF OCTOBER. FROM NOVEMBER THROUGH FEBRUARY, THE WATER LEVELS IN THE LAGOONS GENERALLY REMAIN NEAR MAXIMUM LEVELS. DURING MARCH & APRIL, THE CITY GRADUALLY LOWERS THE WATER LEVELS TO MINIMUM LEVELS. BUT, THE CITY MAKES NO GUARANTEE THAT MINIMUM WATER LEVELS WILL BE ACHIEVED AND HOW LONG THE WATER LEVELS WILL REMAIN AT MINIMUM LEVELS. SEE THE SEQUENCE OF OPERATIONS ON DWG G006 FOR ADDITIONAL INFORMATION



TYPICAL TRANSFER PIPING DEMOLITION DETAIL

3/4" = 1'-0"

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VERIFY SCALE
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0 1"
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DSN.: CB
DRN.: RS
CKD.: CB
DATE: MAY 2026

NO.	DATE	DESCRIPTION	BY
1		REVISIONS	

REGISTERED PROFESSIONAL ENGINEER
OREGON
JAN. 14, 2020
CHRISTOPHER J. BUDICH
86473PE
RENEWS: 12/31/2027

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
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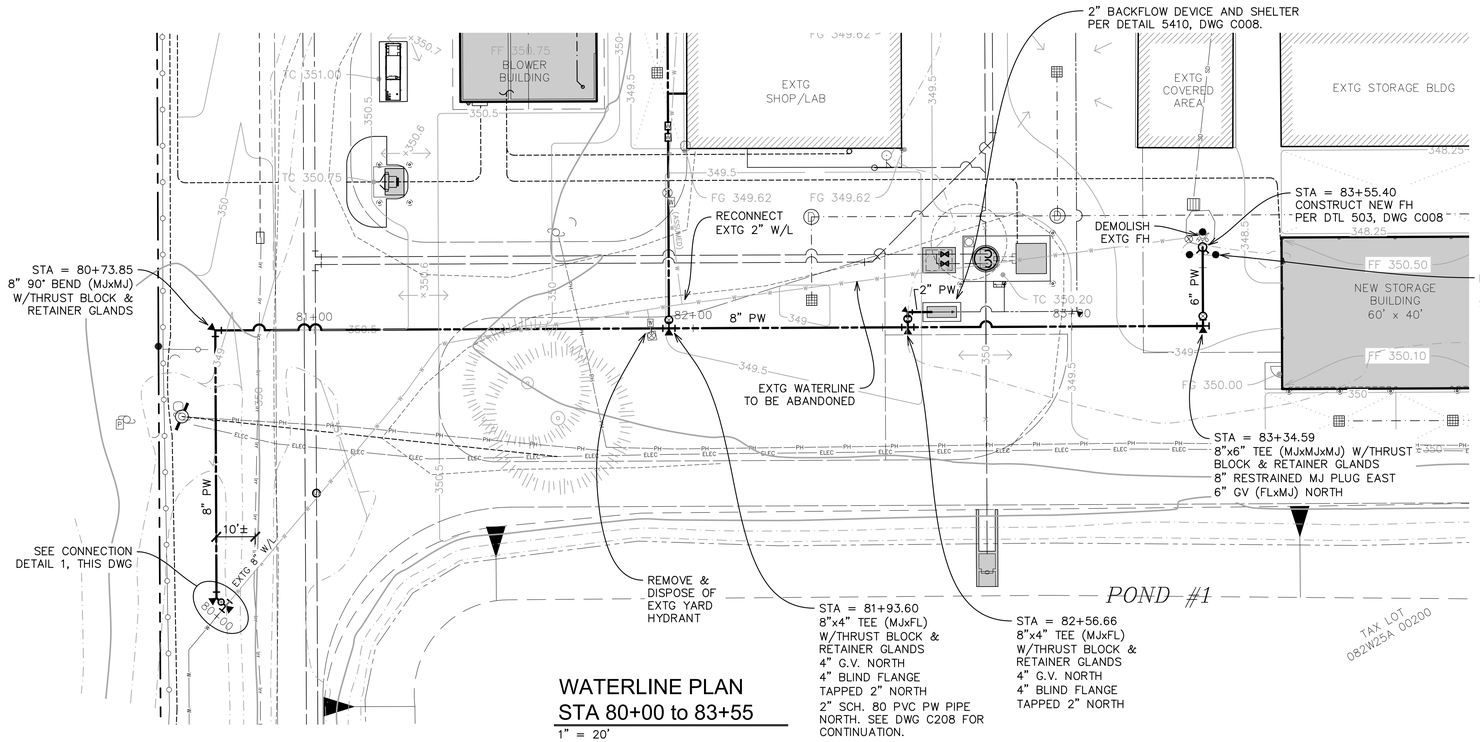
CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

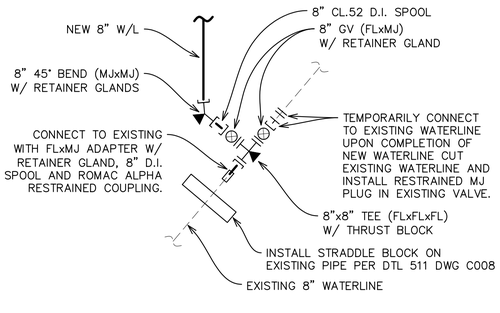
TRANSFER PIPING MODIFICATION DETAIL

DRAWING
C115
51 OF 223

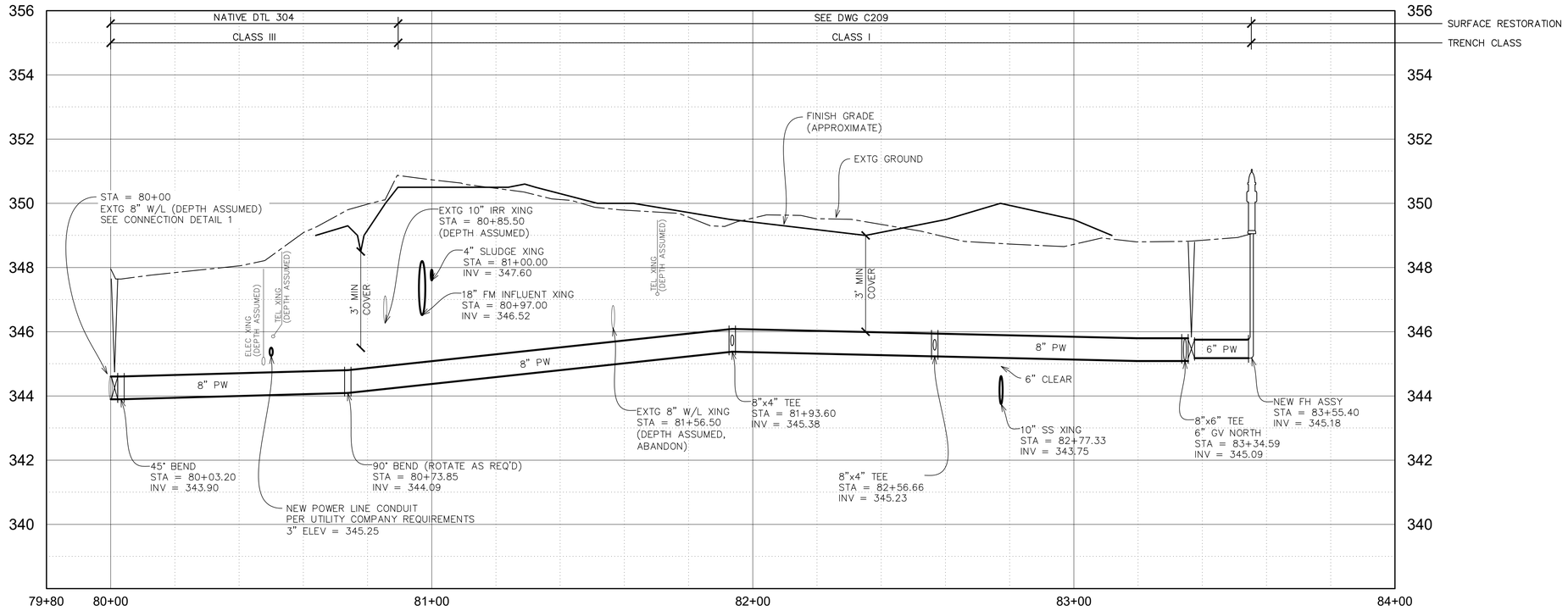
JOB NUMBER
2599.3220.0



WATERLINE PLAN
STA 80+00 to 83+55
1" = 20'



CONNECTION DETAIL 1
N.T.S.



WATERLINE PROFILE
1" = 20' H, 1" = 2' V

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

NO.	DATE	DESCRIPTION	BY
2	6/5/2026	ELEC. CONDUITS	TMT

REVISIONS

DSN. CB
DRN. TMT/TN
CKD. CB
DATE: MAY 2026

REGISTERED PROFESSIONAL ENGINEER
OREGON JULY 14, 2006
CHRISTOPHER T. BROCKATO
56473PE
RENEWS: 12/31/2027

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
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CITY OF AUMSVILLE, OREGON

WASTEWATER TREATMENT PLANT IMPROVEMENTS

WATERLINE PLAN–PROFILE STA 80+00 to 83+55

DRAWING
C116
52 OF 223

JOB NUMBER
2599.3220.0

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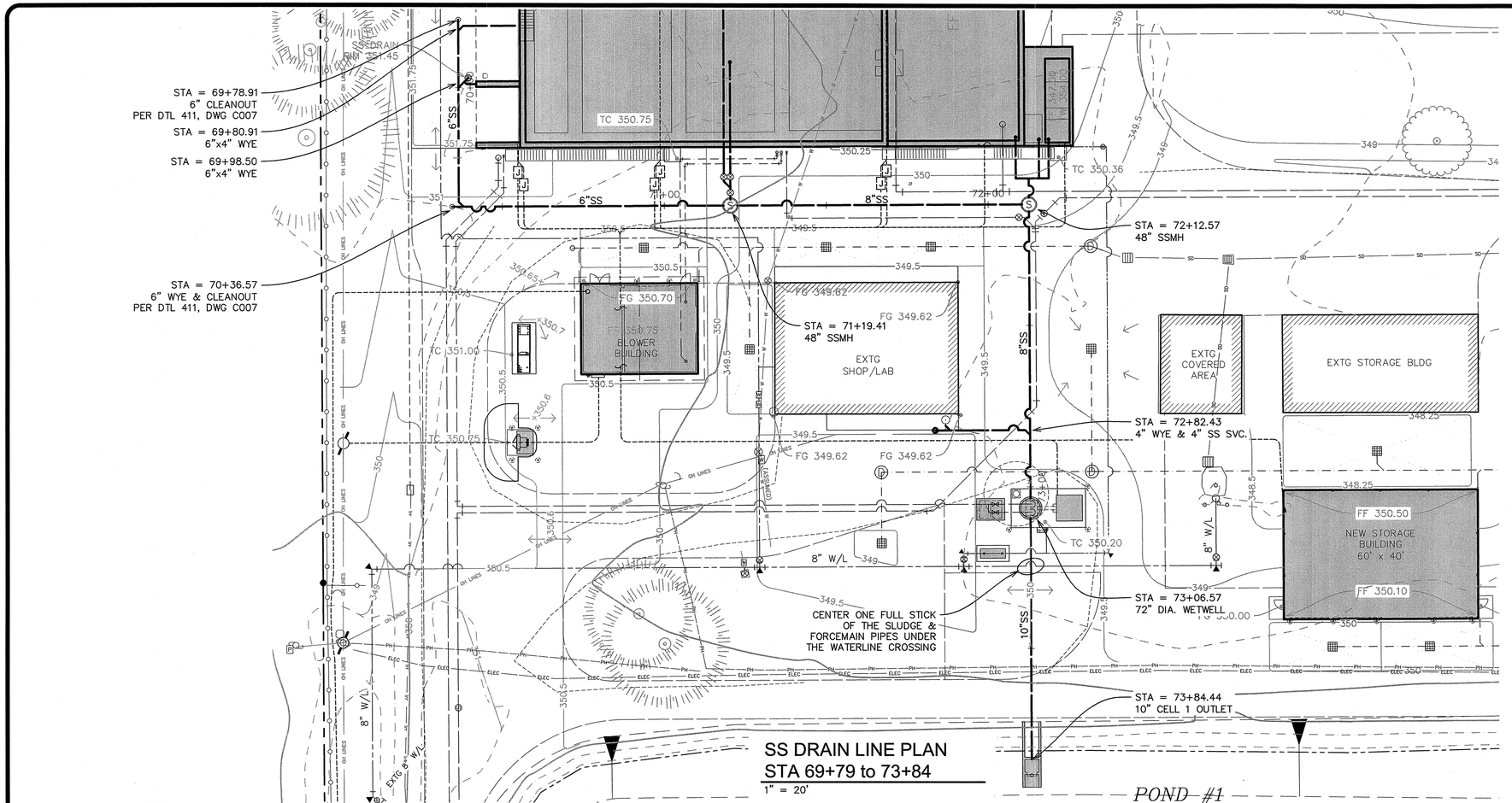
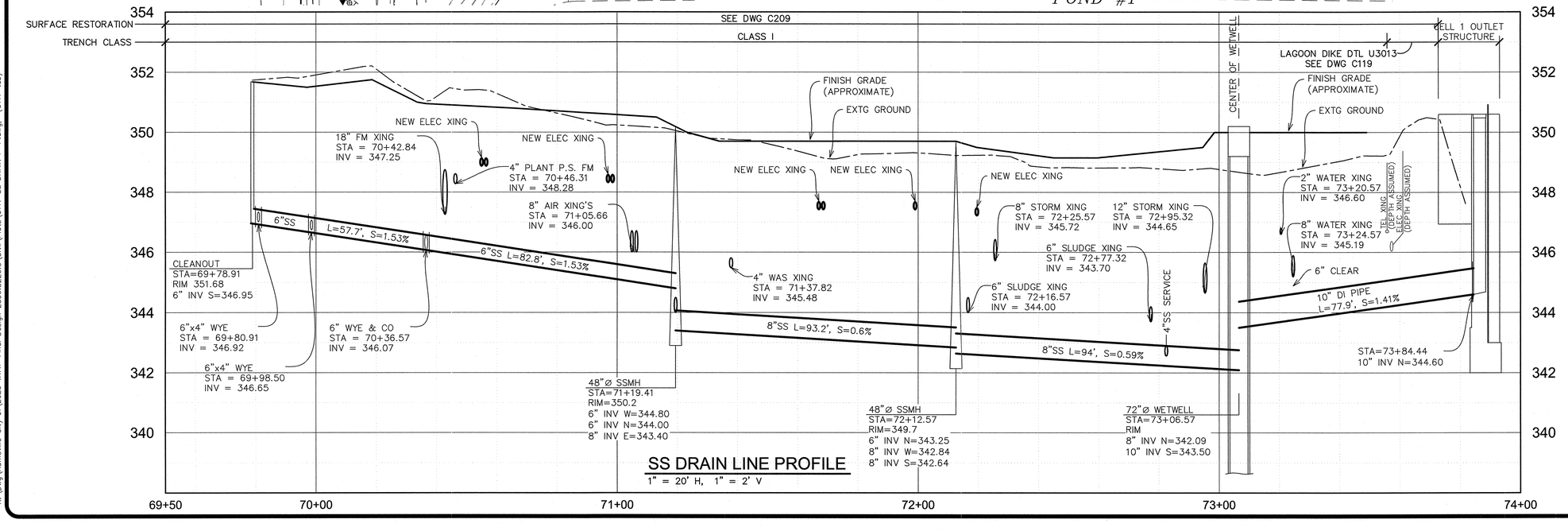


SS DRAIN LINE PLAN
STA 69+79 to 73+84
1" = 20'



SS DRAIN LINE PROFILE
1" = 20' H, 1" = 2' V

NO.	DATE	DESCRIPTION	BY
1		REVISIONS	

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DSN. CB
DRN. TM/TN
CKD. CB
DATE: MAY 2026

REGISTERED PROFESSIONAL ENGINEER
OREGON
JULY 15, 2005
CHRISTOPHER J. BRUGATO
56473PE
RENEWS: 12/31/2027

WESTECH ENGINEERING, INC.
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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

SS DRAIN LINE
PLAN–PROFILE
STA 69+79 to 73+84

DRAWING
C117
53 OF 223

JOB NUMBER
2599.3220.0

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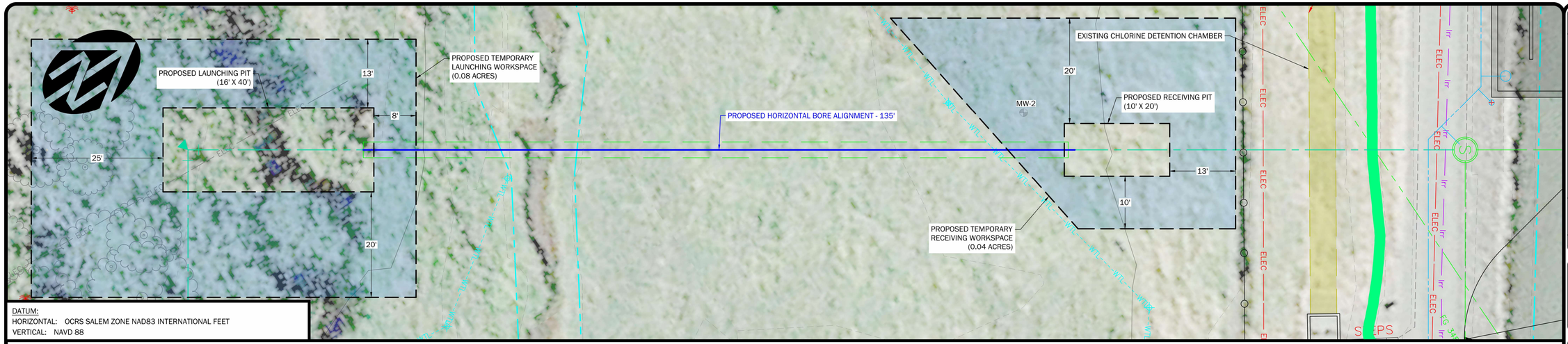
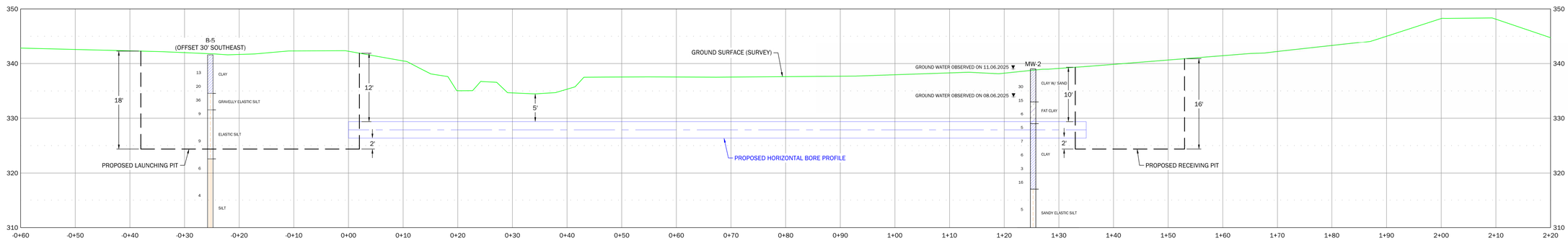


PLAN

10 0 10

SCALE IN FEET



LEGEND

GROUND WATER OBSERVED

SPT N

TYPE OF SOIL

- BORING LOCATION
- PROPOSED SBR DISCHARGE ALIGNMENT
- PROPOSED NON-POTABLE WATER PIPELINE ALIGNMENT
- SANITARY SEWER
- POWER LINE
- ABANDONED POWER LINE
- IRRIGATION LINE
- SANITARY SEWER MANHOLE
- FENCE
- EDGE OF WATER
- WETLAND
- FLOOD - INUNDATION BOUNDARY (500 YEAR)

PROFILE

10 0 10

HORIZONTAL SCALE IN FEET

10 0 10

VERTICAL SCALE IN FEET

CONTRACTOR NOTES:

1. CONTRACTOR SHALL ADHERE TO THE SPECIFICATIONS AND PROJECT REQUIREMENTS PER CITY OF AUMSVILLE SPECIFICATIONS, CONTRACT DOCUMENTS AND SPECIAL PERMIT CONDITIONS, EXCEPT AS NOTED ON THIS DRAWING.
2. CONTRACTOR IS RESPONSIBLE FOR CALLING OREGON STATE ONE-CALL AND LOCATING ALL UNDERGROUND UTILITIES PRIOR TO BEGINNING CONSTRUCTION. IF ANY UTILITY CONFLICT IS IDENTIFIED, CONTRACTOR SHALL SUBMIT PLAN TO AVOID THE UTILITY CONFLICT AND OBTAIN APPROVAL FROM CITY OF AUMSVILLE PRIOR TO INITIATING BORING OPERATIONS.
3. CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING AND PROTECTING ANY FOREIGN UTILITY THAT MAY BE AFFECTED BY THE BORING OPERATIONS.
4. CONTRACTOR IS RESPONSIBLE FOR CONTROLLING GROUNDWATER AND IMPLEMENTING DEWATERING MEASURES IF ENCOUNTERED IN BORE PITS. GROUNDWATER ELEVATION WILL VARY SEASONALLY.
5. CONTRACTOR IS RESPONSIBLE FOR THE CONSTRUCTION PROCESS AND SAFETY, INCLUDING CONSTRUCTION SEQUENCE, TEMPORARY HANDRAILS OR BARRIERS, EXCAVATION ACCESS/EGRESS, LIFTING OF MATERIALS AND EQUIPMENT INTO AND OUT OF TEMPORARY EXCAVATIONS, TEMPORARY SHORING OF EXCAVATIONS, AND STABILITY OF TEMPORARY SLOPES.
6. CONTRACTOR SHALL SUBMIT THE FOLLOWING TO THE OWNER FOR APPROVAL PRIOR TO CONSTRUCTION:
   - BORE MACHINE SPECIFICATIONS AND OPERATING MANUAL.
   - LUBRICATING SYSTEM SPECIFICATIONS AND OPERATING MANUAL (IF USED).
   - STEERING SYSTEM SPECIFICATIONS AND MATERIALS (IF USED).
   - SHORING PLAN SEALED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF OREGON.
   - SPOILS MANAGEMENT AND DISPOSAL PLAN.
   - EXCAVATION AND SHORING INSPECTION AND MONITORING PLAN.
   - CONTINGENCY PLAN FOR UNFORESEEN CONDITIONS: OBSTRUCTIONS, DISCOVERED UNMARKED FOREIGN UTILITIES, GROUNDWATER, CONTAMINATED GROUND CONDITIONS, UNSTABLE GROUND CONDITIONS, LOCKED AUGERS AND/OR STUCK CASING, FLOODED CASING AND/OR LAUNCHING PIT, DRIFT OR DIVE OF CASING, SURFACE SETTLEMENT AND/OR HEAVE, AND ANY OTHER CONDITIONS THAT WOULD PREVENT ADVANCEMENT OF THE CASING, HALTING BORING OPERATIONS.
7. TEMPORARY EXCAVATIONS: TEMPORARY EXCAVATIONS SHALL CONFORM TO OSHA CODE OF FEDERAL REGULATIONS STANDARD, AND ANY OTHER LOCAL, STATE, AND FEDERAL REGULATIONS.
8. SITE ACCESS: ALL EQUIPMENT MUST ACCESS THE SITE ALONG THE CONSTRUCTION RIGHT-OF-WAY OR FROM ACCESS ROUTES APPROVED BY THE OWNER.
9. CONSTRUCTION WORKSPACES: MAXIMUM WORKSPACE LIMITS ARE DEPICTED. RESTRICT CLEARING TO THE WORKSPACE INDICATED SURROUNDING THE LAUNCHING AND RECEIVING PITS ALONG THE CONSTRUCTION RIGHT-OF-WAY.
10. LAUNCHING AND RECEIVING PIT DIMENSIONS WERE LAID OUT TO DEPICT MAXIMUM ANTICIPATED SIZES. ACTUAL SIZE AND ELEVATION DIMENSIONS WILL VERY DEPENDING ON THE NEEDS OF THE SELECTED CONTRACTOR AND PERMIT CONDITIONS.
11. ANNULAR OVERCUT: OVERCUT SHALL NOT EXCEED ½-INCH RADIALLY.
12. LINE AND GRADE: LINE AND GRADE SHALL BE WITHIN 1 PERCENT OF THE BORE LENGTH VERTICALLY AND 2 PERCENT OF THE BORE LENGTH HORIZONTALLY OF THE DESIGNED PROFILE AND ALIGNMENT.
13. SPILL PREVENTION: REFUELING OF ALL CONSTRUCTION EQUIPMENT SHALL BE COMPLETED IN ACCORDANCE WITH THE SPILL PREVENTION, CONTROL, AND COUNTERMEASURE PLAN.
14. EROSION CONTROL: CONTRACTOR SHALL SUPPLY, INSTALL AND MAINTAIN SEDIMENT CONTROL STRUCTURES IN ACCORDANCE WITH CONTRACT DOCUMENTS. CONTRACTOR SHALL INSTALL ADDITIONAL EROSION CONTROL STRUCTURES AS DIRECTED BY THE ENVIRONMENTAL INSPECTOR.
15. SITE RESTORATION: ALL DISTURBED AREAS SHALL BE RETURNED TO THE ORIGINAL CONTOURS. DISTURBED AREAS SHALL BE SEEDED OR SURFACED AS SPECIFIED ON CIVIL SHEETS.
16. THESE STANDARDS AND MINIMUM REQUIREMENTS SHALL APPLY UNLESS OVERRIDDEN BY MORE STRINGENT LOCAL, STATE, OR FEDERAL STANDARDS REQUIREMENTS, OR PERMIT CONDITIONS.

REFERENCES:

1. GEOTECHNICAL DATA: THE GEOTECHNICAL INFORMATION PROVIDED ON THIS DRAWING HAS BEEN GENERALIZED. REFER TO THE BORING LOGS IN THE GEOTECHNICAL REPORT IN THE CONTRACT DOCUMENTS FOR MORE DETAILED INFORMATION.
2. GROUND SURFACE SURVEY AND UTILITIES SHOWN ON THE DRAWING ARE BASED ON SURVEY DATA PROVIDED BY CITY OF AUMSVILLE BY EMAIL ON MAY 30, 2025.

CASING SPECIFICATIONS:

1. CASING WILL CONSIST OF 36" O.D. X 0.500" W.T., MINIMUM STEEL GRADE B BARE.

GeoEngineers

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH, OR THIS SHEET, ADJUST SCALES ACCORDINGLY

DSN. JAH
DRN. BTL
CKD. BCR
DATE: MAY 2026

Digitally signed by Jerad Hoffman
Date: 2026.05.19 16:01:25 -07'00'

REGISTERED PROFESSIONAL ENGINEER
Jerad Hoffman
86240PE
OREGON JULY 30, 2007
JERAD A. HOFFMAN
EXPIRES: June 30, 2027

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
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E-mail: westech@westech-eng.com

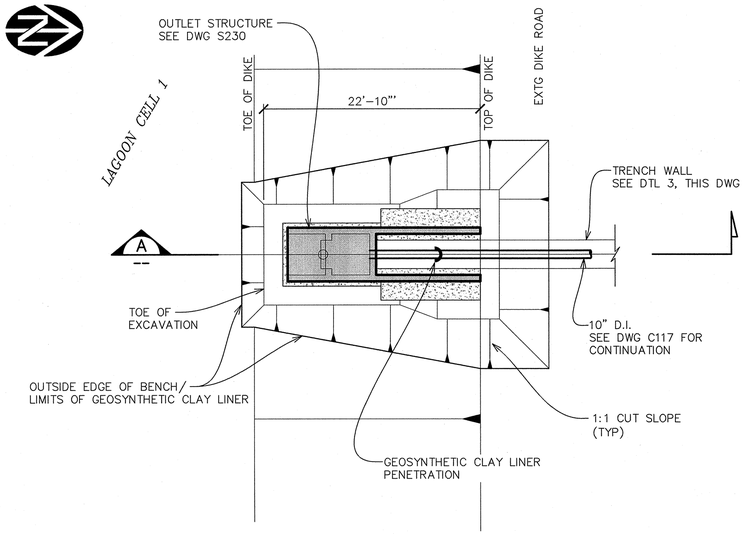
CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

SBR DISCHARGE PIPE HORIZONTAL BORE PLAN AND PROFILE

DRAWING
C118
54 OF 223

JOB NUMBER
2599.3210.0

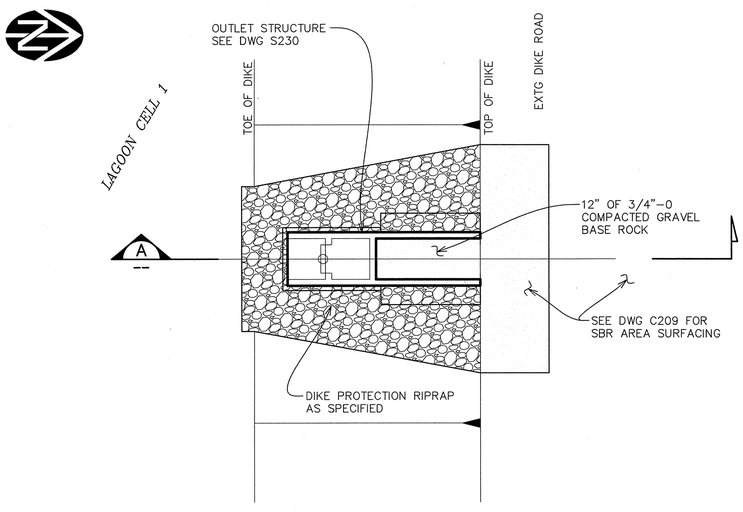
5/19/2026 2:05:06 PM
P:\25\2535603\CAD\00\HAB\Beaver Creek\DWG\SBR Discharge Pipe HAB_Rev_C.dwg, (SHEET 1 tab)



CELL 1 OUTLET STRUCTURE EXCAVATION PLAN

1/8" = 1'-0"

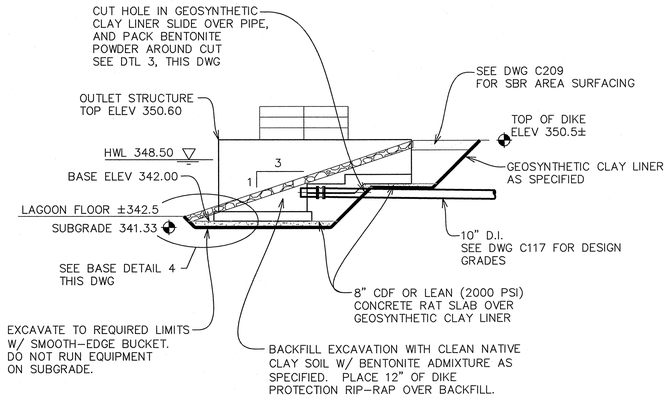
1 / C119



CELL 1 OUTLET SURFACE RESTORATION PLAN

1/8" = 1'-0"

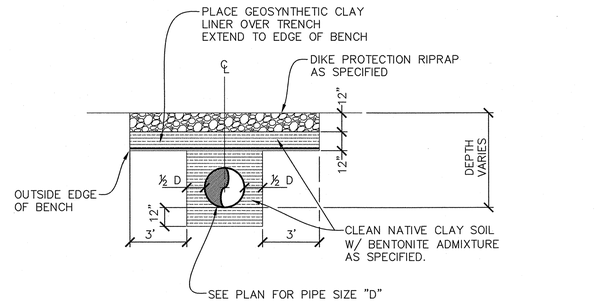
2 / C119



CELL 1 OUTLET STRUCTURE SECTION

1/8" = 1'-0"

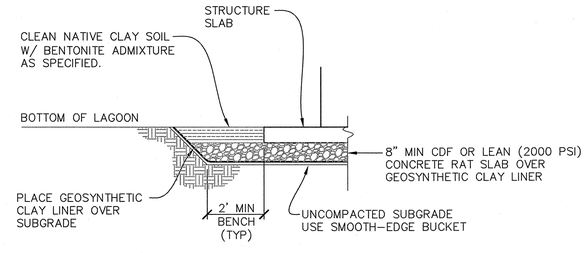
A / --



TRENCH SECTION

1/4" = 1'-0"

3 / C119



BASE DETAIL

1/4" = 1'-0"

4 / C119

NO.	DATE	DESCRIPTION	BY
1		REVISIONS	

VERIFY SCALE
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0 1"
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

DSN. CB
DRN. TMT
CKD. CB
DATE: MAY 2026

REGISTERED PROFESSIONAL ENGINEER
65473PE
OREGON
JAN. 14, 2000
CHRISTOPHER J. BUCKTO
RENEWS: 12/31/2027

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
3841 Fairview Industrial Dr. S.E., Suite 100, Salem, OR 97302
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CITY OF AUMSVILLE, OREGON

WASTEWATER TREATMENT PLANT IMPROVEMENTS

CELL 1 OUTLET STRUCTURE CIVIL PLAN AND DETAILS

DRAWING
C119
55 OF 223

JOB NUMBER
2599.3220.0

5/26/2026 12:16:01 PM
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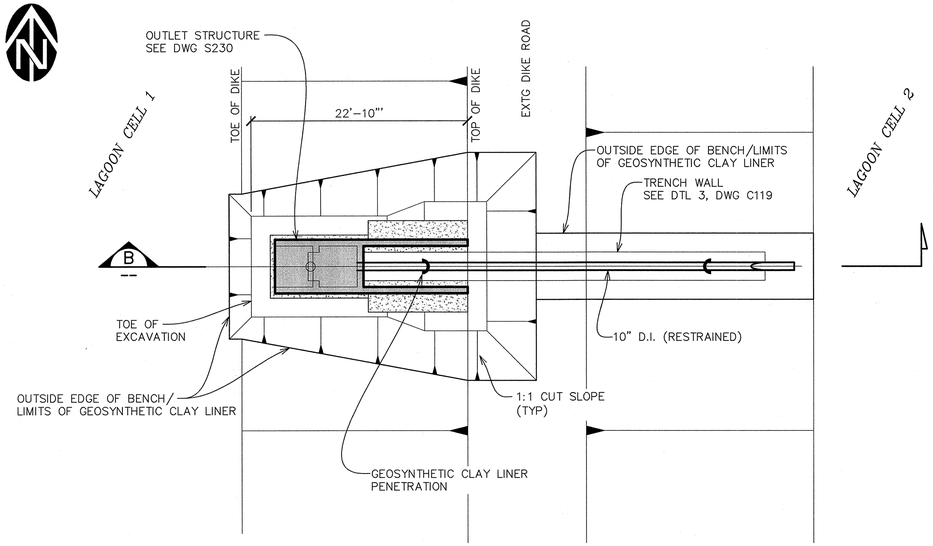
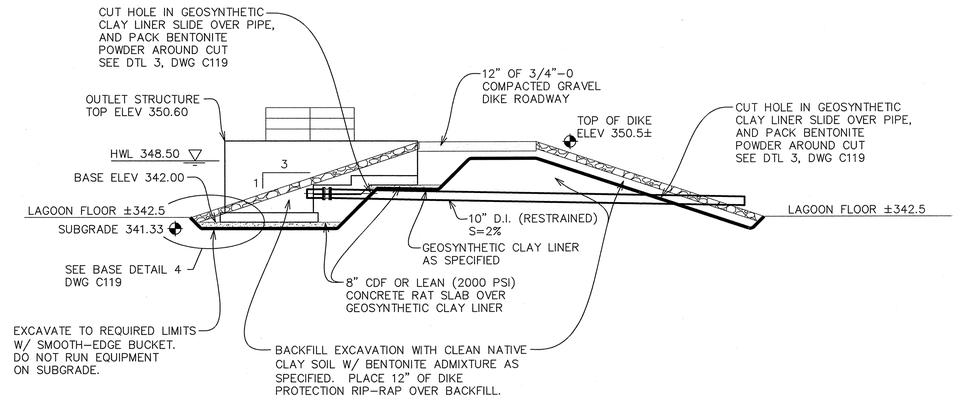
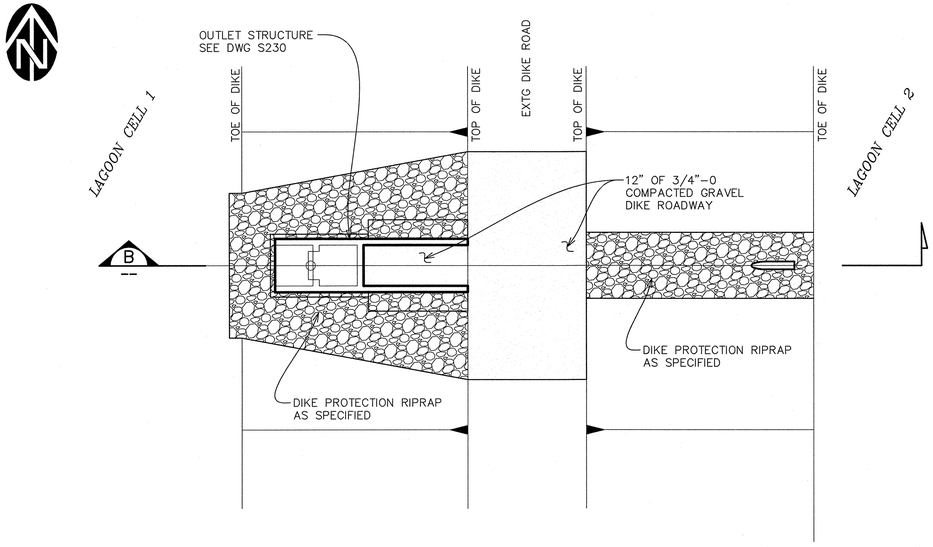


CELL 1 to 2 TRANSFER STRUCTURE EXCAVATION PLAN (1 / C120)
1/8" = 1'-0"



CELL 1 to 2 TRANSFER STRUCTURE SECTION (B / --)
1/8" = 1'-0"



CELL 1 to 2 TRANSFER SURFACE RESTORATION PLAN (2 / C120)
1/8" = 1'-0"

NO.	DATE	DESCRIPTION	BY
1		REVISIONS	

VERIFY SCALE
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0 1"
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

DSN. CB
DRN. TMT
CKD. CB
DATE: MAY 2026

REGISTERED PROFESSIONAL ENGINEER
OREGON
JAN. 14, 2020
CHRISTOPHER J. BUDJATO
86413PE
RENEWS: 12/31/2027

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
3841 Fairview Industrial Dr. S.E., Suite 100, Salem, OR 97302
Phone: (503) 585-2474 Fax: (503) 585-3986
E-mail: westech@westech-eng.com

CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

CELL 1 to 2 TRANSFER STRUCTURE CIVIL PLAN AND DETAILS

DRAWING
C120
56 OF 223

JOB NUMBER
2599.3220.0

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SEE DWG C202 FOR CONTINUATION

EROSION CONTROL LEGEND

- INSTALL SILT FENCE PER DTL 6110, DWG C004.
- INSTALL 8"ø COMPOST SOCK PER DTL 6120, DWG C004.
- PLACE INLET SEDIMENT CONTROL PER DETAIL 6130, DWG C004. TYPICAL OF ALL CATCH BASINS.
- SURFACE FLOW DIRECTION.
- CONTRACTOR SHALL MAINTAIN THE MAIN ACCESS ROAD IN A CONDITION SUITABLE FOR PASSENGER VEHICLES AT ALL TIMES. ANY RUTTING SHALL BE IMMEDIATELY REPAIRED TO THE SATISFACTION OF THE ENGINEER.
- THESE ROUTES MAY BE USED AS TEMPORARY PASSENGER VEHICLE ROUTES AS NEEDED TO FACILITATE CONSTRUCTION.

NOTES:
1. CONTRACTOR TO MAINTAIN EROSION CONTROL BMP'S THROUGH CONSTRUCTION UNTIL SITE IS STABILIZED.
2. NO CONCRETE WASHOUT ALLOWED ON SITE.

NOTE:
SEE DRAWING C202 FOR DEMOLITION NOTES & KEY CALLOUTS.

WETLAND BOUNDARY
NO WORK WITHIN WETLAND BOUNDARY IS PERMITTED.

5' MIN SEPARATION FROM COMPOST SOCK TO SILT FENCE

BEAVER CREEK

CAMPO RAIL BRIDGE

0 10 20 40 FEET

BSC:8 351.81 SPIKE MAG

BSC:1 350.70 SPIKE MAG

IR 5/8" W/YPC BARKER PLS686 FLUSH

IR 5/8" W/AC UNREADABLE BENT

EXISTING BUILDING STORAGE

SHIPPING CONTAINER

POLE BUILDING

EXISTING SHOP BUILDING

COVERED CONC

POLE BUILDING

CELL TOWER SITE

6' TALL CHAIN LINK FENCE

GATE

6' TALL WIRE FENCE

EFFLUENT IRRIGATION

R1 REMOVE IRRIGATION PIPING SEE DWG C111 AND C208 FOR REMOVAL LIMITS

RELOCATE IRRIGATION PIPE, SEE DWG C111

R1 CONCRETE PAD

R1 REMOVE IRRIGATION PIPING

EXTG IRRIGATION PIPE TO REMAIN

P PROTECT ALL TREES UNLESS SHOWN FOR REMOVAL (TYP)

R1 ASPHALT

R1 CONCRETE

RELOCATE WATERLINE. SEE DWG C116

USE EXTG GRAVEL DRIVEWAY AS CONSTRUCTION ENTRANCE

5' MIN FROM WETLAND

WETLANDS

PROPERTY LINE

GRAV ROAD

DOCK

POND #1

TAX LOT 075A 00200

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NO.	DATE	DESCRIPTION REVISIONS	BY
1			

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

DSN. CB
DRN. TM1/TN
CKD. CB
DATE: MAY 2026

REGISTERED PROFESSIONAL ENGINEER
OREGON JULY 14, 2000
CHRISTOPHER J. BUCHANAN
85473PE
RENEWS: 12/31/2027

WESTECH ENGINEERING, INC.
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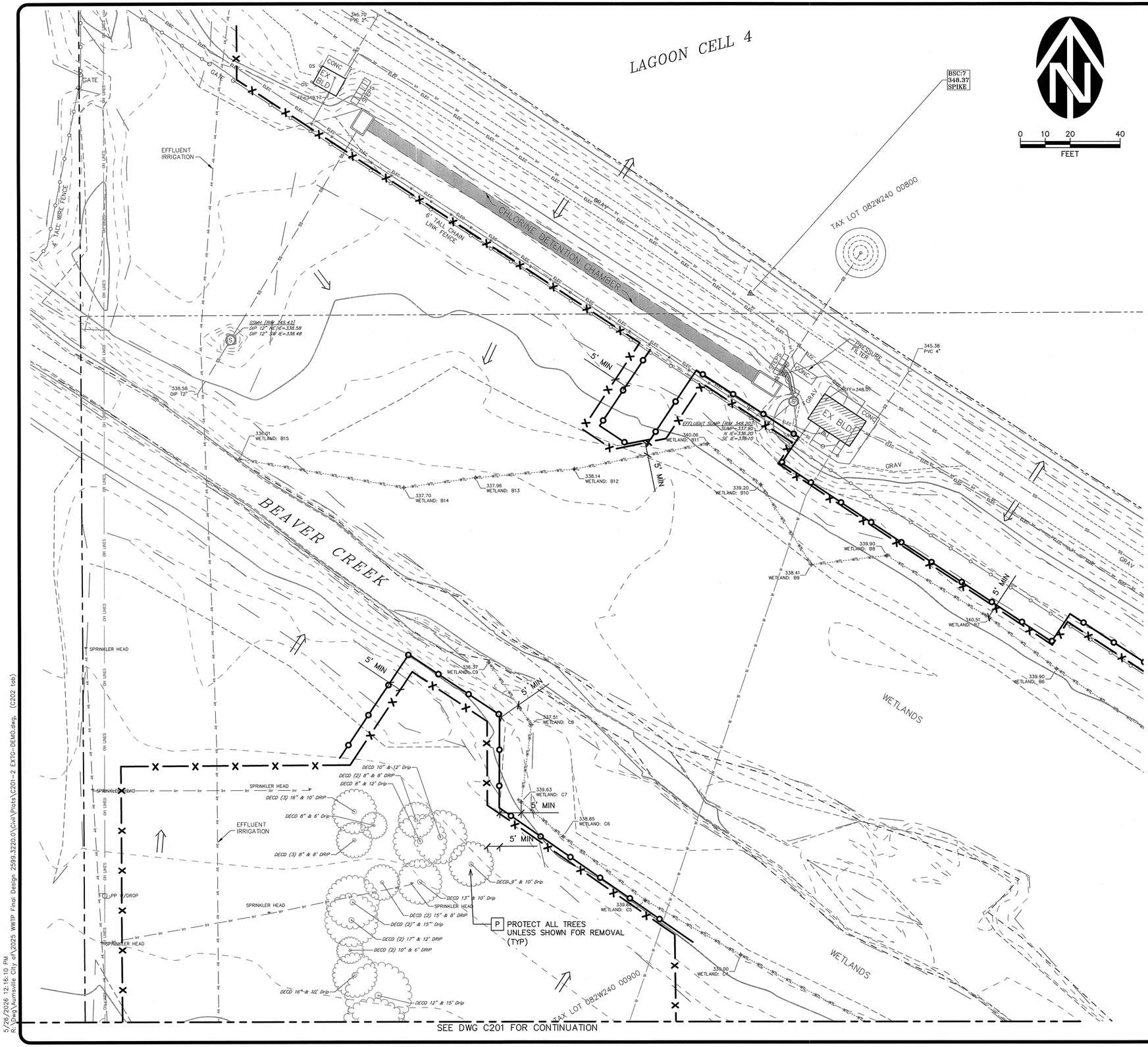
CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

SBR EXISTING CONDITIONS, EROSION CONTROL, & DEMOLITION PLAN

DRAWING C201
57 OF 223

JOB NUMBER 2599.3220.0



EROSION CONTROL LEGEND

— x — x — INSTALL SILT FENCE PER DTL 6110, DWG C004.

—o—o— INSTALL 8"ø COMPOST SOCK PER DTL 6120, DWG C004.

PLACE INLET SEDIMENT CONTROL PER DETAIL 6130, DWG C004. TYPICAL OF ALL CATCH BASINS.

SURFACE FLOW DIRECTION.

NOTES:
1. CONTRACTOR TO MAINTAIN EROSION CONTROL BMP'S THROUGH CONSTRUCTION UNTIL SITE IS STABILIZED.
2. NO CONCRETE WASHOUT ALLOWED ON SITE.

GENERAL DEMOLITION NOTES

1. Contractor to provide written notice 4 weeks prior to starting demolition work. City currently uses the facilities. The City to remove shop equipment and materials inside and around the buildings prior to the demolition work.

DEMOLITION KEY CALLOUTS

P Protect. Any damage by Contractor to be repaired to preexisting condition at no additional cost to the owner.

R1 Remove and dispose.

R2 Demolish existing building. Remove and dispose of all interior equipment and appurtenances. There is a small connex box inside the existing storage building. Contractor shall relocate connex box to another location within the treatment plant site. Coordinate with City to find a suitable location. Demolish existing power circuit and breaker feeding building from existing shop building. Demolish building roof and wall structure and dispose of debris off site. Remove and dispose of concrete floor slab and footings at approved off site location. Cut all utility pipes and conduits below grade and fill with watertight concrete plugs. All excavation work shall be completed with a smooth-edge bucket to minimize subgrade disturbance. Fill excavated area with compacted 3/4"-0 crushed rock as specified to match adjacent grade.

R3 Remove existing tree and stump to a minimum of 4 feet below existing ground surface and including all roots greater than 1/2 inch diameter. Dispose of all wood, debris, and excavated material offsite. All excavation work shall be performed with a smooth edge bucket to minimize subgrade disturbance. Fill excavated area with 3/4"-0 compacted crushed rock. Protect all trees not scheduled for removal.

R4 Contractor to relocate shipping container to another location within the treatment plant property. Coordinate with city to determine the location.

R5 City to relocate sheds. Contractor to coordinate timing with the City.

S1 Work in this area is PROHIBITED until the Lagoon Biosolids Removal contract is completed. See Article 8 of the Supplemental Conditions.

NO.	DATE	DESCRIPTION	BY
1		REVISIONS	

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

DSN.: CB
DRN.: TMT/TN
CKD.: CB
DATE: MAY 2026

REGISTERED PROFESSIONAL ENGINEER
OREGON
JULY 14, 2023
CHRISTOPHER T. BENOIT
RENEWS: 12/31/2027

WESTECH ENGINEERING, INC.
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CITY OF AUMSVILLE, OREGON

WASTEWATER TREATMENT PLANT IMPROVEMENTS

DAF/CCC EXISTING CONDITIONS, EROSION CONTROL, & DEMOLITION PLAN

DRAWING
C202
58 OF 223

JOB NUMBER
2599.3220.0

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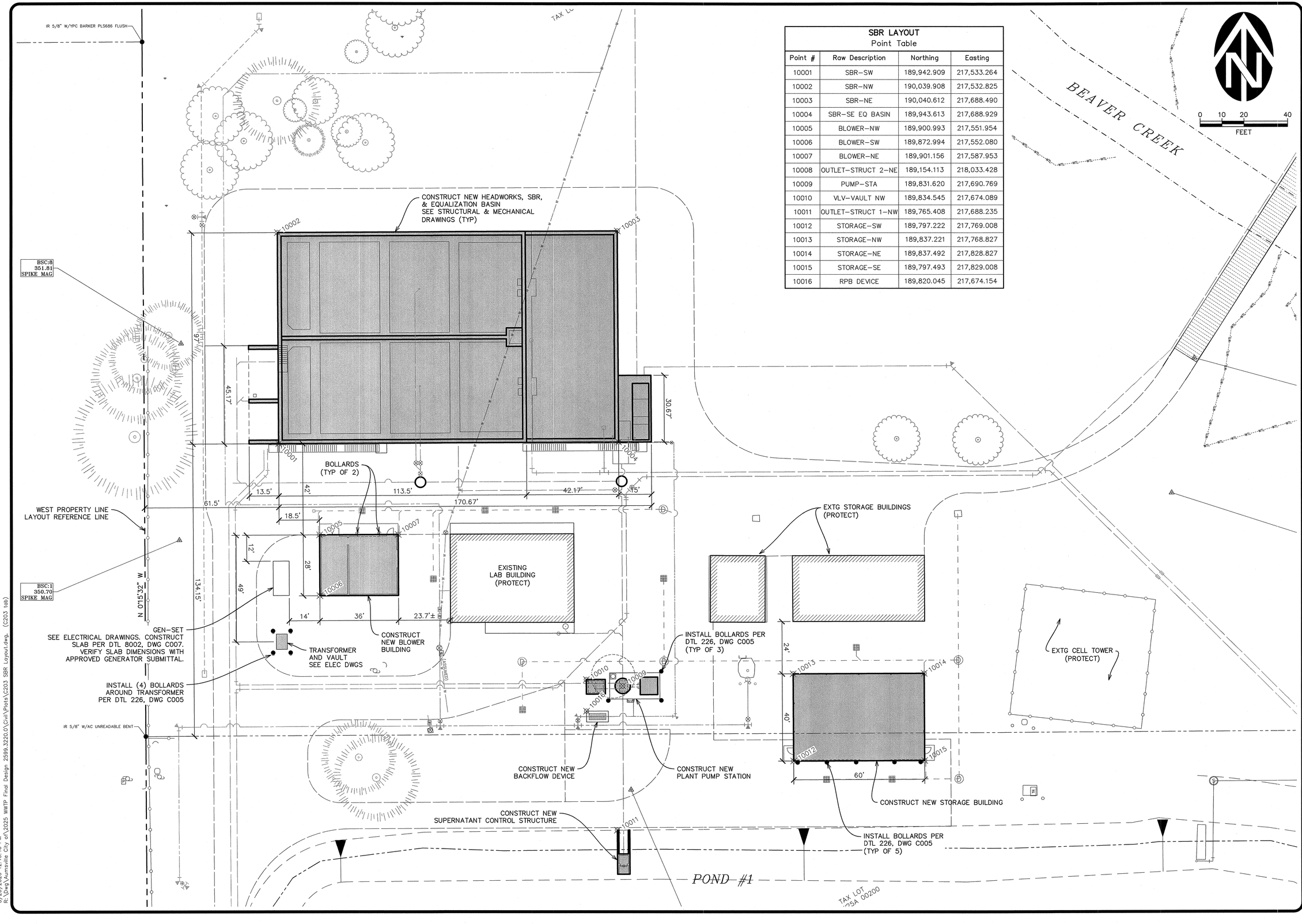
SBR LAYOUT
Point Table

Point #	Raw Description	Northing	Easting
10001	SBR–SW	189,942.909	217,533.264
10002	SBR–NW	190,039.908	217,532.825
10003	SBR–NE	190,040.612	217,688.490
10004	SBR–SE EQ BASIN	189,943.613	217,688.929
10005	BLOWER–NW	189,900.993	217,551.954
10006	BLOWER–SW	189,872.994	217,552.080
10007	BLOWER–NE	189,901.156	217,587.953
10008	OUTLET–STRUCT 2–NE	189,154.113	218,033.428
10009	PUMP–STA	189,831.620	217,690.769
10010	VLV–VAULT NW	189,834.545	217,674.089
10011	OUTLET–STRUCT 1–NW	189,765.408	217,688.235
10012	STORAGE–SW	189,797.222	217,769.008
10013	STORAGE–NW	189,837.221	217,768.827
10014	STORAGE–NE	189,837.492	217,828.827
10015	STORAGE–SE	189,797.493	217,829.008
10016	RPB DEVICE	189,820.045	217,674.154



NO.	DATE	DESCRIPTION	BY
1		REVISIONS	

VERIFY SCALE
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0 1"
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

DSN.: CB
DRN.: TMT
CKD.: CB
DATE: MAY 2026

REGISTERED PROFESSIONAL ENGINEER
OREGON
JAN. 14, 2005
CHRISTOPHER J. BUDICH
86473PE
RENEWS: 12/31/2027

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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

SBR SITE LAYOUT PLAN

DRAWING
C203
59 OF 223

JOB NUMBER
2599.3220.0

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NOTES:
1. RAMMED AGGREGATE PIER DESIGN SHALL BE PROVIDED BY THE CONTRACTOR AS SPECIFIED. THE LAYOUT SHOWN ON THESE PLANS IS FOR CONCEPTUAL PURPOSES ONLY.
2. SEE SURFACING PLAN FOR SUBGRADE AND BASEROCK REQUIREMENTS OUTSIDE OF STRUCTURE LIMITS.
3. WORK IN THIS AREA IS PROHIBITED UNTIL THE LAGOON BIOSOLIDS REMOVAL CONTRACT IS COMPLETED. SEE ARTICLE 8 OF THE SUPPLEMENTAL CONDITIONS.

RAMMED AGGREGATE PIER CONCEPTUAL LAYOUT

OUTLINE OF PROPOSED TANKAGE FOOTING

500 YEAR FLOOD LIMITS. STORAGE OF MATERIALS AND STOCKPILING OF TRENCH AND EXCAVATION SPOILS PROHIBITED WITHIN THE 500 YEAR FLOOD LIMITS

THIS AREA MAY BE USED TO STOCKPILE CLEAN NATIVE EXCAVATED SPOILS FOR USE AS TRENCH AND STRUCTURE BACKFILL, AND FOR ADDING & MIXING BENTONITE AS SPECIFIED. ALL STOCKPILES SHALL BE COVERED AND MAINTAINED PER DETAIL 6170, DWG C004. UPON COMPLETION OF CONSTRUCTION, REMOVE AND DISPOSE OF ALL EXCESS MATERIAL. REGRADE TO PROVIDE SMOOTH, FREE-DRAINING SURFACE, AND HYDROSEED.

OUTLINE OF PROPOSED BUILDING FOOTING

SEE NOTE 3

OUTLINE OF PROPOSED BUILDING FOOTING

BEAVER CREEK

WETLANDS

POND #1

TAX LOT 052A 00200

TAX LL

FF 350.50

FF 350.85

FF 350.75

FG 350.70

FG 349.62

FF=349.67

FF=349.71

FF 350.10

FG 350.00

TC 351.00

TC 350.75

TC 350.20

SS DRAIN RIM 351.45

EXISTING SHOP BUILDING

COVERED CONC

POLE BUILDING

CELL TOWER SITE

6' TALL CHAIN LINK FENCE

4' TALL WIRE FENCE

GATE

BOLLARD

GRAV

GRAV ROAD

CONC

ASPH

EFFLUENT IRRIGATION

PWRPED

PP W/DROP

PWRM

PP

ELEC

SD

GAURD RAIL

BRIDGE

DIP 6

345.72 DIP 6" INTO GROUND

0 10 20 40 FEET

C205

C206 2

C206 3

DOCK

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NO.	DATE	DESCRIPTION	BY
1		REVISIONS	

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

DSN. CB
DRN. TN
CKD. CB
DATE: MAY 2026

REGISTERED PROFESSIONAL ENGINEER
OREGON
JULY 14, 2006
CHRISTOPHER J. BRUICK
RENEWS: 12/31/2027

WESTECH ENGINEERING, INC.
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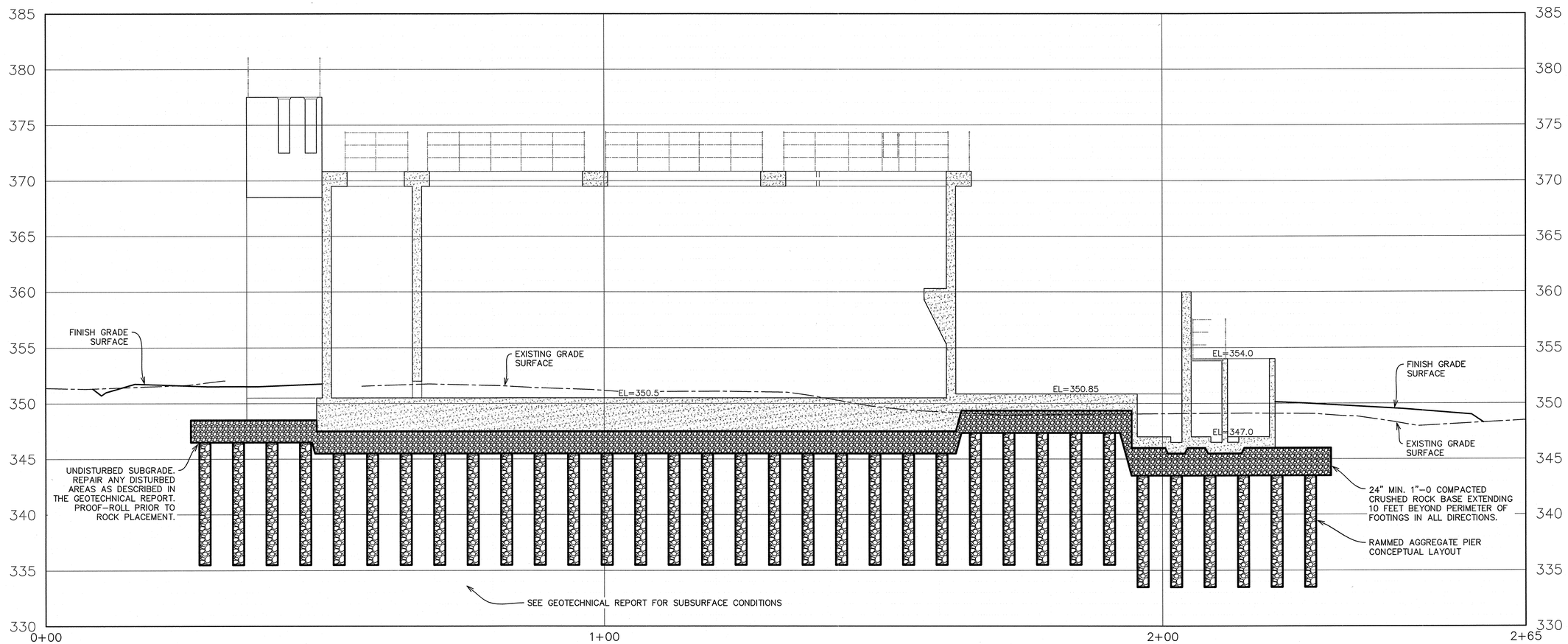
CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

SBR STRUCTURAL SUBGRADE & BASEROCK PLAN

DRAWING
C204
60 OF 223

JOB NUMBER
2599.3220.0

NOTES:
1. RAMMED AGGREGATE PIER DESIGN SHALL BE PROVIDED BY THE CONTRACTOR AS SPECIFIED. THE LAYOUT SHOWN ON THESE PLANS IS FOR CONCEPTUAL PURPOSES ONLY.
2. SEE SURFACING PLAN FOR SUBGRADE AND BASEROCK REQUIREMENTS OUTSIDE OF STRUCTURE LIMITS.



CROSS SECTION 1 C205
HORIZ. 1"=10', VERT. 1"=5'

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

NO.	DATE	DESCRIPTION
1		

REVISIONS BY

DSN: CB
DRN: TN
CKD: CB
DATE: MAY 2026

REGISTERED PROFESSIONAL ENGINEER
56473PE
OREGON
JAN. 14, 2005
CHRISTOPHER J. BADUKTO
RENEWS: 12/31/2027

WESTECH ENGINEERING, INC.
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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

SBR SITE CROSS SECTIONS

DRAWING C205
61 OF 223
JOB NUMBER 2599.3220.0

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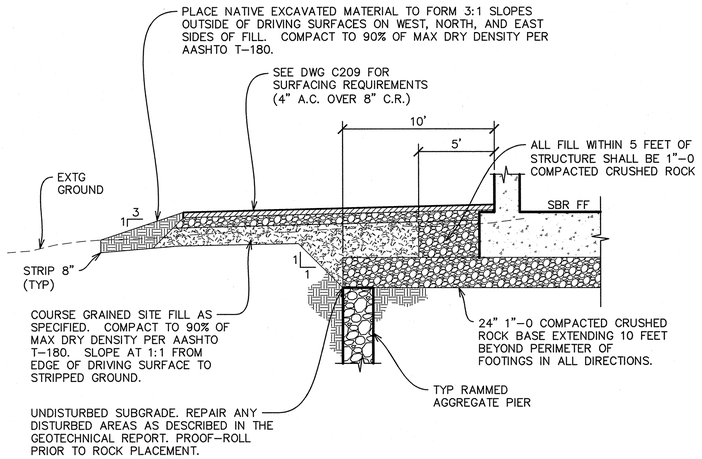
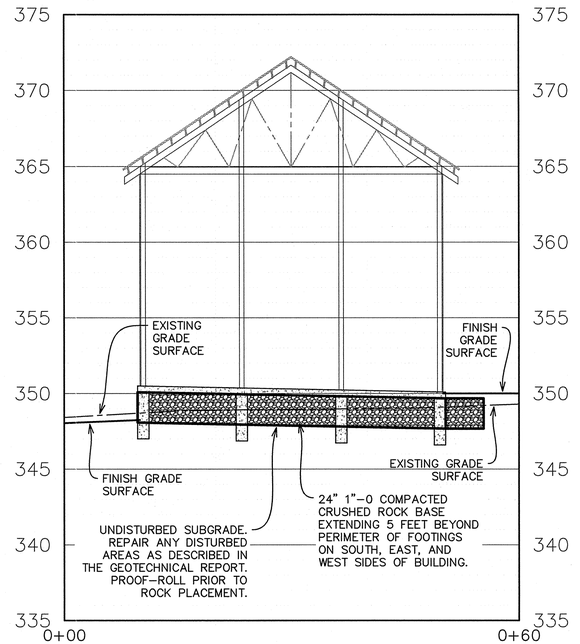
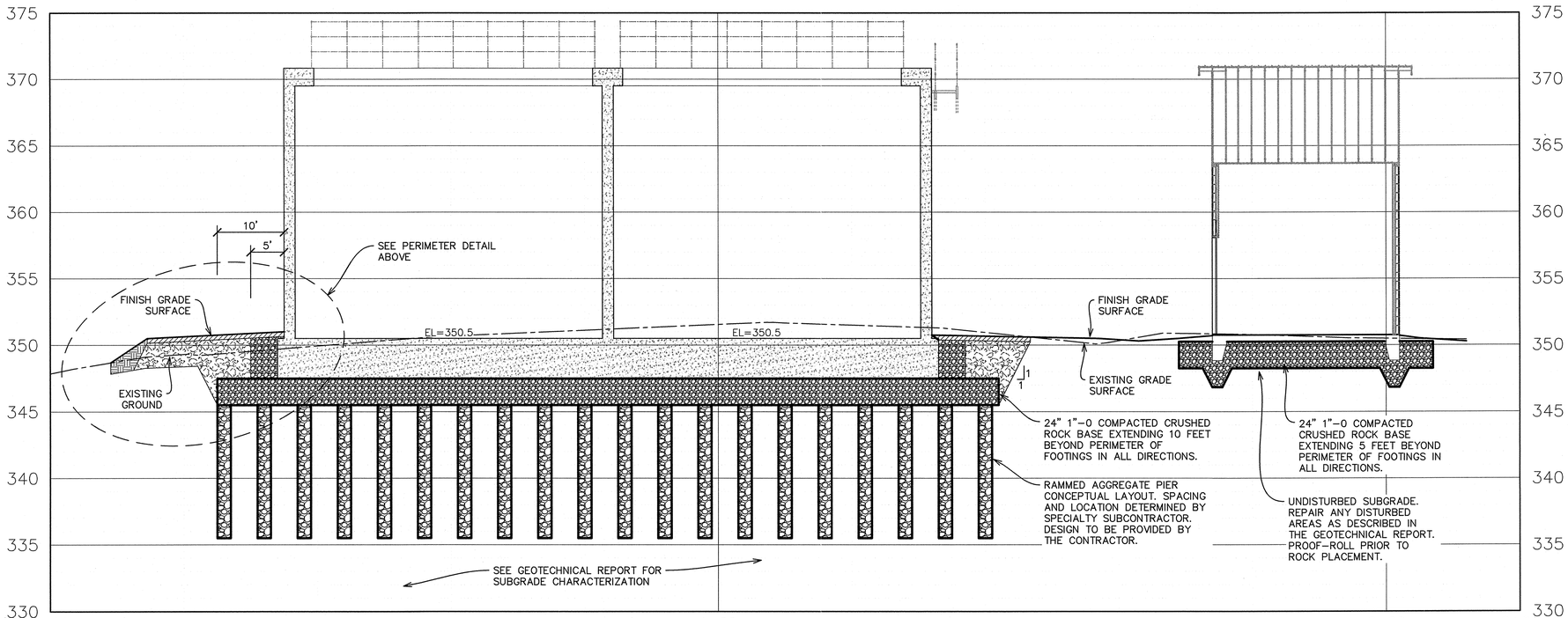


SBR PERIMETER DETAIL
1" = 5'



CROSS SECTION 3
HORIZ. 1"=10', VERT. 1"=5' C206

NOTES:
1. RAMMED AGGREGATE PIER DESIGN SHALL BE PROVIDED BY THE CONTRACTOR AS SPECIFIED. THE LAYOUT SHOWN ON THESE PLANS IS FOR CONCEPTUAL PURPOSES ONLY.
2. SEE SURFACING PLAN FOR SUBGRADE AND BASEROCK REQUIREMENTS OUTSIDE OF STRUCTURE LIMITS.



CROSS SECTION 2
HORIZ. 1"=10', VERT. 1"=5' C206

NO.	DATE	DESCRIPTION	BY
1		REVISIONS	

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

DSN.: CB
DRN.: ...TN
CKD.: CB
DATE: MAY 2026

REGISTERED PROFESSIONAL ENGINEER
OREGON
JAN. 14, 2005
CHRISTOPHER J. BRUCKNER
RENEWS: 12/31/2027

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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

SBR SITE CROSS SECTIONS

DRAWING C206
62 OF 223

JOB NUMBER 2599.3220.0

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500 YEAR FLOOD LIMITS.
STORAGE OF MATERIALS AND PLACING STOCKPILES OR ANY OTHER FILL IS PROHIBITED WITHIN THE 500 YR FLOODPLAIN.

OPTIONAL SPOILS DISPOSAL AREA.
STRIPPING NOT REQUIRED IN THIS AREA. ALL SPOILS IN THIS AREA SHALL BE COMPACTED TO 80% OF MAX DRY DENSITY AS MEASURED BY AASHTO T-180 TEST METHOD. ALL SPOILS IN EXCESS OF THE VOLUME DEPICTED BY THE GRADING PLAN IN THIS AREA SHALL BE DISPOSED OFFSITE AT DISPOSAL AREA FURNISHED BY THE CONTRACTOR. CONTRACTOR TO FINISH GRADE AREA TO PROVIDE A SMOOTH, FREE DRAINING SURFACE.

BEAVER CREEK

0 10 20 40
FEET

3:1 TYP SLOPE

5:1 TYP SLOPE

GAINES PARK BRIDGE

FF 350.50

FF 350.85

TC 350.75

FF=352.33

FF 347.00
TW 354.00

SS DRAIN
RIM 351.45

6" SD CLEANOUT
PER DTL 411, DWG C007
6" INV 347.80

CONNECT 4" RD
SEE DTL 1, DWG C006
(TYP 2)

CB RIM 350.25
6" INV 347.55
8" INV 347.38

6" SD S=1%

8" WYE INV 346.92

CB RIM 349.25
8" INV 346.60

CB RIM 349.25
8" INV 346.14

TC 350.36

CONSTRUCT NEW 48"ø SDMH
OVER EXTG 8" STORM LINE
ABANDON EXTG STORM LINE
TO NW.
RIM 349.0
8" INV SE 345.45 (VERIFY)
NEW 8" INV W 345.45

EXTG CB'S TO REMAIN

CONNECT TO
EXTG STORM CB
12" INV S 343.53

NOTE: UNLESS NOTED OTHERWISE, ALL PIPELINE TRENCHES SHALL BE CLASS I.

FG 350.70
FF 350.75

TC 351.00

TC 350.75

FG 349.62
FF=349.67

8" SD
L=31'
S=0.80%

EXISTING
SHOP BUILDING

CB RIM 349.25
8" INV 347.17

FF=349.71

8" SD
L=138'
S=1.40%

8" SD
L=38'
S=0.80%

COVERED
CONC

POLE BUILDING

CB RIM 348.0
8" INV 344.75

12" SD
L=67'
S=0.50%

12" SD
L=135'
S=0.50%

CB RIM 348.50
8" INV 345.18

EXTG CB
TO REMAIN

12" SD
L=65'
S=0.50%

8" SD
S=1%

48"ø SDMH
RIM 348.5
8" INV S 344.95
12" INV N,W 343.87

CELL
TOWER SITE

6' TALL CHAIN
LINK FENCE

48"ø SDMH
RIM 349.3
8" INV S 345.20
12" INV E 344.88

8" SD
L=22'
S=0.80%

TC 350.20

48"ø SDMH
RIM 349.3
8" INV N 344.88
12" INV W,E 344.55

CONNECT 4" RD
SEE DTL 1, DWG C006

8" SD
L=54'
S=1%

CB RIM 348.90
8" INV 345.38

FF 350.50

FF 350.10

FG 350.00

FG 350.00

8" SD
L=30'
S=1%

8" SD
L=30'
S=1%

CB RIM 349.8
8" INV 346.10

CB RIM 349.8
8" INV 345.80

48"ø SDMH
RIM 350.1
8" INV 345.50

GRAV ROAD

POND #1

TAX LOT
725A 00200

DOCK

WETLANDS

GRAV

EFFLUENT
IRRIGATION

6' TALL WIRE FENCE

CHAIN LINK FENCE

ELEC

PWRMH

PWRPED

PWRDROP

BOLLARD

DIP 6

DIP 6" INTO BRIDGE 346.40

DIP 6" INTO GROUND 345.72

NO.	DATE	DESCRIPTION	BY
1		REVISIONS	

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

DSN. CB
DRN. TN
CKD. CB
DATE: MAY 2026

REGISTERED PROFESSIONAL ENGINEER
OREGON
JULY 14, 2015
CHRISTOPHER J. BRADLEY
RENEWS: 12/31/2027

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

SBR GRADING & DRAINAGE PLAN

DRAWING
C207
63 OF 223

JOB NUMBER
2599.3220.0

5/26/2026 12:16:36 PM
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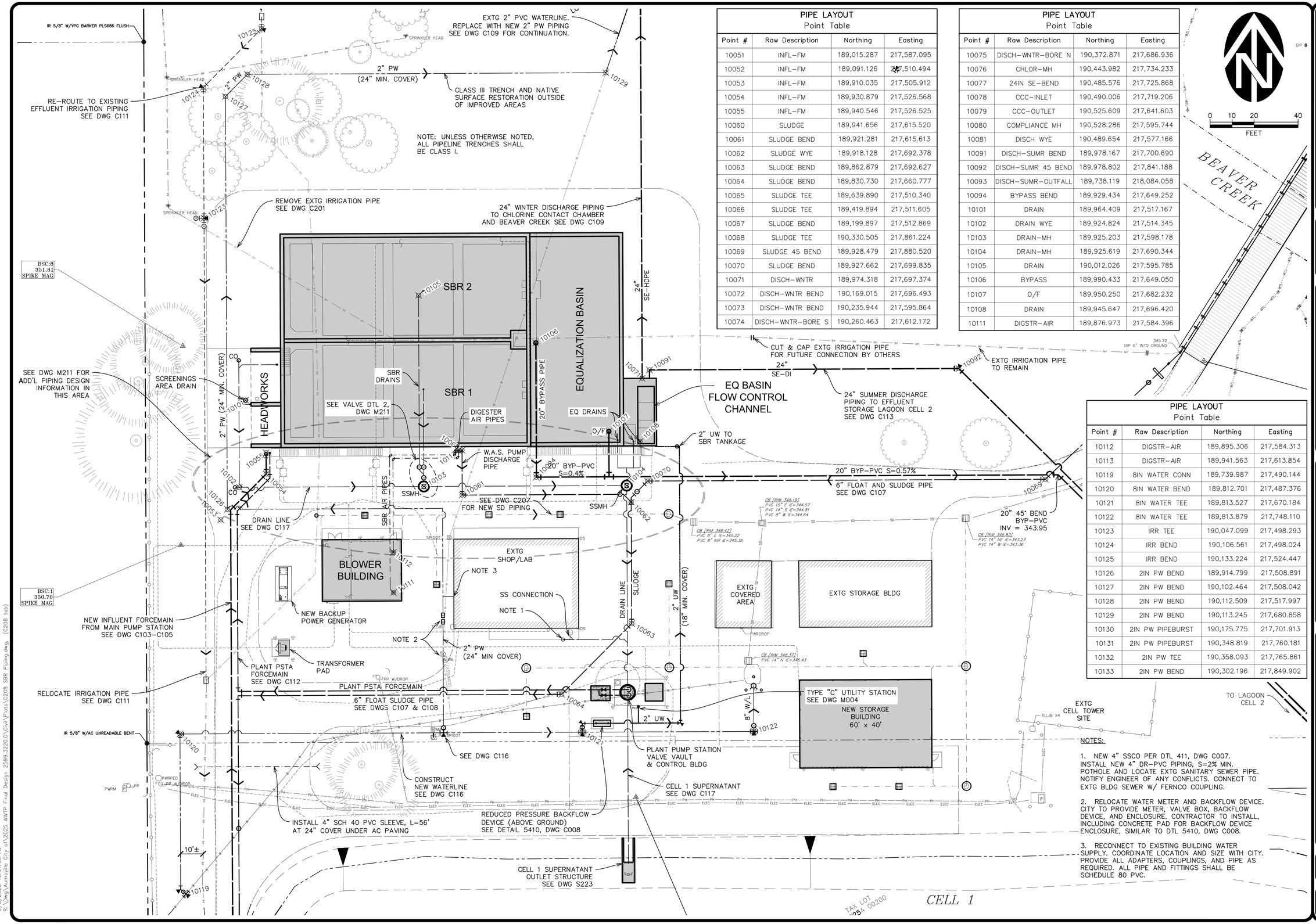

PIPE LAYOUT
Point Table

Point #	Raw Description	Northing	Easting
10051	INFL-FM	189,015.287	217,587.095
10052	INFL-FM	189,091.126	217,510.494
10053	INFL-FM	189,910.035	217,505.912
10054	INFL-FM	189,930.879	217,526.568
10055	INFL-FM	189,940.546	217,526.525
10060	SLUDGE	189,941.656	217,615.520
10061	SLUDGE BEND	189,921.281	217,615.613
10062	SLUDGE WYE	189,918.128	217,692.378
10063	SLUDGE BEND	189,862.879	217,692.627
10064	SLUDGE BEND	189,830.730	217,660.777
10065	SLUDGE TEE	189,639.890	217,510.340
10066	SLUDGE TEE	189,419.894	217,511.605
10067	SLUDGE BEND	189,199.897	217,512.869
10068	SLUDGE TEE	190,330.505	217,861.224
10069	SLUDGE 45 BEND	189,928.479	217,880.520
10070	SLUDGE BEND	189,927.662	217,699.835
10071	DISCH-WNTR	189,974.318	217,697.374
10072	DISCH-WNTR BEND	190,169.015	217,696.493
10073	DISCH-WNTR BEND	190,235.944	217,595.864
10074	DISCH-WNTR-BORE S	190,260.463	217,612.172

PIPE LAYOUT
Point Table

Point #	Raw Description	Northing	Easting
10075	DISCH-WNTR-BORE N	190,372.871	217,686.936
10076	CHLOR-MH	190,443.982	217,734.233
10077	24IN SE-BEND	190,485.576	217,725.868
10078	CCC-INLET	190,490.006	217,719.206
10079	CCC-OUTLET	190,525.609	217,641.603
10080	COMPLIANCE MH	190,528.286	217,595.744
10081	DISCH WYE	190,489.654	217,577.166
10091	DISCH-SUMR BEND	189,978.167	217,700.690
10092	DISCH-SUMR 45 BEND	189,978.802	217,841.188
10093	DISCH-SUMR-OUTFALL	189,738.119	218,084.058
10094	BYPASS BEND	189,929.434	217,649.252
10101	DRAIN	189,964.409	217,517.167
10102	DRAIN WYE	189,924.824	217,514.345
10103	DRAIN-MH	189,925.203	217,598.178
10104	DRAIN-MH	189,925.619	217,690.344
10105	DRAIN	190,012.026	217,595.785
10106	BYPASS	189,990.433	217,649.050
10107	O/F	189,950.250	217,682.232
10108	DRAIN	189,945.647	217,696.420
10111	DIGSTR-AIR	189,876.973	217,584.396

PIPE LAYOUT
Point Table

Point #	Raw Description	Northing	Easting
10112	DIGSTR-AIR	189,895.306	217,584.313
10113	DIGSTR-AIR	189,941.563	217,613.854
10119	8IN WATER CONN	189,739.987	217,490.144
10120	8IN WATER BEND	189,812.701	217,487.376
10121	8IN WATER TEE	189,813.527	217,670.184
10122	8IN WATER TEE	189,813.879	217,748.110
10123	IRR TEE	190,047.099	217,498.293
10124	IRR BEND	190,106.561	217,498.024
10125	IRR BEND	190,133.224	217,524.447
10126	2IN PW BEND	189,914.799	217,508.891
10127	2IN PW BEND	190,102.464	217,508.042
10128	2IN PW BEND	190,112.509	217,517.997
10129	2IN PW BEND	190,113.245	217,680.858
10130	2IN PW PIPEBURST	190,175.775	217,701.913
10131	2IN PW PIPEBURST	190,348.819	217,760.181
10132	2IN PW TEE	190,358.093	217,765.861
10133	2IN PW BEND	190,302.196	217,849.902

NOTES:

1. NEW 4" SSCO PER DTL 411, DWG C007. INSTALL NEW 4" DR-PVC PIPING, S=2% MIN. POTHOLE AND LOCATE EXTG SANITARY SEWER PIPE. NOTIFY ENGINEER OF ANY CONFLICTS. CONNECT TO EXTG BLDG SEWER W/ FERNCO COUPLING.
2. RELOCATE WATER METER AND BACKFLOW DEVICE. CITY TO PROVIDE METER, VALVE BOX, BACKFLOW DEVICE, AND ENCLOSURE. CONTRACTOR TO INSTALL, INCLUDING CONCRETE PAD FOR BACKFLOW DEVICE ENCLOSURE, SIMILAR TO DTL 5410, DWG C008.
3. RECONNECT TO EXISTING BUILDING WATER SUPPLY. COORDINATE LOCATION AND SIZE WITH CITY. PROVIDE ALL ADAPTERS, COUPLINGS, AND PIPE AS REQUIRED. ALL PIPE AND FITTINGS SHALL BE SCHEDULE 80 PVC.

NO.	DATE	DESCRIPTION	BY
2	6/5/2026	ELEC CONDUITS	TMT

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY
0 1"

DSN. CB
DRN. TMT
CKD. CB
DATE: MAY 2026

REGISTERED PROFESSIONAL ENGINEER
56473PE
OREGON JULY 14, 1989
CHRISTOPHER T. BUCKLEY
RENEWS: 12/31/2027

WESTECH ENGINEERING, INC.
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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

SBR PIPING & UTILITY PLAN

DRAWING C208
64 OF 223

JOB NUMBER 2599.3220.0

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SURFACING LEGEND

- HEAVY DUTY CONCRETE PAVING. SEE DTL. 2392, DWG. C005
- 4" CONCRETE SIDEWALK OVER 2" (MIN) CRUSHED ROCK LEVELING COURSE OVER UNDISTURBED SUBGRADE. SEE NOTE 1.
- ASPHALT PAVING: 4" CL 'B' A.C. (IN TWO 2-INCH LIFTS) OVER 8" COMPACTED BASE ROCK OVER UNDISTURBED SUBGRADE. SEE NOTE 1.
- PLANTER AREA: PLACE 2" OF BARKDUST OVER 6" MIN OF TOPSOIL
- DIGOUT & RECONSTRUCT GRAVEL SECTION PLACE 8" (MIN) COMPACTED CRUSHED ROCK TO FINISH GRADE OVER UNDISTURBED SUBGRADE. SEE NOTE 1.
- HYDROSEED: PLACE 6" OF TOPSOIL AND HYDROSEED. PROVIDE TEMPORARY IRRIGATION AS REQ'D TO ESTABLISH GRASS COVER. SEE NOTES ON DWG C003 FOR HYDROSEED AND SEED MIX REQUIREMENTS.
- BERM ARMOR: 12" OF DIKE PROTECTION RIP-RAP AS SPECIFIED OVER BERM STRUCTURE.

NOTE 1: REPAIR ANY DISTURBED SUBGRADE AREAS AS DESCRIBED IN THE GEOTECHNICAL REPORT. PROOF-ROLL SUBGRADE PRIOR TO ROCK PLACEMENT.

0 10 20 40
FEET

" W/YPC BARKER PLS686 FLUSH

IR 5/8" W/AC UNREADABLE BENT

346.60
DIP 6"@AP FOR BRIDGE
345.75'
DIP 8" STD DRAIN

40.7'

POND #1

NO.	DATE	DESCRIPTION	BY
1		REVISIONS	

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DSN. CB
DRN. TM1/TN
CKD. CB
DATE: MAY 2026

REGISTERED PROFESSIONAL ENGINEER
OREGON
JAN. 14, 2000
CHRISTOPHER J. BAILEY
86473PE
RENEWS: 12/31/2027

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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

SBR SURFACING PLAN

DRAWING
C209
65 223

JOB NUMBER
2599.3220.0

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EROSION CONTROL LEGEND

- INSTALL SILT FENCE PER DTL 6110, DWG C004.
- INSTALL 8"ø COMPOST SOCK PER DTL 6120, DWG C004.
- PLACE INLET SEDIMENT CONTROL PER DETAIL 6130, DWG C004. TYPICAL OF ALL CATCH BASINS.
- SURFACE FLOW DIRECTION.
- CONTRACTOR SHALL MAINTAIN THE MAIN ACCESS ROAD IN A CONDITION SUITABLE FOR PASSENGER VEHICLES AT ALL TIMES. ANY RUTTING SHALL BE IMMEDIATELY REPAIRED TO THE SATISFACTION OF THE ENGINEER.

NOTES:
1. CONTRACTOR TO MAINTAIN EROSION CONTROL BMP'S THROUGH CONSTRUCTION UNTIL SITE IS STABILIZED.
2. NO CONCRETE WASHOUT ALLOWED ON SITE.

0 10 20 40
FEET

LAGOON CELL 4

AFTER PLACEMENT OF COFFER DAM AND DEWATERING, (SEE DWG C304 & C307), STRIP RIP-RAP AND PLACE ALONG UNPROTECTED INTERIOR SLOPES OF LAGOON CELL 3.

BSC:7 348.37 SPIKE

NEW CHLORINE CONTACT CHAMBER

EXISTING CELL 4 OUTLET STRUCTURE

NEW FILL IN LAGOON CELL 4

NEW FILL IN LAGOON CELL 4

NEW DAF BLDG

REMOVE ALL CONCRETE AROUND EXTG BUILDING. SEE DWG M321 & DWG C311

EDGE OF WATER

EXTG FILTER BACKWASH PIPE TO REMAIN

EXTG DIKE ROAD

EXTG IRRIGATION FORCE MAIN TO REMAIN

REMOVE & REPLACE CHAINLINK FENCE AS REQUIRED.

CHLORINE DETENTION CHAMBER

MAIN ROAD EXTENDS TO BRIDGE SEE DWG C311

6' TALL CHAIN LINK FENCE

EXTG OUTLET CHAMBER TO REMAIN (PROTECT)

EXTG DE-CHLORINATION BUILDING TO REMAIN (PROTECT). SEE DWG M351 FOR INTERIOR CHEMICAL FEED SYSTEM MODIFICATIONS. SEE SEQUENCE OF OPERATIONS ON DWG G006 FOR ADDITIONAL INFORMATION.

EXTG CONTACT CHAMBER TO REMAIN (PROTECT)

EXTG FACILITIES TO REMAIN (PROTECT)

EXTG IRRIGATION/CHLORINE BUILDING AND IRRIGATION PUMP STATION CONTROL BUILDING TO REMAIN (PROTECT). SEE SEQUENCE OF OPERATIONS ON DWG G006 FOR ADDITIONAL INFORMATION.

WETLANDS

BORE PIT FOR STREAM CROSSING SEE DWGS C109 & C110

EXISTING WETLAND BOUNDARY NO WORK WITHIN WETLAND BOUNDARY IS PERMITTED

EXTG WETLANDS

EXTG OUTFALL PIPE TO REMAIN

EXTG OUTFALL (WINTER DISCHARGE)

EXTG WETLANDS

Beaver Creek

WETLANDS

EXTG IRRIGATION FORCE MAIN (SUMMER DISCHARGE)

BORE PIT FOR STREAM CROSSING SEE DWGS C109 & C110

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		REVISIONS	

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DSN.: CB
DRN.: TMT/TN
CKD.: CB
DATE: MAY 2026

REGISTERED PROFESSIONAL ENGINEER
86473PE
OREGON
JULY 14, 2006
CHRISTOPHER J. BUCKOK
RENEWS: 12/31/2027

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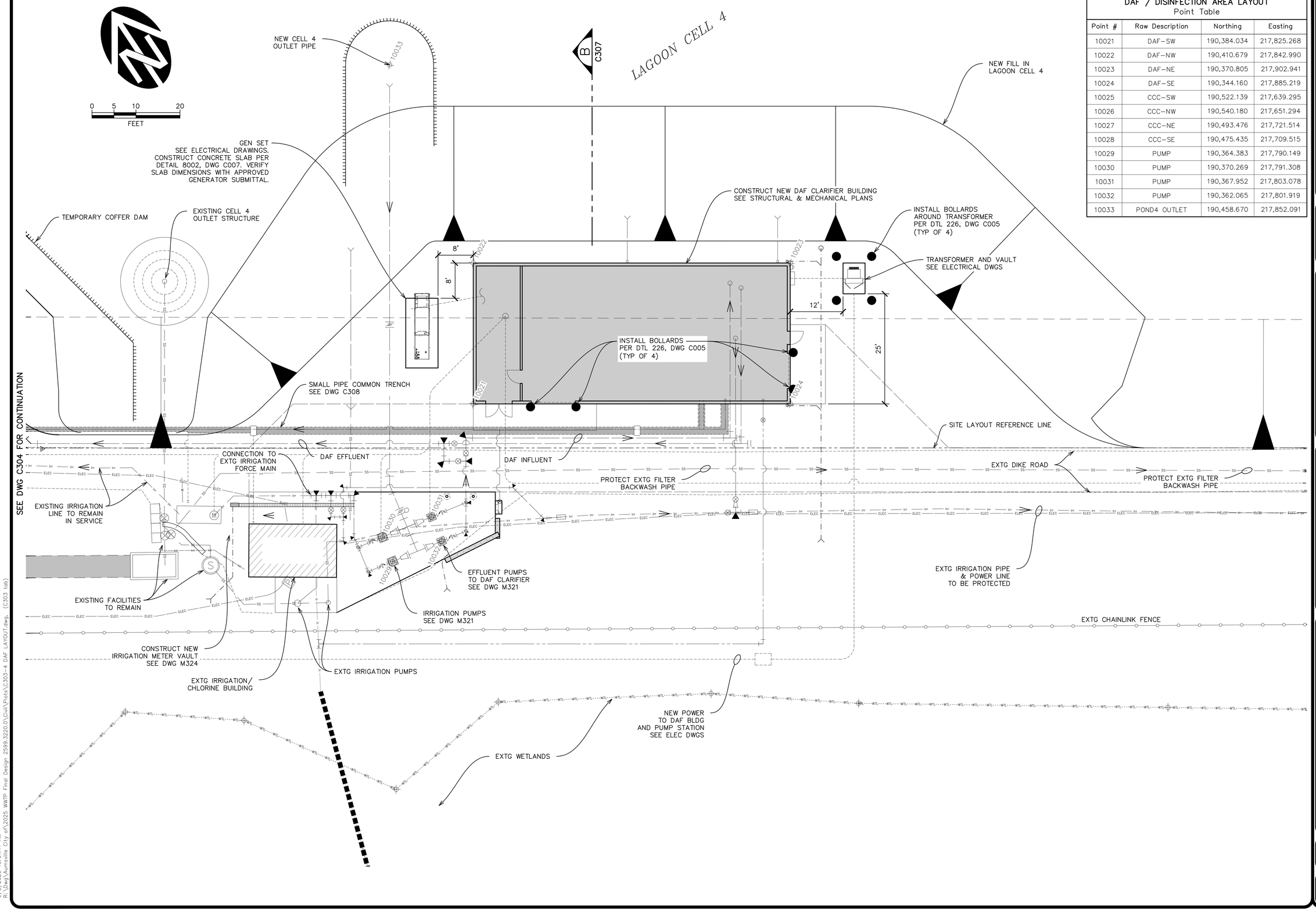
CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS
DAF AREA
EXISTING CONDITIONS, EROSION CONTROL, & DEMOLITION PLAN

DRAWING
C301
66 223

JOB NUMBER
2599.3220.0



DAF / DISINFECTION AREA LAYOUT
Point Table

Point #	Raw Description	Northing	Easting
10021	DAF–SW	190,384.034	217,825.268
10022	DAF–NW	190,410.679	217,842.990
10023	DAF–NE	190,370.805	217,902.941
10024	DAF–SE	190,344.160	217,885.219
10025	CCC–SW	190,522.139	217,639.295
10026	CCC–NW	190,540.180	217,651.294
10027	CCC–NE	190,493.476	217,721.514
10028	CCC–SE	190,475.435	217,709.515
10029	PUMP	190,364.383	217,790.149
10030	PUMP	190,370.269	217,791.308
10031	PUMP	190,367.952	217,803.078
10032	PUMP	190,362.065	217,801.919
10033	POND4 OUTLET	190,458.670	217,852.091

NO.	DATE	DESCRIPTION	BY
2	6/5/2026	ELEC CONDUITS	TMT

REVISIONS

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DRN. TMT
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DATE: MAY 2026

REGISTERED PROFESSIONAL ENGINEER
OREGON JULY 14, 1989
CHRISTOPHER T. BUCKLEY
56473PE
RENEWS: 12/31/2027

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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

DAF AREA SITE LAYOUT PLAN

DRAWING
C303
67 223

JOB NUMBER
2599.3220.0

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DAF / DISINFECTION AREA LAYOUT
Point Table

Point #	Raw Description	Northing	Easting
10021	DAF-SW	190,384.034	217,825.268
10022	DAF-NW	190,410.679	217,842.990
10023	DAF-NE	190,370.805	217,902.941
10024	DAF-SE	190,344.160	217,885.219
10025	CCC-SW	190,522.139	217,639.295
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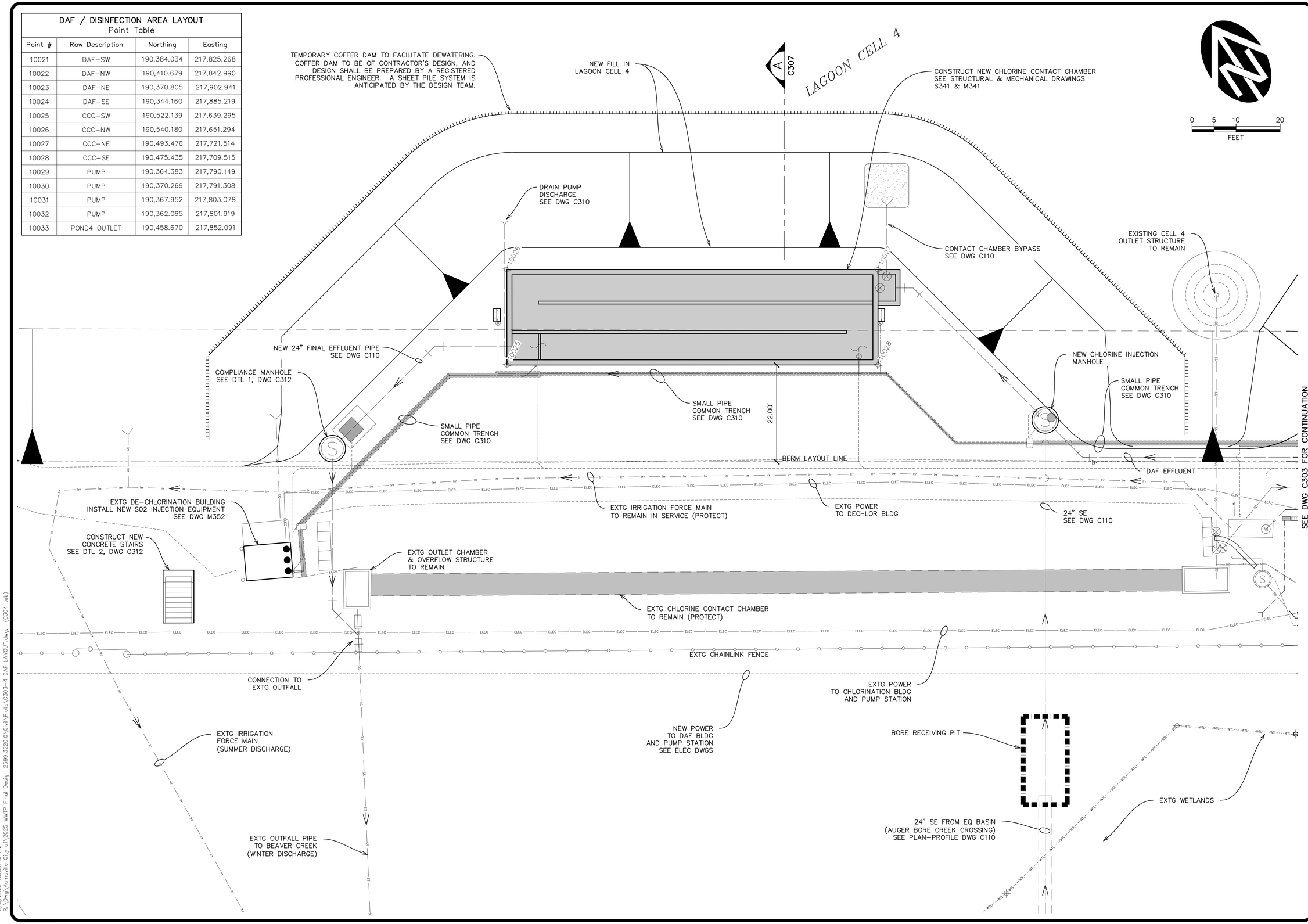
10031	PUMP	190,367.952	217,803.078
10032	PUMP	190,362.065	217,801.919
10033	POND4 OUTLET	190,458.670	217,852.091



BY	DESCRIPTION	DATE	NO.
TMT	ELEC CONDUITS	6/5/2026	2

REVISIONS

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DSN. CB
DRN. TMT
CKD. CB
DATE: MAY 2026

REGISTERED PROFESSIONAL ENGINEER
56473PE
OREGON
JULY 1, 1982
CHRISTOPHER T. BROCK
RENEWS: 12/31/2027

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CITY OF AUMSVILLE, OREGON

WASTEWATER TREATMENT PLANT IMPROVEMENTS

CHLORINE CONTACT CHAMBER SITE LAYOUT PLAN

DRAWING
C304
68 223

JOB NUMBER
2599.3220.0

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PRELOADED SETTLEMENT MONITORING PLATE (TYP OF 2)
FIELD LOCATE. SEE DTL 2, DWG C307.

B C307

LAGOON CELL 4

LIMITS OF PRELOAD FILL
SEE DWG C307 FOR
ADDITIONAL INFORMATION

EXISTING CELL 4
OUTLET STRUCTURE

TOE 338±

338
339
340
341
342
343
344
345
346
347
348

3:1 SLOPE TYP

2:1 SLOPE

TOB

348.5

TOB 348.5

NEW DAF CLARIFIER/
CHEMICAL FEED BUILDING

DAF
FF 348.95

FG 348.9

4" RD

5' TYP

6" CLEANOUT
INV=345.90
PER DTL 411, DWG C007

6"x4" PVC WYE

AT FACE OF EXISTING DIKE CONSTRUCT
BENCH AND INSTALL A GEOSYNTHETIC
CLAY LINER PER DETAIL 3, DWG C119.
CUT HOLE IN LINER, SLIDE OVER PIPE,
AND PACK BENTONITE POWDER AROUND
CUTOUT.

TOB 348.0

FG 348.90

FG 348.74

6" SD
S=1%

FG 348.6

FG 348.78

CLASS I TRENCH

LAGOON DIKE TRENCH
DTL U3013

SEE DWG C306 FOR CONTINUATION

TRENCH DRAIN
RIM=347.95
INV=347.49

TRENCH DRAIN
SEE NOTES BELOW

RIM 347.95
INV 347.60

FG 348.00

FF 348.07

FG 348.07

6" WIDE TRENCH DRAIN
CATCH BASIN
RIM=347.95
INV=347.37

6" DR-DI
TRENCH DRAIN OUTFALL
L=23', S=6%
INV 346.00

CLASS I TRENCH

FG 347.95

FG 347.75

TW 348.00
BW 344.67

FG 348.36

500 YEAR
FLOODPLAIN

CONSTRUCT 5-COURSE RETAINING WALL
PER DTL 8310, DWG C006,
FINSIH GRADE AND SLOPE AT FACE OF WALL
TO MATCH PRE-EXISTING CONDITIONS.

RECONSTRUCT EXCAVATED
SLOPE TO MATCH
PRE-EXISTING GRADES

4" PERF PIPE
PER DTL 8310, DWG C006
EXTEND TO DAYLIGHT

POTHOLE EXTG PIPES AT CROSSINGS
PIOR TO CONSTRUCTION. NOTIFY
ENGINEER OF ANY CONFLICTS

6" SD DISCHARGE TO DAYLIGHT
INV=345.25

EXTG CHAINLINK FENCE

EXTG WETLANDS

0 5 10 20
FEET

TRENCH DRAIN NOTES

1. TRENCH DRAIN SHALL BE JAY R SMITH MODEL 9877 (OR EQUAL), SECTIONS 1 THROUGH 8. TOTAL LENGTH = 8 METERS, W/ 6" WIDE JAY R SMITH MODEL 9877-901D-CB (OR EQUAL) CATCH BASIN ON WEST END. TRENCH DRAIN COVER SHALL BE JAY R SMITH POWER LOCK DUCTILE IRON ADA SLOTTED COVER 9870-478-ADA (OR EQUAL).
2. INSTALL TRENCH DRAIN PER MANUFACTURER'S INSTRUCTIONS. PROVIDE 6" MINIMUM 3300 PSI CONCRETE ON SIDES, BOTTOM, AND ENDS OF TRENCH DRAIN AND CATCH BASIN. TRENCH DRAIN BOTTOM SLOPE = 0.5%.

NO.	DATE	DESCRIPTION	BY
1		REVISIONS	

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DRN. TMT
CKD. CB
DATE: MAY 2026

REGISTERED PROFESSIONAL ENGINEER
OREGON
JAN. 14, 1994
CHRISTOPHER J. BRUNOKTO
RENEWS: 12/31/2027

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CITY OF AUMSVILLE, OREGON

WASTEWATER TREATMENT PLANT IMPROVEMENTS

DAF AREA
GRADING & DRAINAGE PLAN

DRAWING
C305
69 223

JOB NUMBER
2599.3220.0

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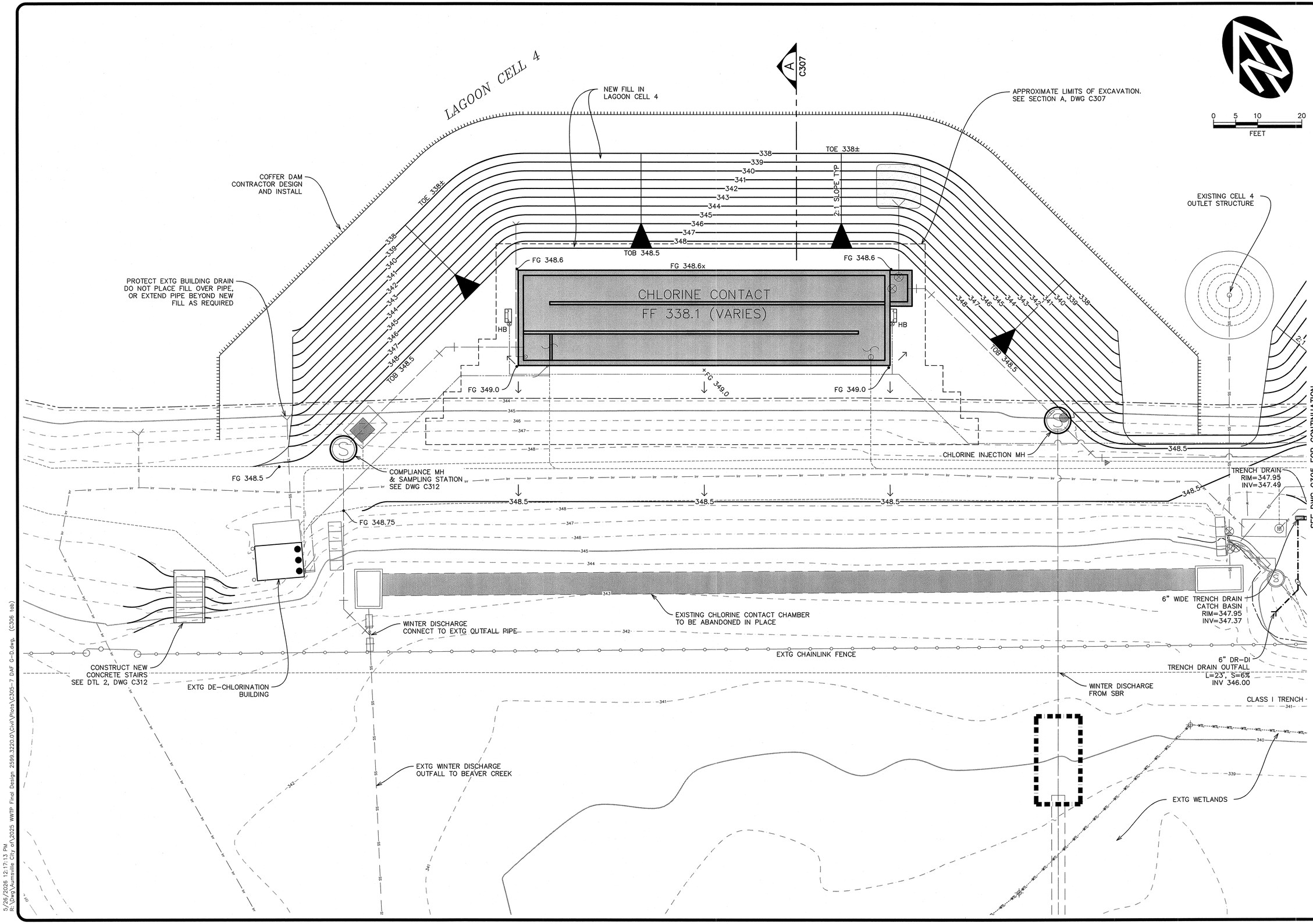

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DATE: MAY 2026

REGISTERED PROFESSIONAL ENGINEER
OREGON
JULY 14, 2006
CHRISTOPHER T. BRADLEY
RENEWS: 12/31/2027

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CITY OF AUMSVILLE, OREGON

WASTEWATER TREATMENT PLANT IMPROVEMENTS

CHLORINE CONTACT CHAMBER GRADING & DRAINAGE PLAN

DRAWING
C306
70 223

JOB NUMBER
2599.3220.0

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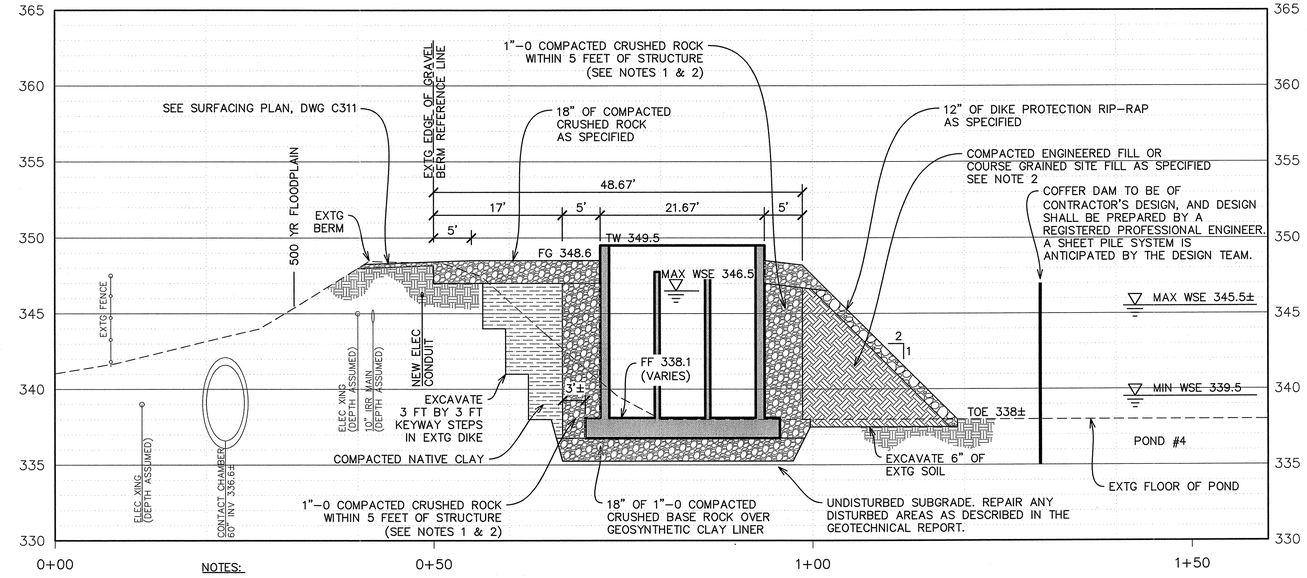
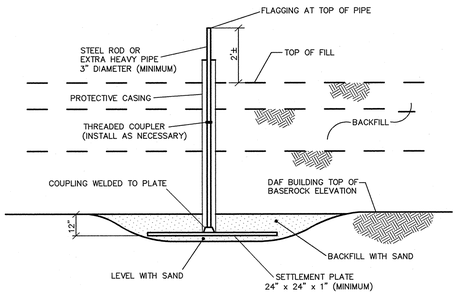


NOTES:

1. USE ONLY HAND COMPACTION TOOLS WITHIN 5 FEET OF STRUCTURE.
2. PLACE LIFTS OF NATIVE CLAY BACKFILL TO AT LEAST 1 FOOT HIGHER THAN CRUSHED ROCK BACKFILL PRIOR TO PLACING LIFTS OF CRUSHED ROCK BACKFILL.

CCC STRUCTURE BERM SECTION — A

1" = 10' H, 1" = 5' V

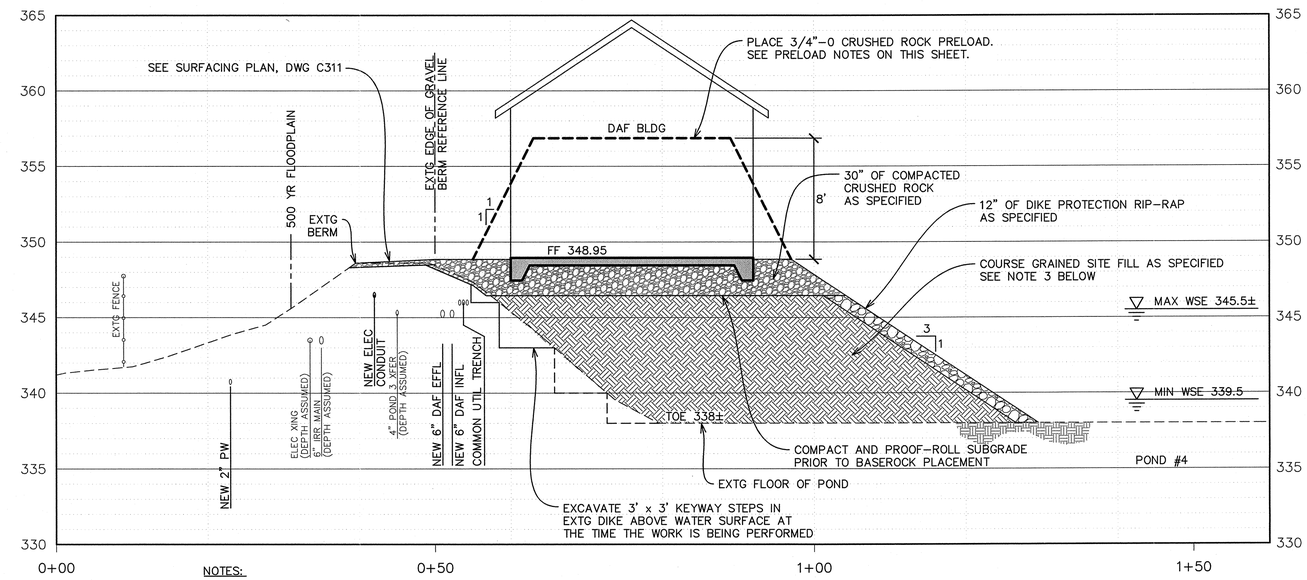


SETTLEMENT PLATE DETAIL — 2 / C307

N.T.S.

DAF Building Preload Notes

1. Place preload fill using ¾"-0 crushed rock as specified. Prior to placing fill, place two settlement plates in accordance with detail 2 drawing C307. Coordinate with the Engineer to locate the settlement plates.
2. The base of the preload fill shall extend a minimum of 5 beyond the footprint of the DAF building. Fill side slopes shall be 1:1. The minimum fill height shall be 8 feet. The final preload shall be a rectangular truncated pyramid. Contractor may place more material as desired to increase the settlement rate.
3. Contractor shall measure and track the elevation of the steel rod for each settlement plate at the beginning and end of each work week. Surveying equipment with a minimum accuracy of 0.01 feet shall be used for the measurements. Contractor shall report the measurements to the Engineer on a weekly basis.
4. For bidding and scheduling purposes, the contractor shall assume a settlement monitoring period of 120 days. If settling is completed prior to this time, the contractor may remove the preload fill and start DAF building construction. Contractor shall obtain written approval from the Engineer prior to removing the preload material.
5. Upon completion of settlement period, the contractor may use the preload material for trench backfill and base rock for the other structures at the site.



NOTES:

3. PLACEMENT OF FILL AND SURCHARGE SHALL PROCEED AT A MONITORED RATE SO AS NOT TO INDUCE EXCESS PORE PRESSURES IN UNDERLYING SOILS THAT PROMOTE INSTABILITY (PORE PRESSURE EXCEEDS EFFECTIVE STRESS CREATING A WEAKENED SUPPORTING SOIL). SUFFICIENT TIME SHALL BE PROVIDED TO ALLOW PORE PRESSURE THAT BUILDS FROM ADDING LOAD AND COMPACTING SOIL, TO DISSIPATE BETWEEN LIFTS. THIS WILL REQUIRE TEMPORARY PIEZOMETRIC MEASUREMENT OF IN-PLACE PRESSURES TO CONFIRM PRESSURE BUILDUP HAS DISSIPATED, OR LENGTHENED SCHEDULE BETWEEN PLACEMENT AND COMPACTION OF LIFTS. OWNER TO INSTALL PIEZOMETER. CONTRACTOR AND ENGINEER TO MONITOR WATER LEVEL IN PIEZOMETER DURING FILL PLACEMENT.

DAF STRUCTURE BERM SECTION — B

1" = 10' H, 1" = 5' V

NO.	DATE	DESCRIPTION
1		REVISIONS

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0 1"
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DSN.: CB
DRN.: TMT
CKD.: CB
DATE: MAY 2026

REGISTERED PROFESSIONAL ENGINEER
OREGON
JULY 14, 2023
CHRISTOPHER T. BROCKTO
56473PE
RENEWS: 12/31/2027

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
3841 Fairview Industrial Dr. S.E., Suite 100, Salem, OR 97302
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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

DAF / CCC AREA SECTIONS & DETAILS

DRAWING
C307
71 223

JOB NUMBER
2599.3220.0

5/26/2026 12:17:15 PM
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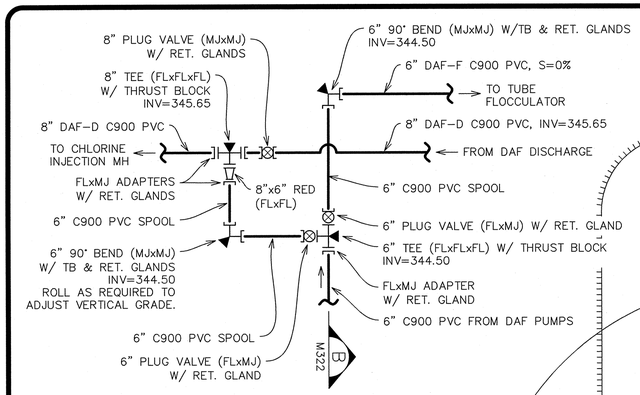
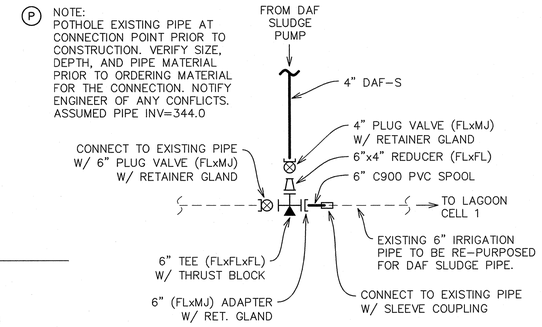


CONNECTION DETAIL 2
N.T.S.



CONNECTION DETAIL 1
N.T.S.

KEY CALLOUTS

(P) POTHOLE AND VERIFY DEPTH PRIOR TO CONSTRUCTION. NOTIFY ENGINEER OF ANY CONFLICTS.

(1) 2" SP
INSTALL VERTICAL SWEEP W/ PULLING BELL MOUNTED 6" AFF ON EXTERIOR FACE OF BUILDING.

(2) CONNECTION TO EXTG IRRIGATION FORCE MAIN.

(3) INSTALL HAND HOLE W/ END SWEEPS & PULLING BELLS FOR SPARE CONDUITS. SEE DTL 8, DWG C314.

(4) NEW 4" DR EXTENSION CONNECT TO EXTG PIPE AND EXTEND TO DAYLIGHT L=36', S=2%, INV=344.66

(5) 2" UW INTO SMALL PIPE COMMON TRENCH.

(6) (2) 2" SP CONDUITS
(2) ¾" CS PIPES
INTO SMALL PIPE COMMON TRENCH.

(7) 6" DAF-F, S=0%
4" DAF-S, SLOPE SLUDGE PIPE AT CONSTANT GRADE TO CONN. #1
8" DAF-D, S=0% IN COMMON TRENCH
ALL PIPE & FITTINGS RESTRAINED. CLASS I TRENCH UNDER AND WITHIN 5 FEET OF BUILDING. LAGOON DIKE TRENCH (DTL U3013) BEYOND.

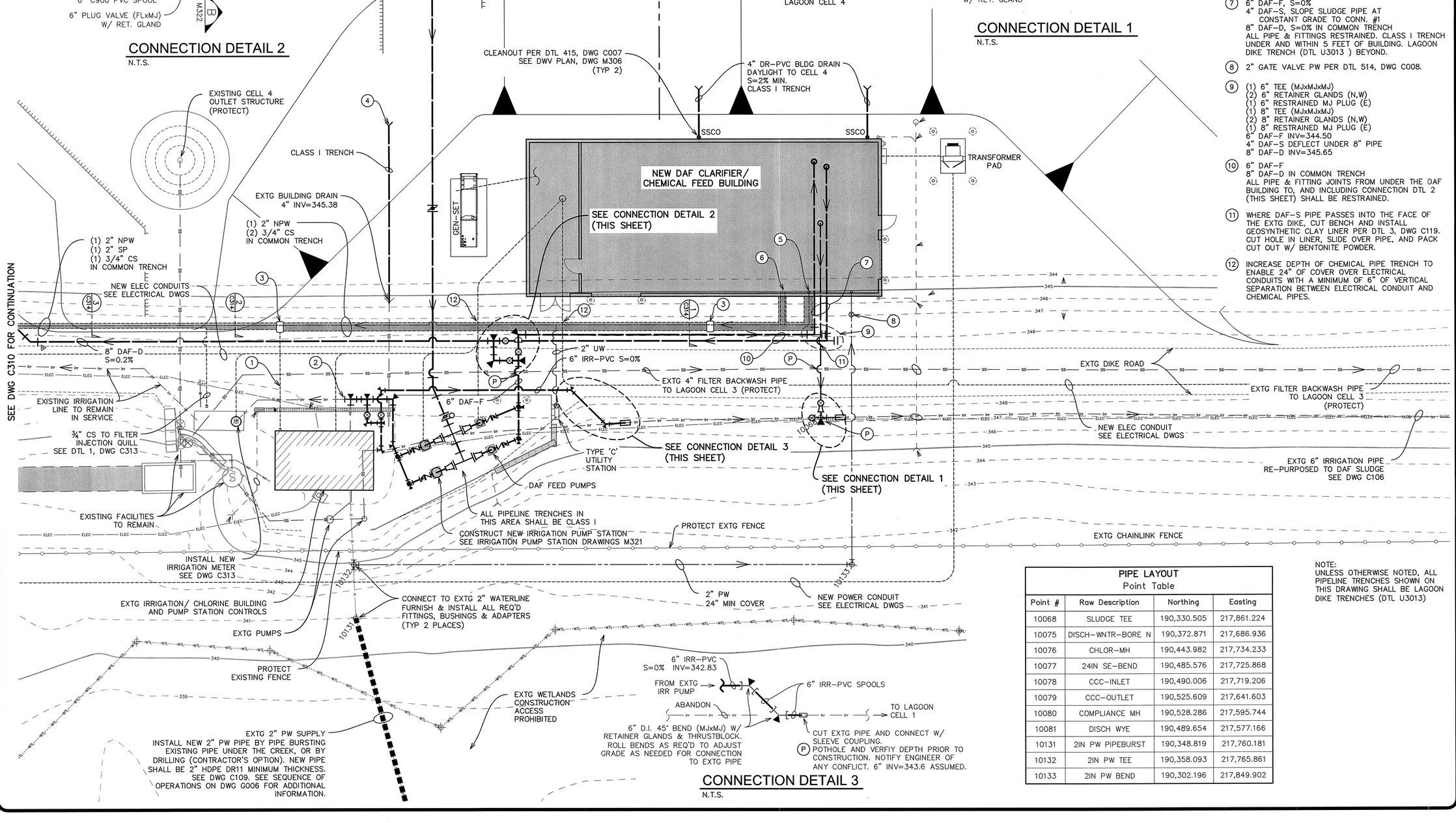
(8) 2" GATE VALVE PW PER DTL 514, DWG C008.

(9) (1) 6" TEE (MJxMJxMJ)
(2) 6" RETAINER GLANDS (N,W)
(1) 6" RESTRAINED MJ PLUG (E)
(1) 8" TEE (MJxMJxMJ)
(2) 8" RETAINER GLANDS (N,W)
(1) 8" RESTRAINED MJ PLUG (E)
6" DAF-F INV=344.50
4" DAF-S DEFLECT UNDER 8" PIPE
8" DAF-D INV=345.65

(10) 6" DAF-F
8" DAF-D IN COMMON TRENCH
ALL PIPE & FITTING JOINTS FROM UNDER THE DAF BUILDING TO, AND INCLUDING CONNECTION DTL 2 (THIS SHEET) SHALL BE RESTRAINED.

(11) WHERE DAF-S PIPE PASSES INTO THE FACE OF THE EXTG DIKE, CUT BENCH AND INSTALL GEOSYNTHETIC CLAY LINER PER DTL 3, DWG C119. CUT HOLE IN LINER, SLIDE OVER PIPE, AND PACK CUT OUT W/ BENTONITE POWDER.

(12) INCREASE DEPTH OF CHEMICAL PIPE TRENCH TO ENABLE 24" OF COVER OVER ELECTRICAL CONDUITS WITH A MINIMUM OF 6" OF VERTICAL SEPARATION BETWEEN ELECTRICAL CONDUIT AND CHEMICAL PIPES.



CONNECTION DETAIL 3
N.T.S.

PIPE LAYOUT Point Table			
Point #	Raw Description	Northing	Easting
10068	SLUDGE TEE	190,330.505	217,861.224
10075	DISCH-WNTR-BORE N	190,372.871	217,686.936
10076	CHLOR-MH	190,443.982	217,734.233
10077	24IN SE-BEND	190,485.576	217,725.868
10078	CCC-INLET	190,490.006	217,719.206
10079	CCC-OUTLET	190,525.609	217,641.603
10080	COMPLIANCE MH	190,528.286	217,595.744
10081	DISCH WYE	190,489.654	217,577.166
10131	2IN PW PIPEBURST	190,348.819	217,760.181
10132	2IN PW TEE	190,358.093	217,765.861
10133	2IN PW BEND	190,302.196	217,849.902

NOTE:
UNLESS OTHERWISE NOTED, ALL PIPELINE TRENCHES SHOWN ON THIS DRAWING SHALL BE LAGOON DIKE TRENCHES (DTL U3013)

NO.	DATE	DESCRIPTION REVISIONS	BY
1			

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

DSN. CB
DRN. TMT/TN
CKD. CB
DATE: MAY 2026

REGISTERED PROFESSIONAL ENGINEER
OREGON JAN. 14, 2005
CHRISTOPHER J. BRUCATO
56473PE
RENEWS: 12/31/2027

WESTECH ENGINEERING, INC.
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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

DAF AREA PIPING & UTILITY PLAN

DRAWING C308
72 OF 223

JOB NUMBER 2599.3220.0

5/26/2026 12:17:24 PM
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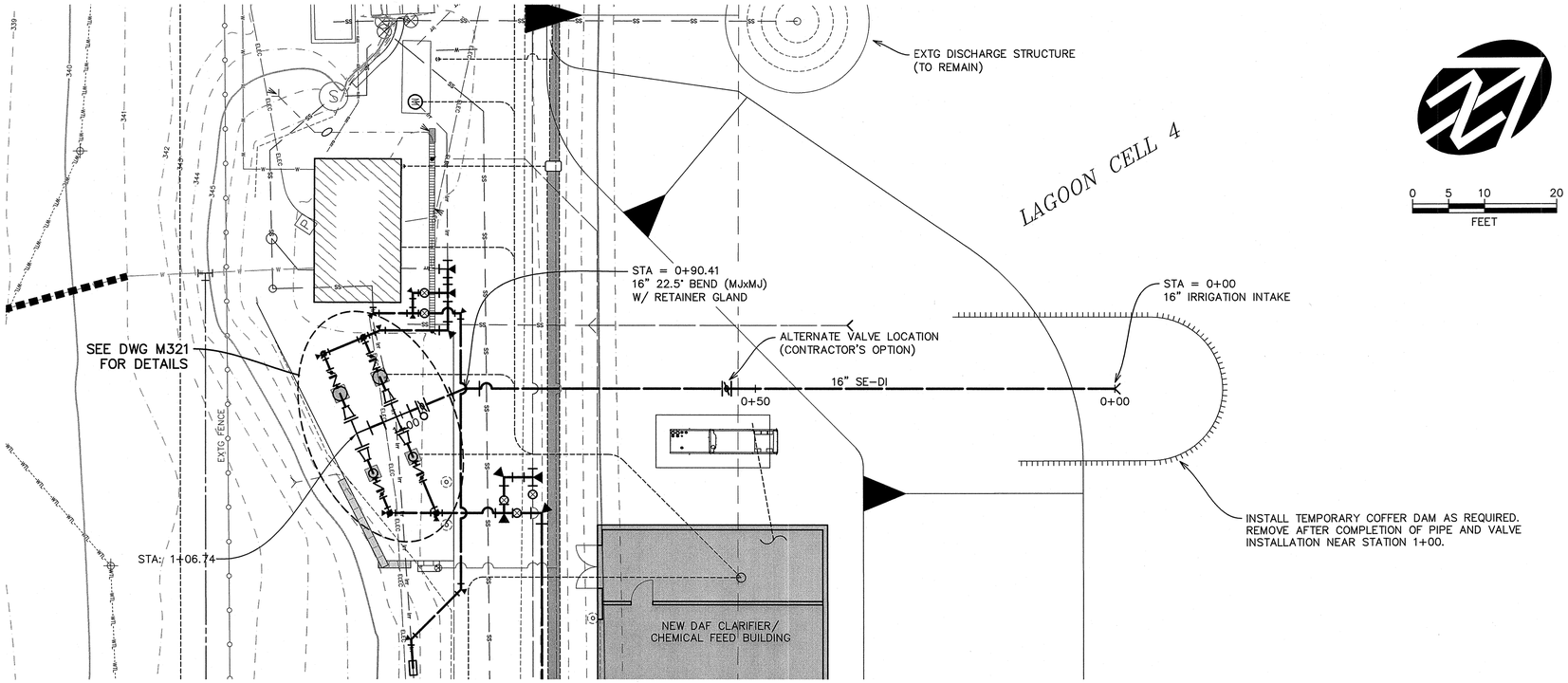
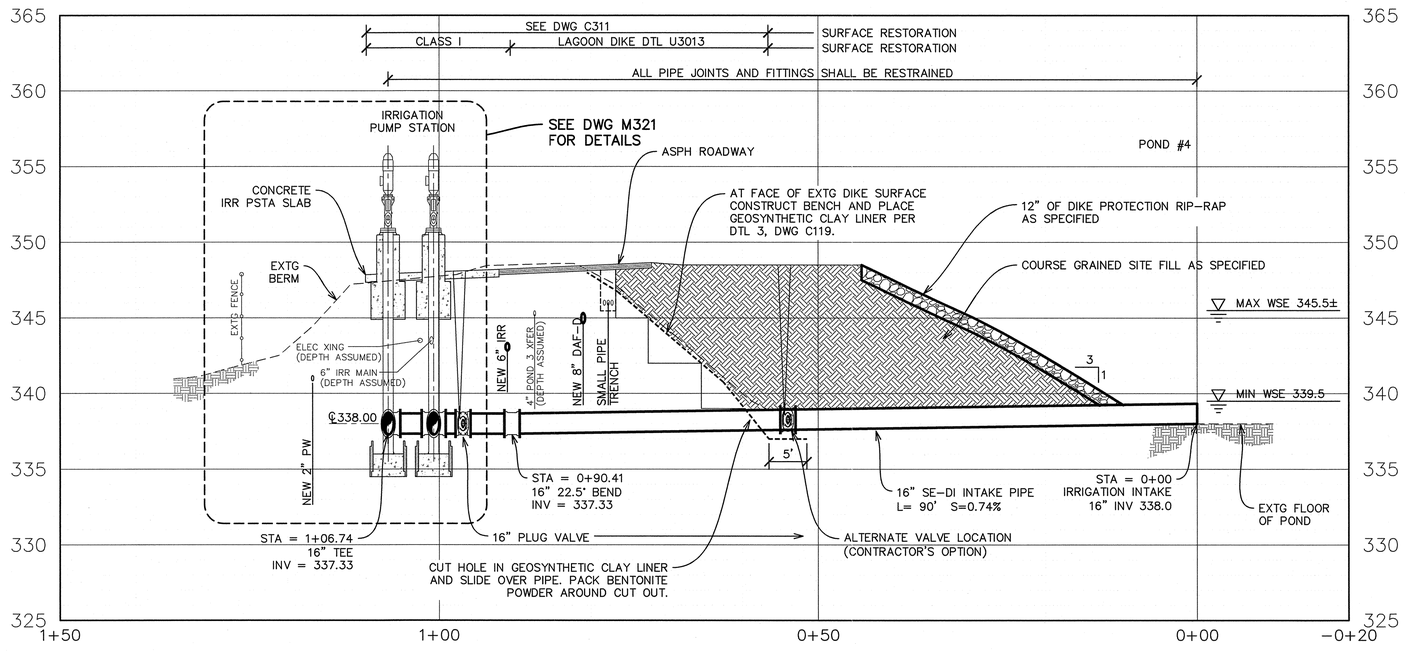


CELL 4 DISCHARGE PIPE PLAN
STA 0+00 to 1+40

1" = 10'



CELL 4 DISCHARGE PIPE PROFILE

1" = 10' H, 1" = 5' V

	BY
DESCRIPTION	
REVISIONS	
1. DATE	
NO.	

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY
0 1"

DSN. CB
DRN. TMT/TN
CKD. CB
DATE: MAY 2026

REGISTERED PROFESSIONAL ENGINEER
OREGON
JULY 14, 2006
CHRISTOPHER J. BRUCATO
85473PE
RENEWS: 12/31/2027

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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

CELL 4 DISCHARGE PIPE PLAN–PROFILE STA 0+00 to 1+40

DRAWING
C309
73 OF 223

JOB NUMBER
2599.3220.0

5/26/2026 12:17:28 PM
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PIPE LAYOUT Point Table			
Point #	Raw Description	Northing	Easting
10068	SLUDGE TEE	190,330.505	217,861.224
10075	DISCH–WNTR–BORE N	190,372.871	217,686.936
10076	CHLOR–MH	190,443.982	217,734.233
10077	24IN SE–BEND	190,485.576	217,725.868
10078	CCC–INLET	190,490.006	217,719.206
10079	CCC–OUTLET	190,525.609	217,641.603
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10131	2IN PW PIPEBURST	190,348.819	217,760.181
10132	2IN PW TEE	190,358.093	217,765.861
10133	2IN PW BEND	190,302.196	217,849.902

LAGOON CELL 4

A C307

TEMPORARY COFFER DAM

NEW FILL IN LAGOON CELL 4

0 5 10 20 FEET

KEY CALLOUTS

(1) INCREASE DEPTH OF CHEMICAL PIPE TRENCH TO ENABLE 24" OF COVER OVER ELECTRICAL CONDUITS WITH A MINIMUM OF 6" OF VERTICAL SEPARATION BETWEEN ELECTRICAL CONDUIT AND CHEMICAL PIPES.

24" SE–DI S=0% INV 344.00

24" INV 344.00

2" PVC SUMP DRAIN TO DAYLIGHT

PI: 36+07.83

PI: 36+15.83

EXISTING CELL 4 OUTLET STRUCTURE

WHERE SMALL DIAMETER COMMON TRENCH PASSES THROUGH FACE OF EXTG LAGOON DIKE, BACKFILL A 10 FOOT LONG SECTION OF TRENCH WITH NATIVE CLAY SOILS WITH BENTONITE ADMIXTURE INSTEAD OF SAND AND CRUSHED ROCK.

NEW CHLORINE CONTACT CHAMBER SEE DWGS S341 & M341

TYPE C UTILITY STATION SEE DWG M004

(1) 2" UW

24" FE–DI SEE DWG C110

PI: 37+01.21

EFFLUENT SAMPLER LOCATION SEE DTL DWG C312

TYPE C UTILITY STATION SEE DWG M004

(1) 2" UW

24" SE SEE DWG C110

CHLORINE INJECTION MANHOLE SEE DWG C110 & C314

(1) 2" UW
(1) 2" SP
(1) 3/4" CS
IN COMMON TRENCH

PI: 35+65.40

60"ø FLAT TOP COMPLIANCE MANHOLE SEE DTL 1, DWG C312

(1) 1" CW
(1) 1" SS
(1) 2" SP
IN COMMON TRENCH

(1) 2" UW
(1) 1" CW
(1) 1" SS
(1) 2" SP
IN COMMON TRENCH

(1) 2" UW
(1) 1" CW
IN COMMON TRENCH

(1) 2" UW

NEW ELEC CONDUITS SEE ELECTRICAL DWGS

8" DAF–D

PI: 37+50.47

INSTALL HANDHOLE W/ END SWEEPS & PULLING BELLS FOR SPARE CONDUITS SEE DTL 8, DWG C314

EXTG 10" IRRIGATION FORCE MAIN (PROTECT)

INSTALL HANDHOLE W/ END SWEEPS & PULLING BELLS FOR SPARE CONDUITS SEE DTL 8, DWG C314

24" FE–DI SEE DWG C110

24" SE SEE DWG C110

EXTG DE–CHLORINATION BUILDING (PROTECT)

FLOOD STAGE OVERFLOW STRUCTURE

EXTG CHLORINE CONTACT CHAMBER TO REMAIN (PROTECT)

EXTG CHAINLINK FENCE

PI: 37+87.00

PI: 37+95.38

SEE CONNECTION DETAIL 4, (THIS SHEET)

EXTG 10" IRRIGATION FORCE MAIN (SUMMER DISCHARGE)

EXTG 12" OUTFALL PIPE TO BEAVER CREEK (WINTER DISCHARGE) SEE DWG C110

NEW 24" FE–DI FROM COMPLIANCE MH

24" D.I. 45° BEND (MJxMJ) W/ RETAINER GLANDS

24" FE–DI SPOOL

24"x12" D.I. REDUCER (MJxMJ) W/ RETAINER GLAND

12" FOSTER ADAPTER

TO/FROM EXTG OVERFLOW STRUCTURE

EXTG 12"PIPE

12" D.I. WYE (MJxMJ) W/ RETAINER GLANDS & THRUSTBLOCK

12" CL 50 D.I. SPOOL

12" SLEEVE CONNECTION

TO BEAVER CREEK OUTFALL

NOTE: SEE SEQUENCE OF OPERATIONS ON DWG G006 FOR ADDITIONAL INFORMATION.

CONNECTION DETAIL 4

N.T.S.

BORE RECEIVING PIT

24" WINTER DISCHARGE EFFLUENT FROM EQ BASIN (AUGER BORE CREEK CROSSING) SEE PLAN–PROFILE DWG C110

EXTG WETLANDS

SEE DWG C309 FOR CONTINUATION

NO.	DATE	DESCRIPTION	BY
1		REVISIONS	

VERIFY SCALE BAR IS ONE INCH ON ORIGINAL DRAWING. IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

DSN. CB
DRN. TMT
CKD. CB
DATE: MAY 2025

REGISTERED PROFESSIONAL ENGINEER — OREGON — JULY 14, 2006 — CHRISTOPHER J. BRUCKNER — 86473PE — RENEWS: 12/31/2027

WESTECH ENGINEERING, INC.
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CITY OF AUMSVILLE, OREGON

WASTEWATER TREATMENT PLANT IMPROVEMENTS

CHLORINE CONTACT CHAMBER PIPING & UTILITY PLAN

DRAWING C310
74 OF 223

JOB NUMBER 2599.3220.0

5/26/2026 12:17:32 PM
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LAGOON CELL 4

GROUTED RIPRAP

NEW FILL IN LAGOON CELL 4

EXISTING CELL 4 OUTLET STRUCTURE

NEW FILL IN LAGOON CELL 4

NEW CHLORINE CONTACT CHAMBER

NEW DAF CLARIFIER/ CHEMICAL FEED BUILDING

GRAVEL

0 10 20 40
FEET

EXTG CHAINLINK FENCE

PLACE 1 FOOT WIDE GRAVEL SHOULDER TO TRANSITION TO EXTG GRADES

EXTG WETLANDS

Beaver Creek

MATCHLINE – SEE BELOW LEFT FOR CONTINUATION

MATCHLINE – SEE UPPER RIGHT FOR CONTINUATION

LAGOON CELL 3

EXTG CHAINLINK FENCE

BEAVER CREEK BRIDGE

SURFACING LEGEND

- HEAVY DUTY CONCRETE PAVING. SEE DTL. 2392, DWG. C005
- 4" CONCRETE SIDEWALK OVER 2" (MIN) CRUSHED ROCK LEVELING COURSE OVER UNDISTURBED SUBGRADE. SEE NOTE 1.
- ASPHALT PAVING: 4" CL 'B' A.C. (IN TWO 2–INCH LIFTS) OVER 8" COMPACTED BASE ROCK OVER UNDISTURBED SUBGRADE. SEE NOTE 1.
- PLANTER AREA: PLACE 2" OF BARKDUST OVER 6" MIN OF TOPSOIL
- DIGOUT & RECONSTRUCT GRAVEL SECTION PLACE 8" (MIN) COMPACTED CRUSHED ROCK TO FINISH GRADE OVER UNDISTURBED SUBGRADE. SEE NOTE 1.
- HYDROSEED: PLACE 6" OF TOPSOIL AND HYDROSEED. PROVIDE TEMPORARY IRRIGATION AS REQ'D TO ESTABLISH GRASS COVER. SEE NOTES ON DWG C003 FOR HYDROSEED AND SEED MIX REQUIREMENTS.
- BERM ARMOR: 12" OF DIKE PROTECTION RIP–RAP AS SPECIFIED OVER BERM STRUCTURE.

NOTE 1: REPAIR ANY DISTURBED SUBGRADE AREAS AS DESCRIBED IN THE GEOTECHNICAL REPORT. PROOF–ROLL SUBGRADE PRIOR TO ROCK PLACEMENT.

NO.	DATE	DESCRIPTION REVISIONS	BY
1			TM/TN

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0 1"
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DSN. CB
DRN. TM/TN
CKD. CB
DATE: MAY 2026

REGISTERED PROFESSIONAL ENGINEER
OREGON
JULY 14, 2000
CHRISTOPHER J. BUGICA
86473PE
RENEWAL: 12/31/2027

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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

DAF / CCC AREA SURFACING PLAN

DRAWING
C311
75 223

JOB NUMBER
2599.3220.0

5/26/2026 12:17:40 PM
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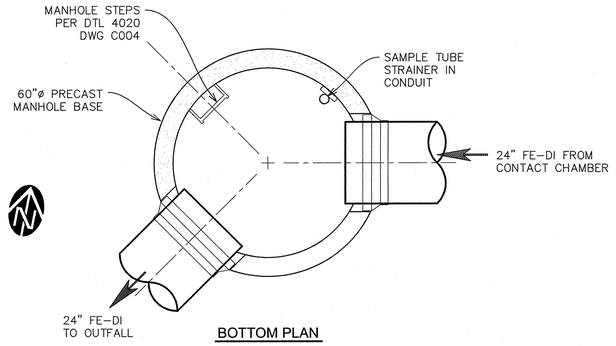
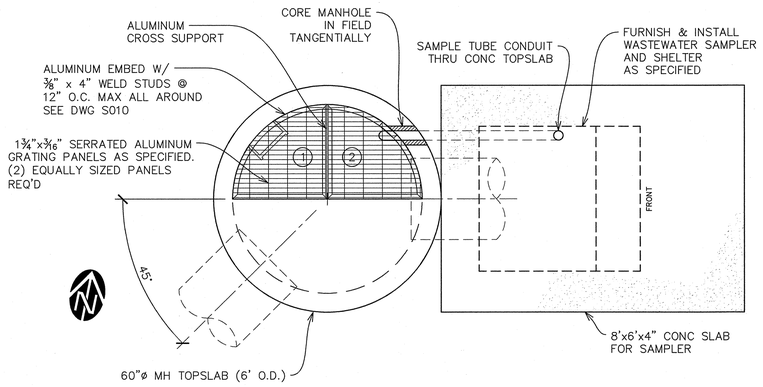
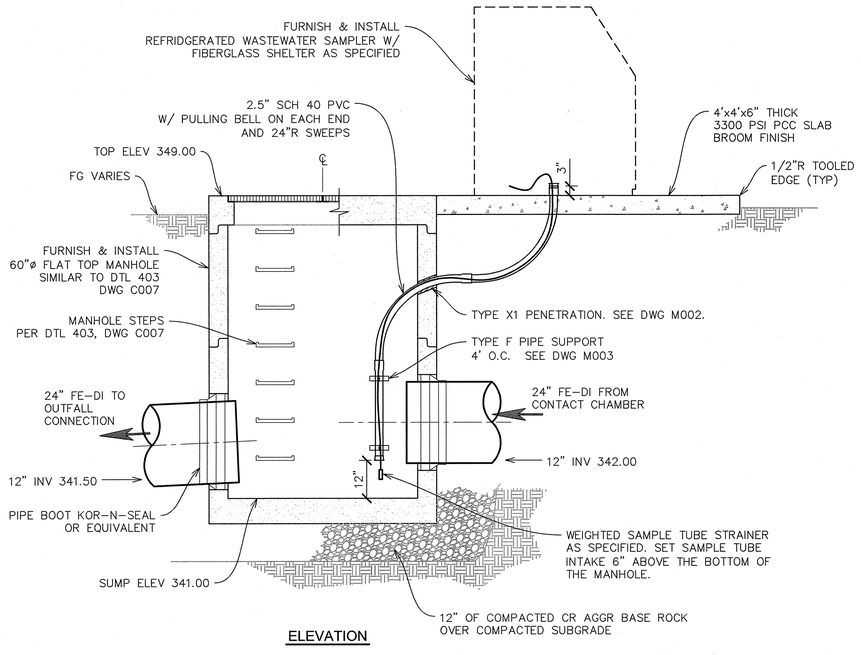


BOTTOM PLAN

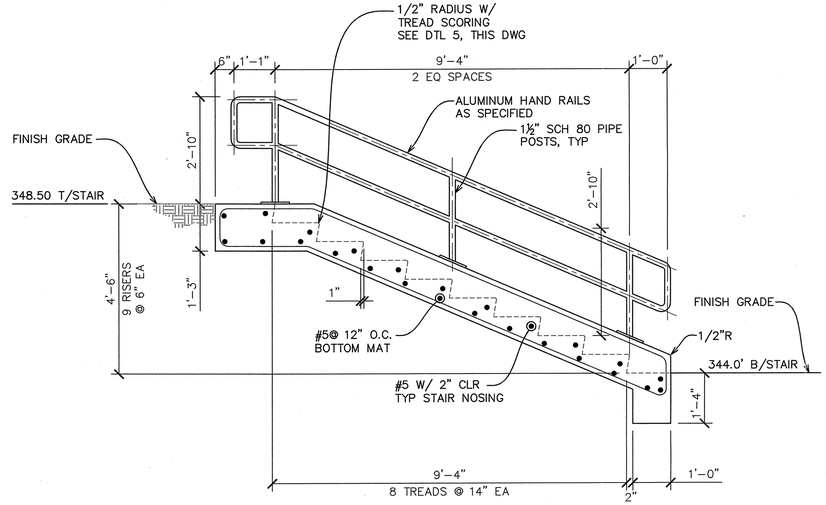


TOP PLAN

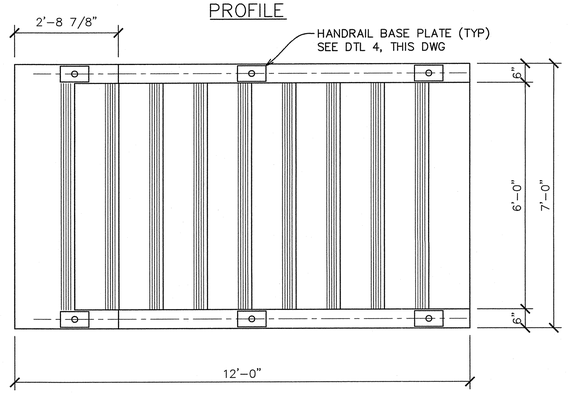


ELEVATION

COMPLIANCE MANHOLE DETAIL 1
1/2" = 1'-0"

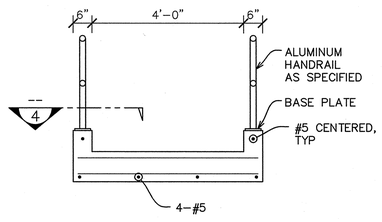


PROFILE

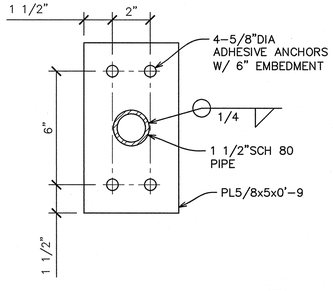


PLAN

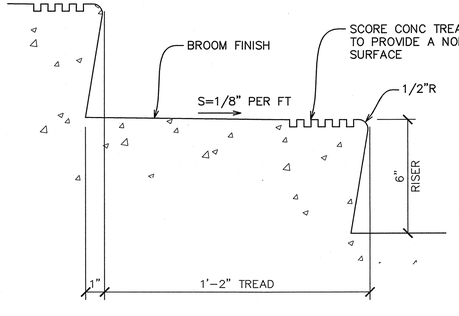
STAIR DETAIL 2
1/2" = 1'-0"



STAIR SECTION 3
1/2" = 1'-0"



BASE PLATE DETAIL 4
3" = 1'-0"



STAIR TREAD DETAIL 5
3" = 1'-0"

NO.	DATE	DESCRIPTION	BY
1		REVISIONS	

VERIFY SCALE
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0 1"
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DSN. CB
DRN. TMT
CKD. CB
DATE: MAY 2026

REGISTERED PROFESSIONAL ENGINEER
OREGON
JULY 15, 2022
CHRISTOPHER T. BRUSKOTTER
86473PE
RENEWS: 12/31/2027

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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

COMPLIANCE MH & STAIRS DETAILS

DRAWING
C312
76 OF 223

JOB NUMBER
2599.3220.0

5/26/2026 12:17:48 PM
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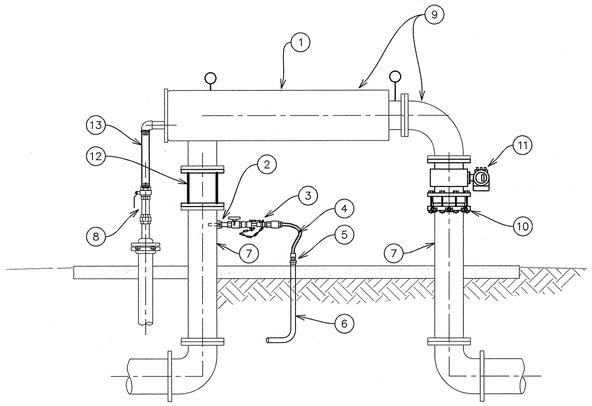


NOTE: SEE SEQUENCE OF OPERATIONS ON DRAWING G006 FOR ADDITIONAL INFORMATION.

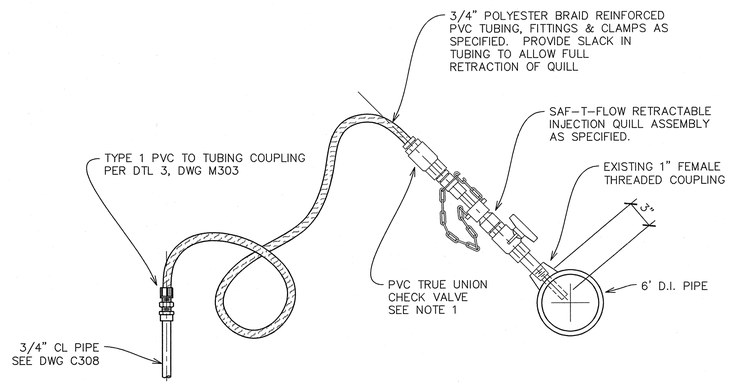
IRRIGATION FILTER CHLORINE INJECTION QUILL & FLOW METER

1/2" = 1'-0"

(1) C313

KEY CALLOUTS

1. EXISTING IRRIGATION WATER FILTER.
2. EXISTING WELDED FEMALE THREADED COUPLING, FIELD VERIFY SIZE PRIOR TO ORDERING INJECTION QUILL.
3. NEW CHEMICAL INJECTION QUILL AS SPECIFIED. SEE DTL 2, C313.
4. NEW POLYETHYLENE TUBING AS SPECIFIED.
5. NEW TYPE 1 PVC TO TUBING CONNECTION PER DETAIL 3/M303.
6. NEW 3/4" CL-S SCH 80 PVC, SEE DWG C308.
7. EXISTING 8" DUCTILE IRON PIPE.
8. EXISTING 2" GALV IRON PIPE & FITTINGS BACKWASH ASSEMBLY.
9. REMOVE EXTG FILTER & BEND. INSTALL NEW FLOW METER, PIPE SPOOLS, & MEGAFLANGE ADAPTER. RE-INSTALL FILTER ASSEMBLY.
10. REMOVE EXTG MEGAFLANGE ADAPTER. REPLACE W/ NEW 8" MEGAFLANGE ADAPTER.
11. INSTALL NEW 8" FLANGED ØDN FLOW METER AS SPECIFIED.
12. FURNISH AND INSTALL NEW 8" CL53 D.I. SPOOL (FLxFL). FABRICATE SPOOL TO MATCH LENGTH OF FLOW METER.
13. FURNISH AND INSTALL NEW 2" GALV IRON THREADED NIPPLE AND FITTINGS AS REQUIRED TO EXTEND BACKWASH PIPE TO NEW FILTER HEIGHT.



NOTES:
1. CHECK VALVES SHALL BE PVC TRUE UNION THREADED END CONNECTIONS. VALVES SHALL BE TC SERIES BY HAYWARD OR EQUAL. -VALVE FOR CHLORINE INJECTION SHALL BE FURNISHED WITH VITON O-RINGS AND SEATS.

INJECTION QUILL ASSEMBLY DETAIL

1-1/2" = 1'-0"

(2) C313

NO.	DATE	DESCRIPTION	BY
1		REVISIONS	

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

DSN. CB
DRN. TN
CKD. CB
DATE: MAY 2026

REGISTERED PROFESSIONAL ENGINEER
OREGON
JAN. 14, 2005
CHRISTOPHER J. BUCKLEY
89-47752E
RENEWS: 12/31/2027

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
3841 Fairview Industrial Dr. S.E., Suite 100, Salem, OR 97302
Phone: (503) 585-2474 Fax: (503) 585-3986
E-mail: westech@westech-eng.com

CITY OF AUMSVILLE, OREGON

WASTEWATER TREATMENT PLANT IMPROVEMENTS

DAF AREA CIVIL DETAILS

DRAWING
C313
77 OF 223

JOB NUMBER
2599.3220.0

5/26/2026 12:17:54 PM
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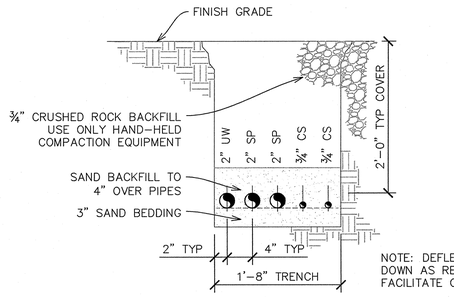
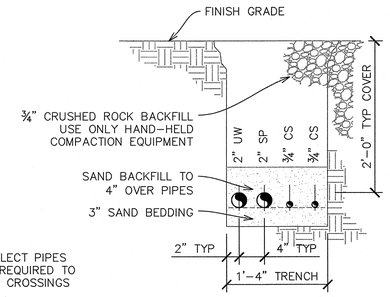
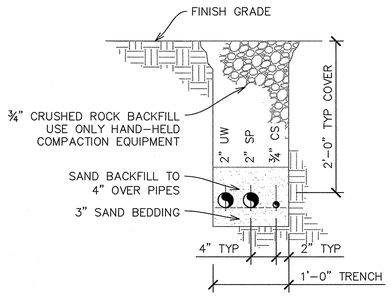


NOTE: DEFLECT PIPES DOWN AS REQUIRED TO FACILITATE CROSSINGS

SMALL PIPE TRENCH 1
1" = 1'–0"



SMALL PIPE TRENCH 2
1" = 1'–0"



SMALL PIPE TRENCH 3
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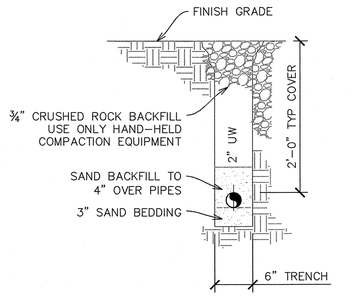
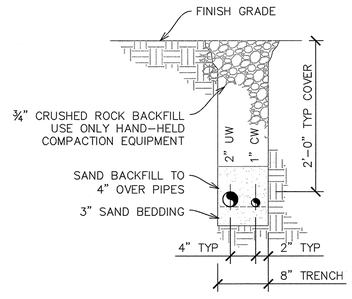


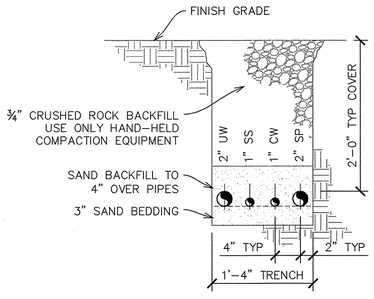
SMALL PIPE TRENCH 4
1" = 1'–0"

SMALL PIPE LEGEND

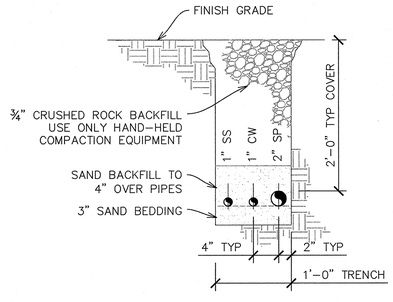
UW	UTILITY WATER
CW	CARRIER WATER
SP	SPARE SOLUTION CONDUIT (EMPTY)
CS	CHLORINE SOLUTION
SS	SULFUR SOLUTION



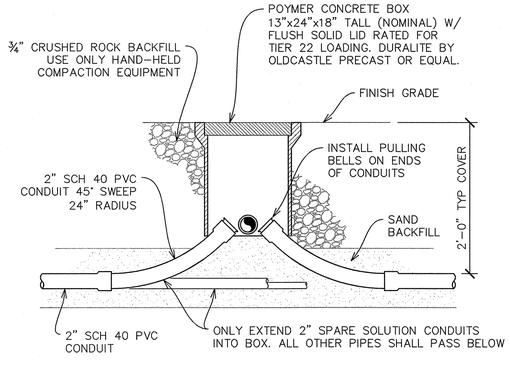
SMALL PIPE TRENCH 5
1" = 1'–0"



SMALL PIPE TRENCH 6
1" = 1'–0"

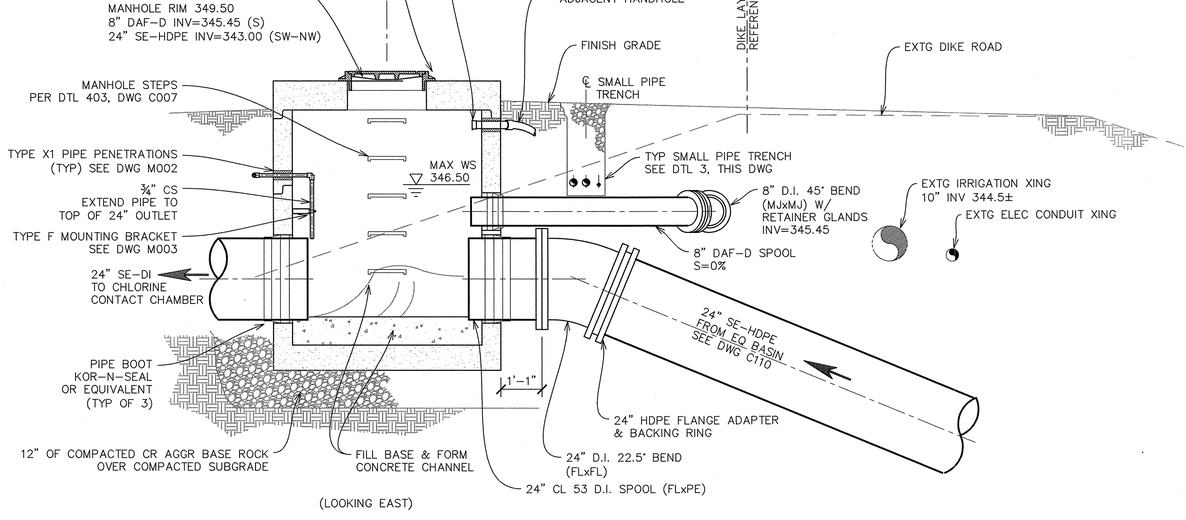


SMALL PIPE TRENCH 7
1" = 1'–0"



HANDHOLE DETAIL FOR SPARE CONDUIT 8
1" = 1'–0"

NOTE: PIPES & CONDUITS SHOWN ROTATED IN THIS VIEW FOR CLARITY. INSTALL COVER TO EAST, CENTERED BETWEEN 24" PIPES.



(LOOKING EAST)

CHLORINE SOLUTION INJECTION MANHOLE DETAIL 9
1/2" = 1'–0"

NO.	DATE	DESCRIPTION	BY
1		REVISIONS	

VERIFY SCALE
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DSN. CB
DRN. TN
CKD. CB
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REGISTERED PROFESSIONAL ENGINEER
86473PE
OREGON
JAN. 14, 1994
CHRISTOPHER J. BUCKLEY
RENEWS: 12/31/2027

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

CHLORINE INJECTION MANHOLE & SMALL PIPE TRENCH DETAILS

DRAWING
C314
78 OF 223

JOB NUMBER
2599.3220.0

5/26/2026 12:17:58 PM
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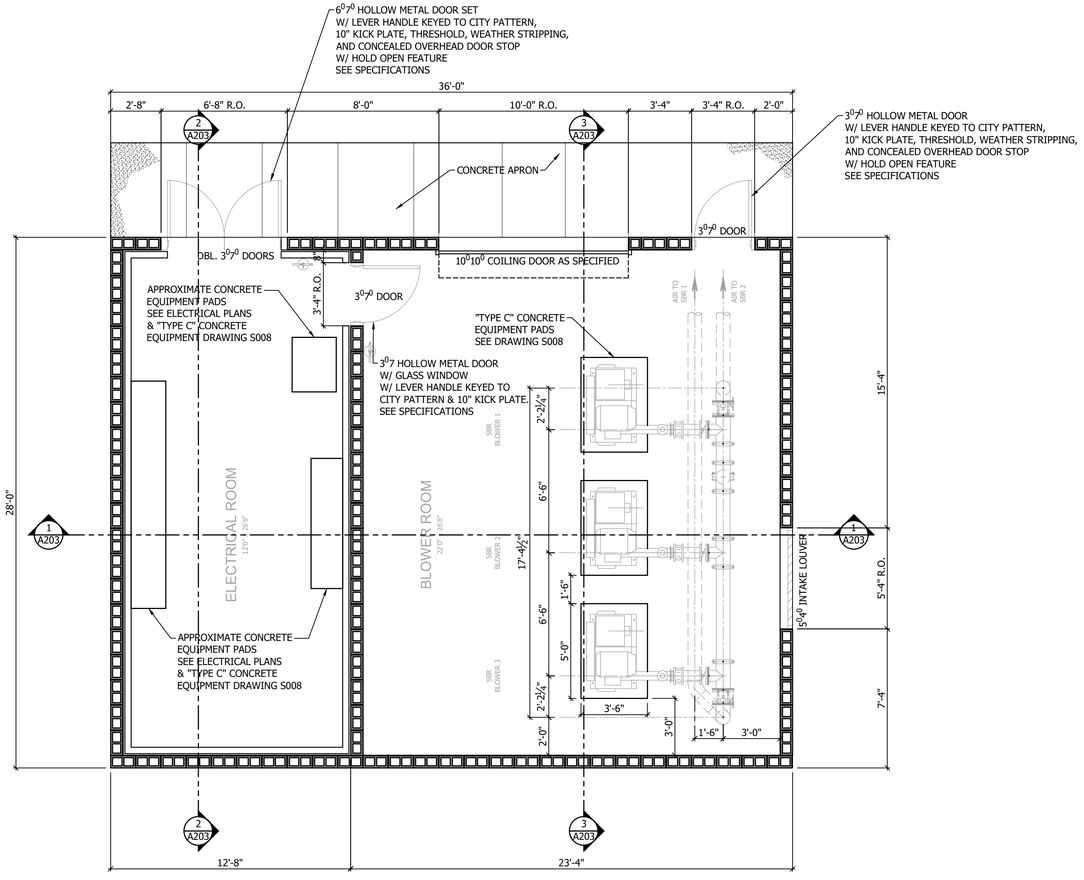
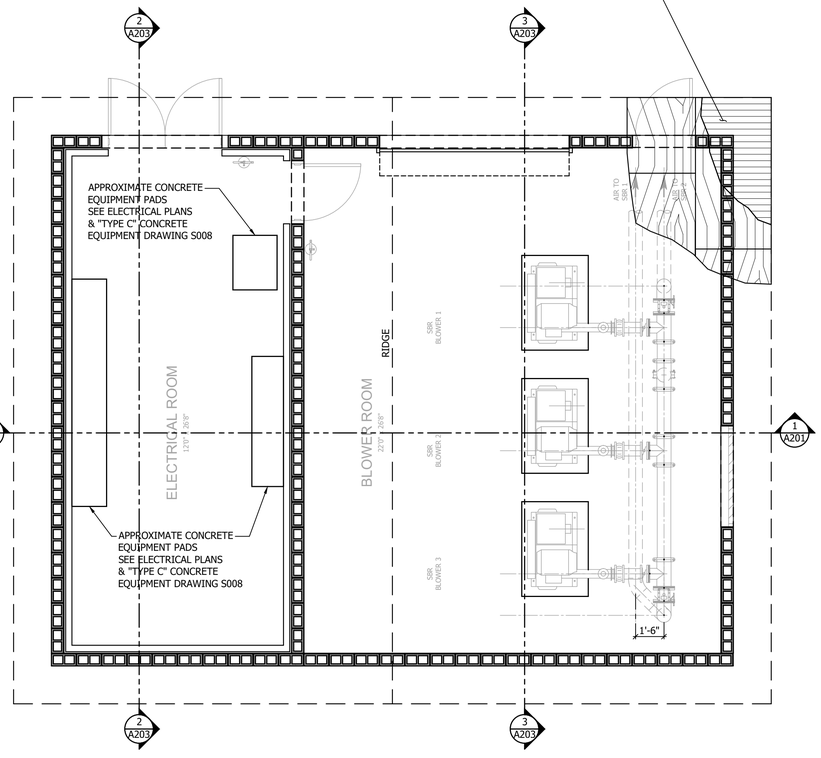


BLOWER BUILDING - FLOOR PLAN

1/4" = 1'-0"



BLOWER BUILDING - ROOF PLAN

1/4" = 1'-0"

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503.585.2474
mscengineersinc.com

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DRN. SMC
CKD. CBS
DATE: MAY 26

REGISTERED PROFESSIONAL ENGINEER
63202
DIGITALLY SIGNED
OREGON
CAMERON B. SWARTWOUT
EXPIRES: JUNE 30, 2028

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

BLOWER BUILDING
FLOOR PLAN AND ROOF PLAN

DRAWING
A201
79 OF 223

JOB NUMBER
231048

5/19/2026 7:26:02 AM
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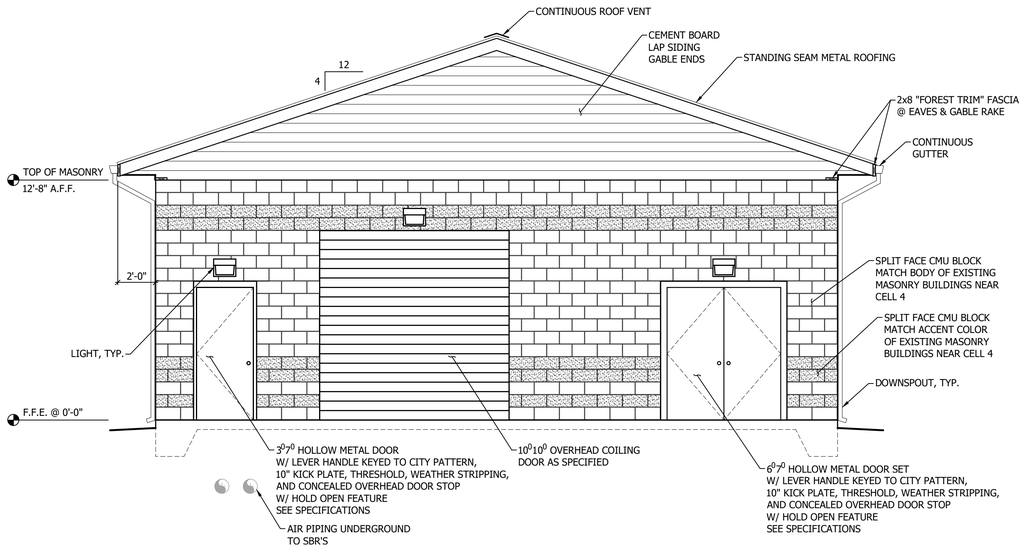
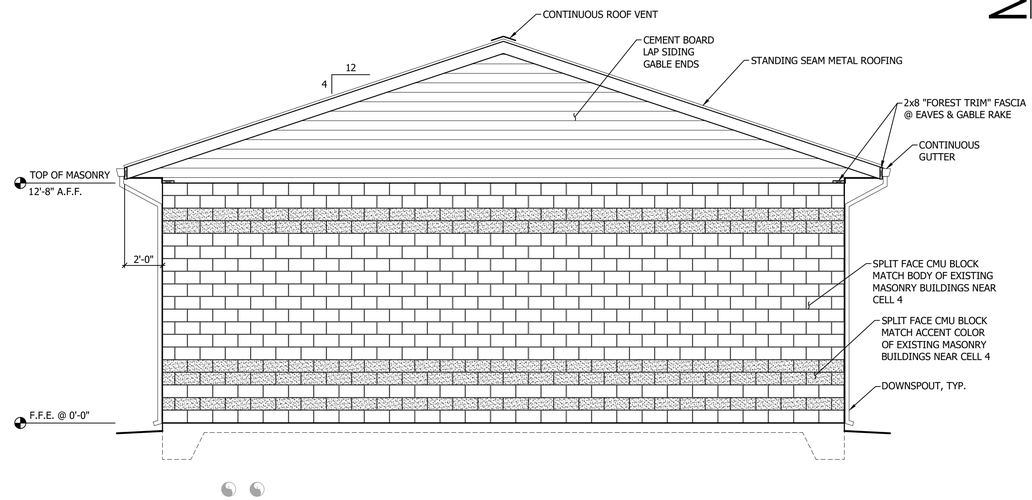


BLOWER BUILDING - NORTH ELEVATION

1/4" = 1'-0"

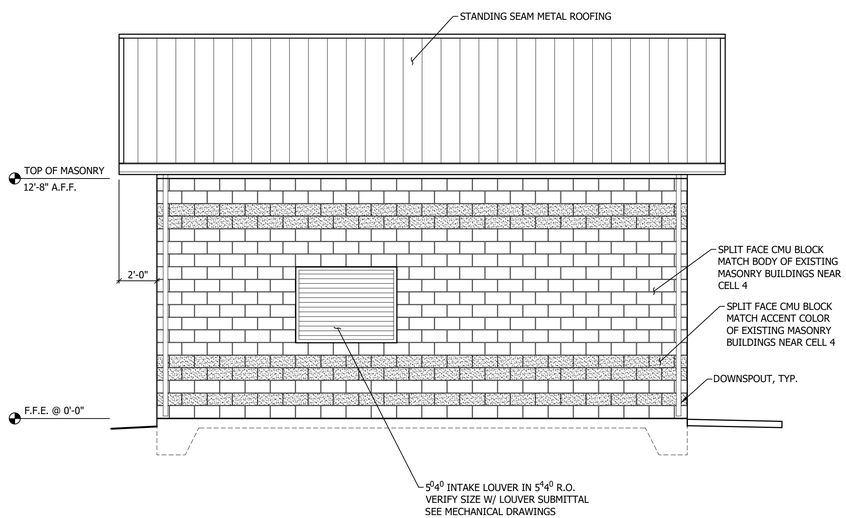
1 A202



BLOWER BUILDING - SOUTH ELEVATION

1/4" = 1'-0"

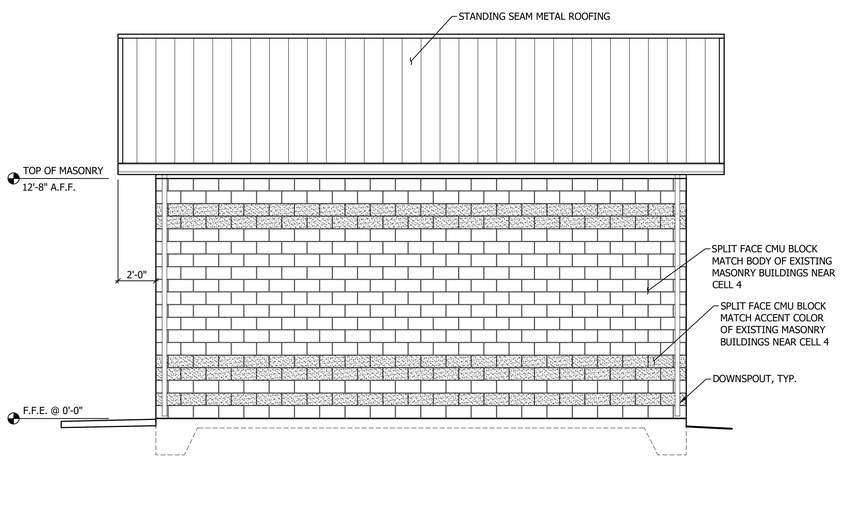
2 A202



BLOWER BUILDING - EAST ELEVATION

1/4" = 1'-0"

3 A202



BLOWER BUILDING - WEST ELEVATION

1/4" = 1'-0"

4 A202

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Salem, OR 97301
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REGISTERED PROFESSIONAL ENGINEER
63202
DIGITALLY SIGNED
OREGON
CAMERON B. SWARTWOUT
EXPIRES: JUNE 30, 2028

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CONSULTING ENGINEERS AND PLANNERS
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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

BLOWER BUILDING ELEVATIONS

DRAWING
A202
80 OF 223

JOB NUMBER
231048

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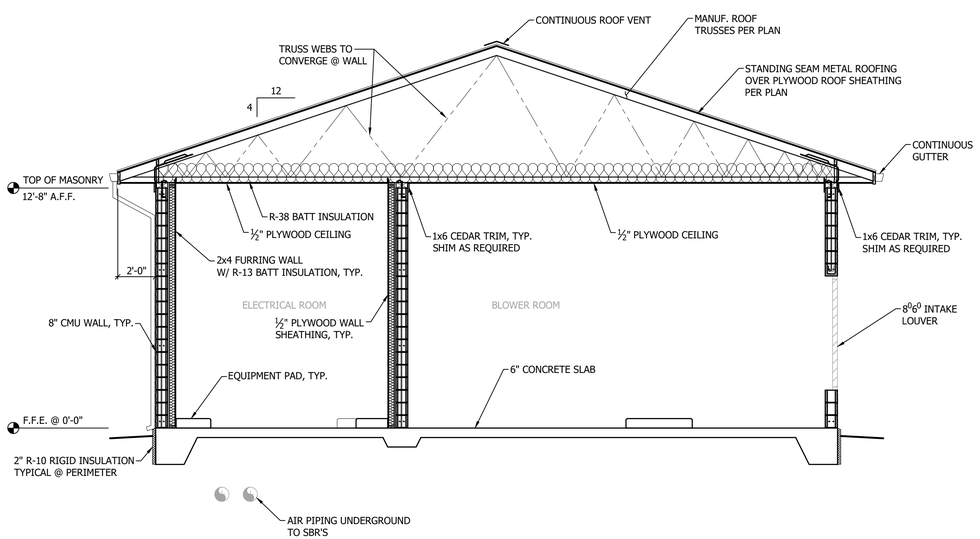
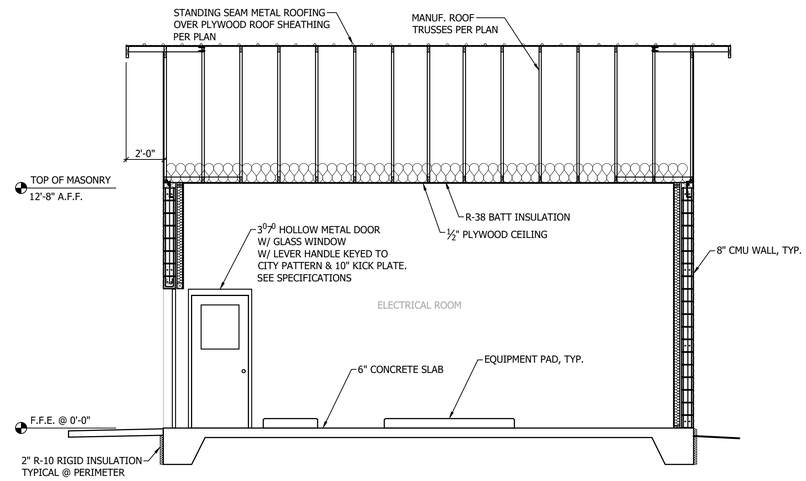


BLOWER BUILDING - LONGITUDINAL SECTION

1/4" = 1'-0"

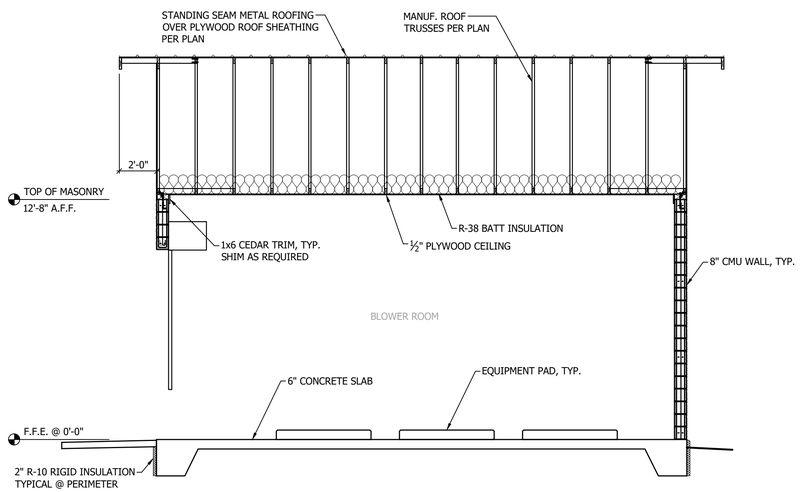
1 / A203



BLOWER BUILDING - TRANSVERSE SECTION @ ELECTRICAL ROOM

1/4" = 1'-0"

2 / A203



BLOWER BUILDING - TRANSVERSE SECTION @ BLOWER ROOM

1/4" = 1'-0"

3 / A203

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SINCE 1925
340 Stayton / Phone NE
Suite 300
Salem, OR 97301
503.585.2474
mscengineers.com

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CKD. CBS
DATE: MAY '26

REGISTERED PROFESSIONAL ENGINEER
63202
DIGITALLY SIGNED
OREGON
CAMERON B. SWEARINGEN
EXPIRES: JUNE 30, 2028

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

BLOWER BUILDING SECTIONS

DRAWING
A203
81 OF 223

JOB NUMBER
231048

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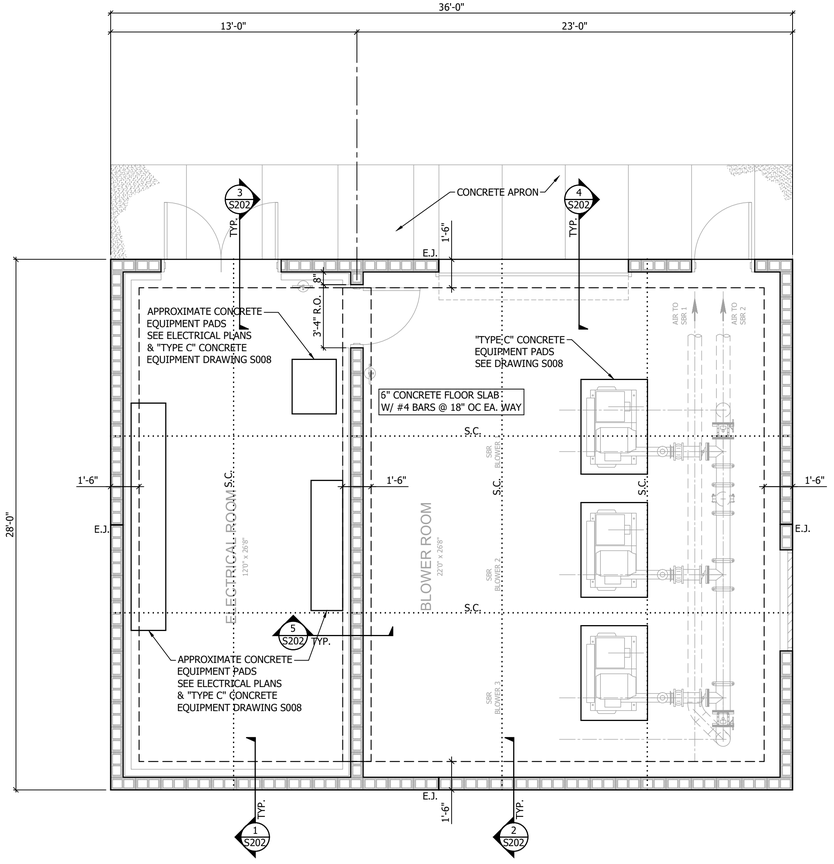
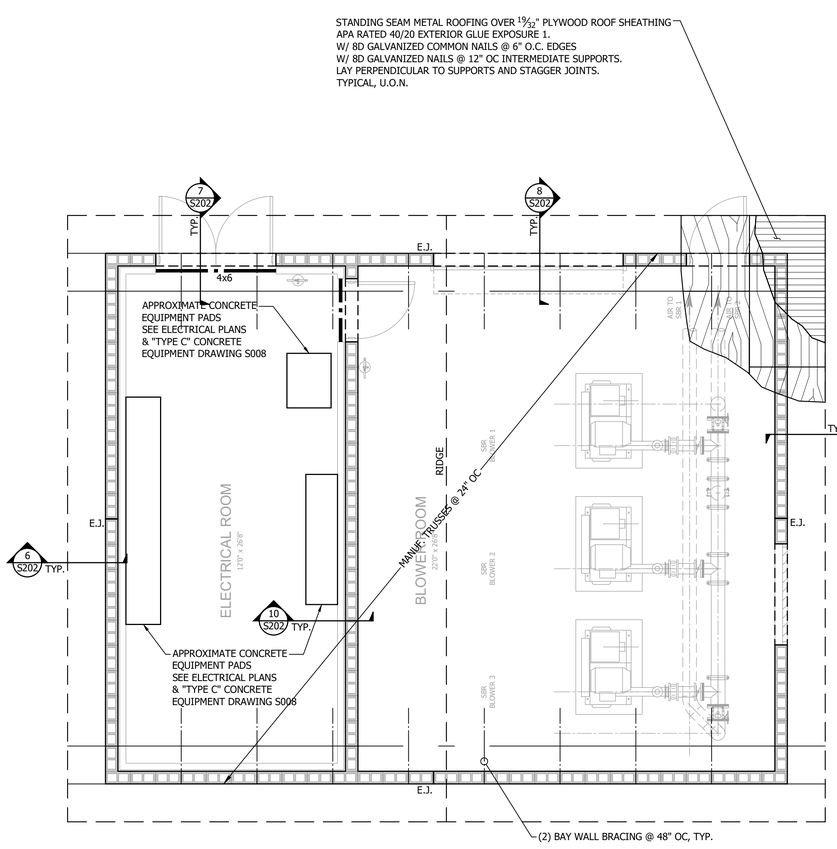


BLOWER BUILDING - FOUNDATION PLAN

1/4" = 1'-0"



BLOWER BUILDING - ROOF FRAMING PLAN

1/4" = 1'-0"

LEGEND

	8" SPLIT FACE MASONRY WALL
FD	FLOOR DRAIN
S.C.	SAW CUT
C.J.	CONSTRUCTION JOINT
E.J.	MASONRY EXPANSION JOINT SEE DETAIL 4/S009

TRUSS MANUFACTURER TO REFER TO STRUCTURAL PLANS FOR LAYOUT AND BEARING LOCATIONS.

GENERAL SHEET NOTES

A. SAWCUTS AND CONSTRUCTION JOINTS ARE PER SUGGESTED. CONTRACTOR SHALL SUBMIT CONSTRUCTION JOINT AND SAWCUT PLAN TO ENGINEER OF RECORD FOR APPROVAL.

MSC ENGINEERS
CONSULTING STRUCTURAL ENGINEERS
SINCE 1925
345 Trade—Phone NE, Suite 310
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63202
DIGITALLY SIGNED
OREGON
CAMERON B. SWEARINGEN
2026
EXPIRES: JUNE 30, 2028

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
3841 Fairview Industrial Dr. S.E., Suite 100, Salem, OR 97302
Phone: (503) 585-2474 Fax: (503) 585-3986
E-mail: westech@westech-eng.com

CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

BLOWER BUILDING FOUNDATION PLAN & ROOF FRAMING PLAN

DRAWING
S201
82 OF 223

JOB NUMBER
231048

5/19/2026 7:26:07 AM
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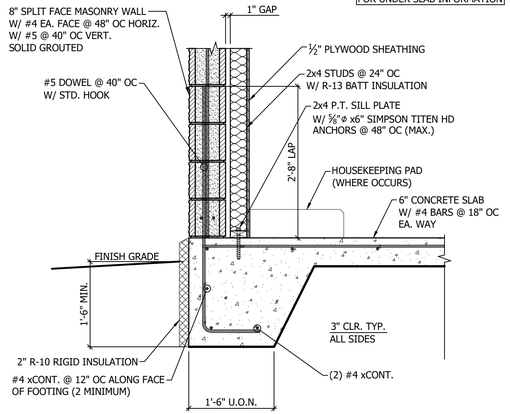
NOTE: REFER TO DETAIL 1/S007
FOR UNDER SLAB INFORMATION

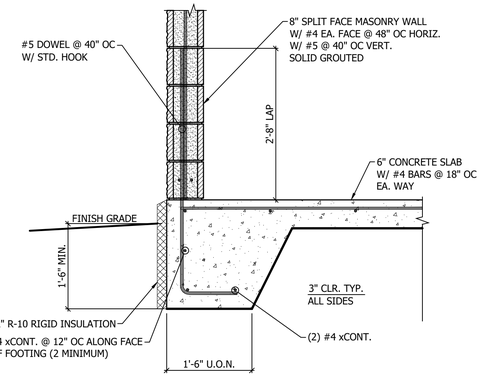


TYPICAL SLAB EDGE @ ELECTRICAL ROOM

3/4" = 1'-0"

1 S202

NOTE: REFER TO DETAIL 1/S007
FOR UNDER SLAB INFORMATION

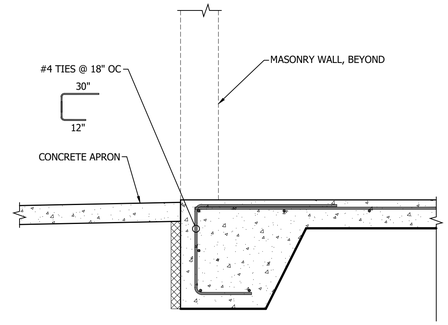


TYPICAL SLAB EDGE @ BLOWER ROOM

3/4" = 1'-0"

2 S202

NOTE: REFER TO DETAIL 1/S202 & 2/S202
FOR ADDITIONAL INFORMATION

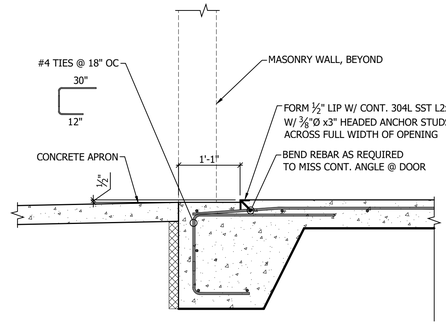


TYPICAL SLAB EDGE @ MANDOOR

3/4" = 1'-0"

3 S202

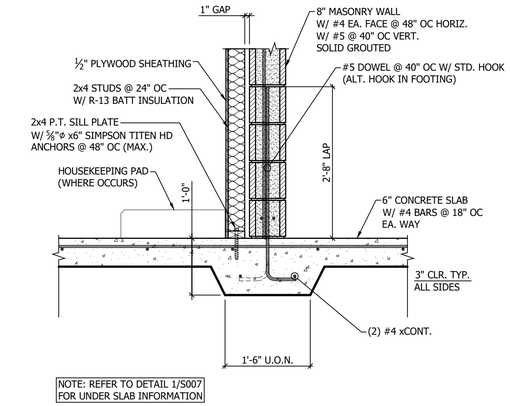
NOTE: REFER TO DETAIL 1/S202 & 2/S202
FOR ADDITIONAL INFORMATION



TYPICAL SLAB EDGE @ ROLLING DOOR

3/4" = 1'-0"

4 S202

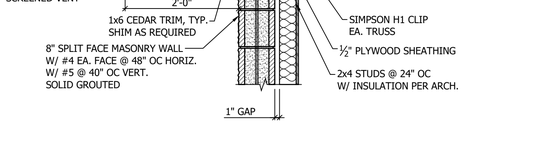


NOTE: REFER TO DETAIL 1/S007
FOR UNDER SLAB INFORMATION

INTERIOR THICKENED SLAB

3/4" = 1'-0"

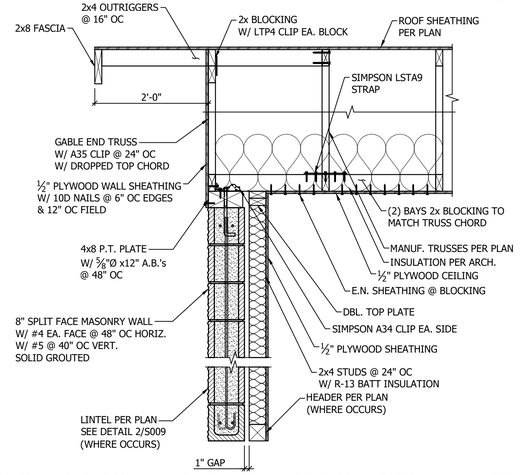
5 S202



ROOF TRUSS CONNECTION @ ELECTRICAL ROOM

3/4" = 1'-0"

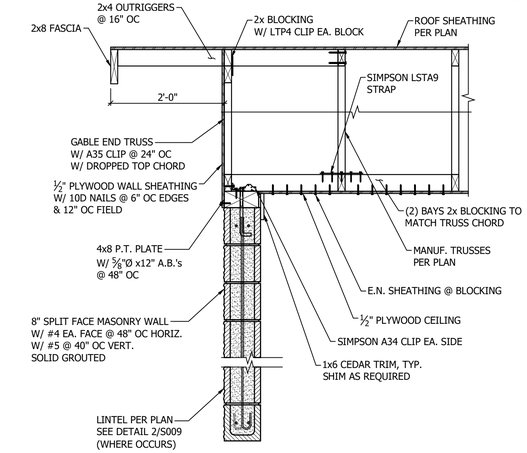
6 S202



ROOF TRUSS CONNECTION @ ELECTRICAL ROOM

3/4" = 1'-0"

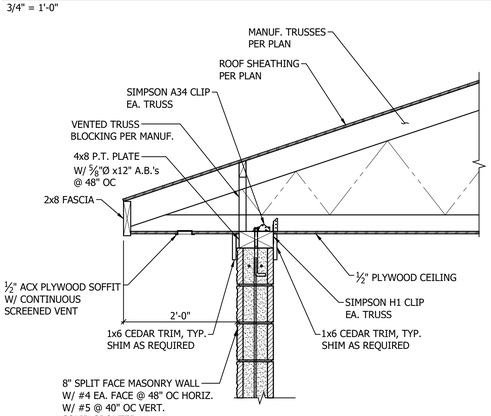
7 S202



ROOF TRUSS CONNECTION @ BLOWER ROOM

3/4" = 1'-0"

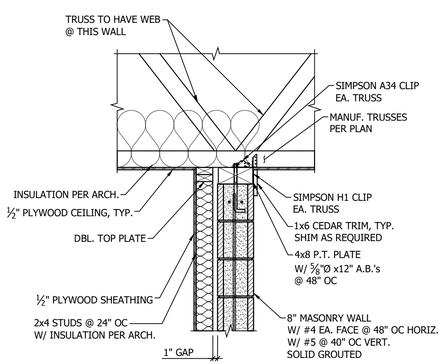
8 S202



ROOF TRUSS CONNECTION @ BLOWER ROOM

3/4" = 1'-0"

9 S202



ROOF TRUSS CONNECTION @ INTERIOR WALL

3/4" = 1'-0"

10 S202

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CONSULTING STRUCTURAL ENGINEERS
MSC ENGINEERS
SINCE 1925
1420 Tapcrest Place N.E.
Salem, OR 97301
503.585.2474
msceng@msceng.com

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OREGON
CAMERON B. SWARTWOUT
EXPIRES: JUNE 30, 2028

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
3841 Fairview Industrial Dr. S.E., Suite 100, Salem, OR 97302
Phone: (503) 585-2474 Fax: (503) 585-3986
E-mail: westech@westech-eng.com

CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

BLOWER BUILDING FOUNDATION DETAILS & ROOF FRAMING DETAILS

DRAWING
S202
83 OF 223

JOB NUMBER
231048

SBR - BOTTOM PLAN

1/8" = 1'-0"

MSC CONSULTING STRUCTURAL ENGINEERS
SINCE 1925
1429 Tandem Place NE
Suite 206
Salem, OR 97301
503.585.2474
mscengineers.com

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

DSN. CBS
DRN. SMC
CKD. CBS
DATE: MAY 26

REGISTERED PROFESSIONAL ENGINEER
63202
DIGITALLY SIGNED
OREGON
7/1/2026
CAMERON B. SWARTWOUT
EXPIRES: JUNE 30, 2028

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
3841 Fairview Industrial Dr. S.E., Suite 100, Salem, OR 97302
Phone: (503) 585-2474 Fax: (503) 585-3986
E-mail: westech@westech-eng.com

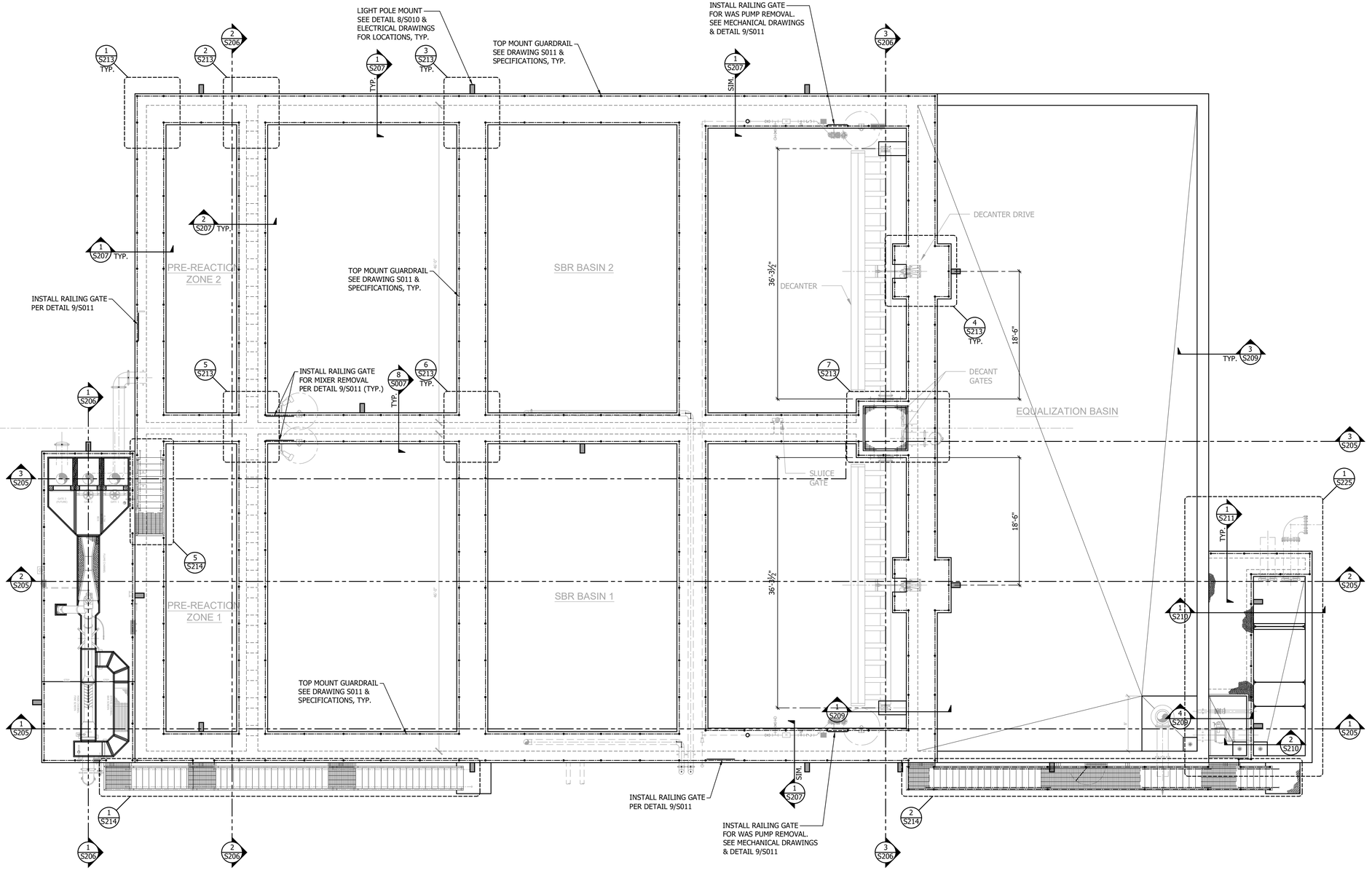
CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

SBR AND EQUALIZATION BASIN BOTTOM PLAN

DRAWING
S203
84 OF 223

JOB NUMBER
231048

5/19/2026 7:26:09 AM
G:\Jobs-2023\231048 - Aumsville WWTP\231048_Aumsville WWTP_05-19-2026.dwg, (S203 tab)
May 19, 2026-7:26:09 am G:\JOBS-2023\231048 - AUMSVILLE WWTP\231048_AUMSVILLE WWTP 05-19-2026.DWG, SMC



SBR - TOP PLAN

1/8" = 1'-0"

MSC ENGINEERS
CONSULTING STRUCTURAL ENGINEERS
SINCE 1925
3420 Pacific Place N.E.
Salem, OR 97301
503.585.2474
mscengineers.com

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

VERIFY SCALE
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0 IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY
1"

DSN. CBS
DRN. SMC
CKD. CBS
DATE: MAY 26

REGISTERED PROFESSIONAL ENGINEER
63202
DIGITALLY SIGNED
OREGON
CAMERON B. SWEARINGEN
2026
EXPIRES: JUNE 30, 2028

WESTECH ENGINEERING, INC.
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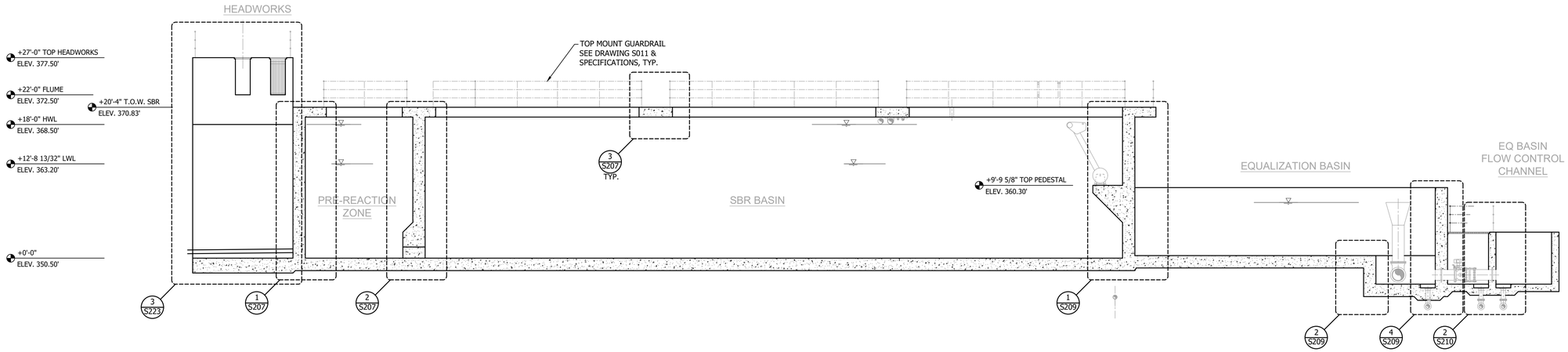
CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

SBR AND EQUALIZATION BASIN
TOP PLAN

DRAWING
S204
85 OF 223

JOB NUMBER
231048

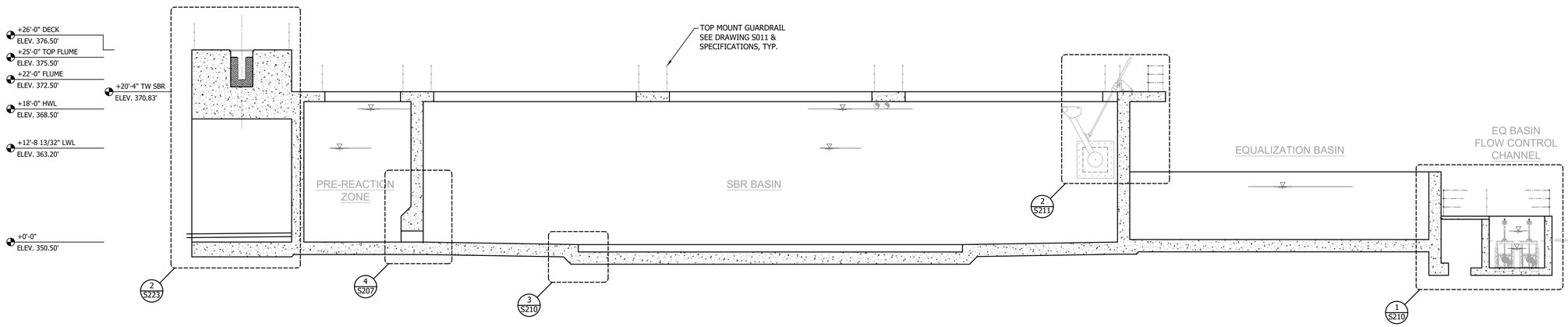
5/19/2026 7:26:11 AM
G:\Jobs-2023\231048 - Aumsville WWTP\231048_Aumsville WWTP_05-19-2026.dwg, (S204 tab)
May 19, 2026-7:26:11 am G:\JOBS-2023\231048 - AUMSVILLE WWTP\231048 AUMSVILLE WWTP 05-19-2026.DWG, SMC



SBR - LONGITUDINAL SECTION

1/8" = 1'-0"

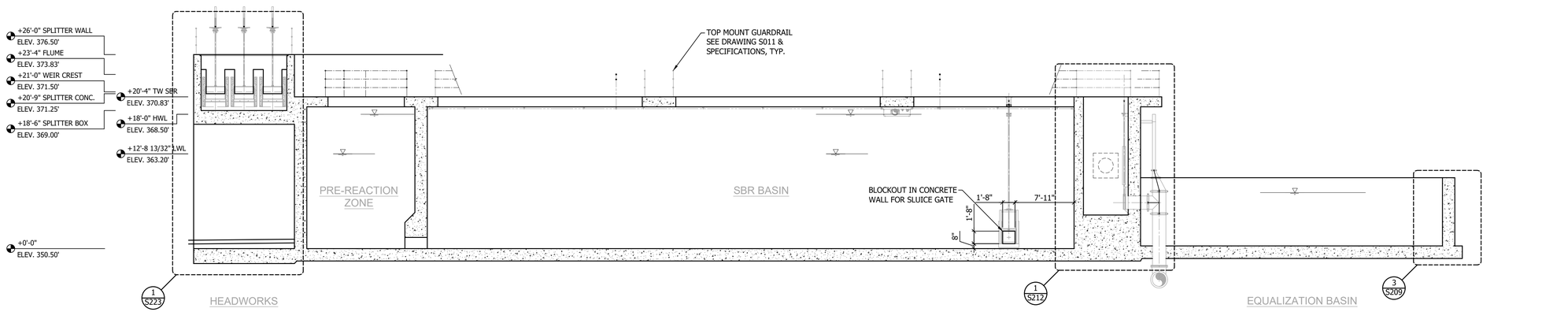
1
S205



SBR - LONGITUDINAL SECTION

1/8" = 1'-0"

2
S205



SBR - LONGITUDINAL SECTION

1/8" = 1'-0"

3
S205

MSC ENGINEERS
CONSULTING STRUCTURAL ENGINEERS
SINCE 1925
3430 Ridgecrest Place NE
Salem, OR 97301
503.585.2787
mscengineersinc.com

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		REVISIONS	

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0 1"
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DSN. CBS
DRN. SMC
CKD. CBS
DATE: MAY '26

REGISTERED PROFESSIONAL ENGINEER
63202
DIGITALLY SIGNED
OREGON
CAMERON B. SWARTWEIN
EXPIRES: JUNE 30, 2028

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
3841 Fairview Industrial Dr. S.E., Suite 100, Salem, OR 97302
Phone: (503) 585-2474 Fax: (503) 585-3986
E-mail: westech@westech-eng.com

CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

SBR SECTIONS

DRAWING
S205
86 OF 223

JOB NUMBER
231048

5/19/2026 7:26:12 AM
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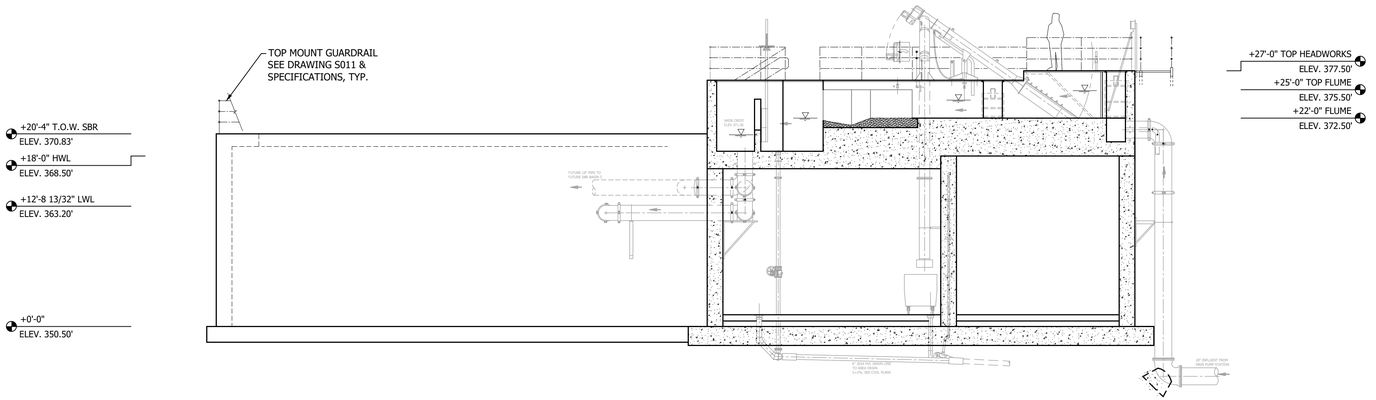
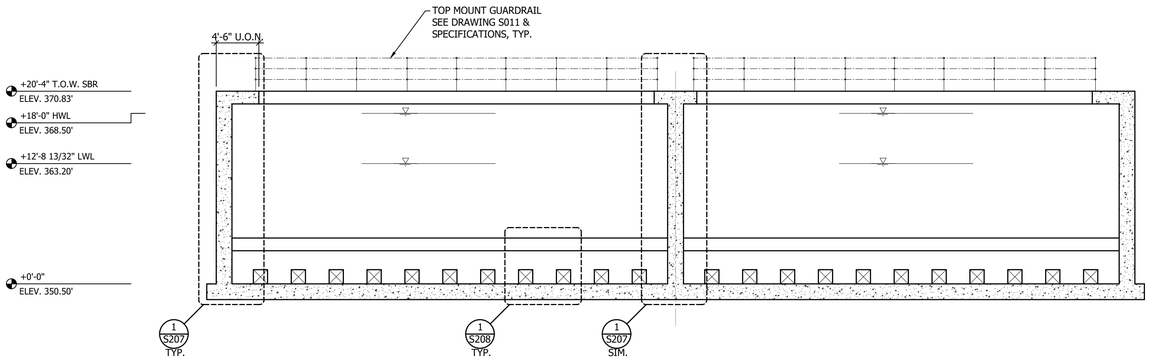
May 19, 2026-7:26:12 am G:\JOBS-2023\231048 - AUMSVILLE WWTP\231048 AUMSVILLE WWTP 05-19-2026.DWG, SMC



SBR - HEADWORKS SECTION

1/8" = 1'-0"

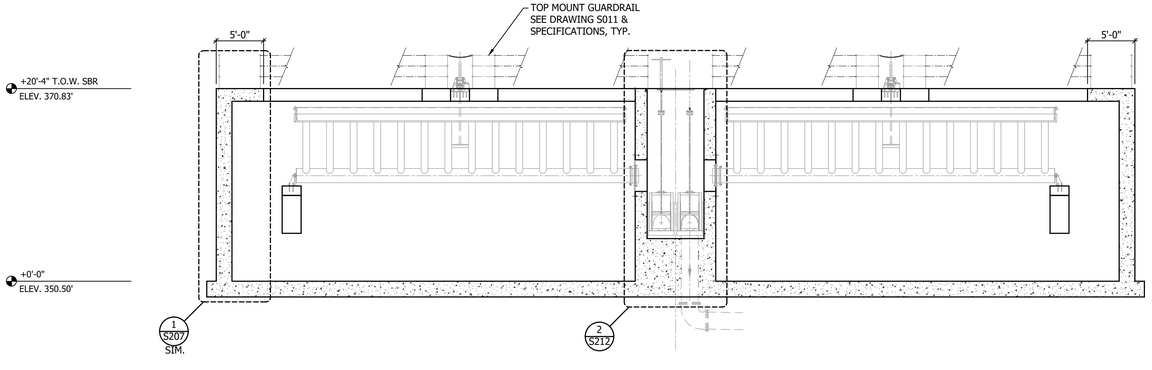
1 / S206



SBR - PRE-REACTION SECTION

1/8" = 1'-0"

2 / S206



SBR - DECANT SECTION

1/8" = 1'-0"

3 / S206

MSC ENGINEERS
CONSULTING STRUCTURAL ENGINEERS
SINCE 1925
345 Trademark Place NE
Salem, OR 97301
503-585-2474
msceng@msceng.com

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DSN. CBS
DRN. SMC
CKD. CBS
DATE: MAY 26

REGISTERED PROFESSIONAL ENGINEER
63202
DIGITALLY SIGNED
OREGON
CAMERON B. SWEARINGEN
2026
EXPIRES: JUNE 30, 2028

WESTECH ENGINEERING, INC.
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E-mail: westech@westech-eng.com

CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

SBR SECTIONS

DRAWING
S206
87 OF 223

JOB NUMBER
231048

5/19/2026 7:26:13 AM
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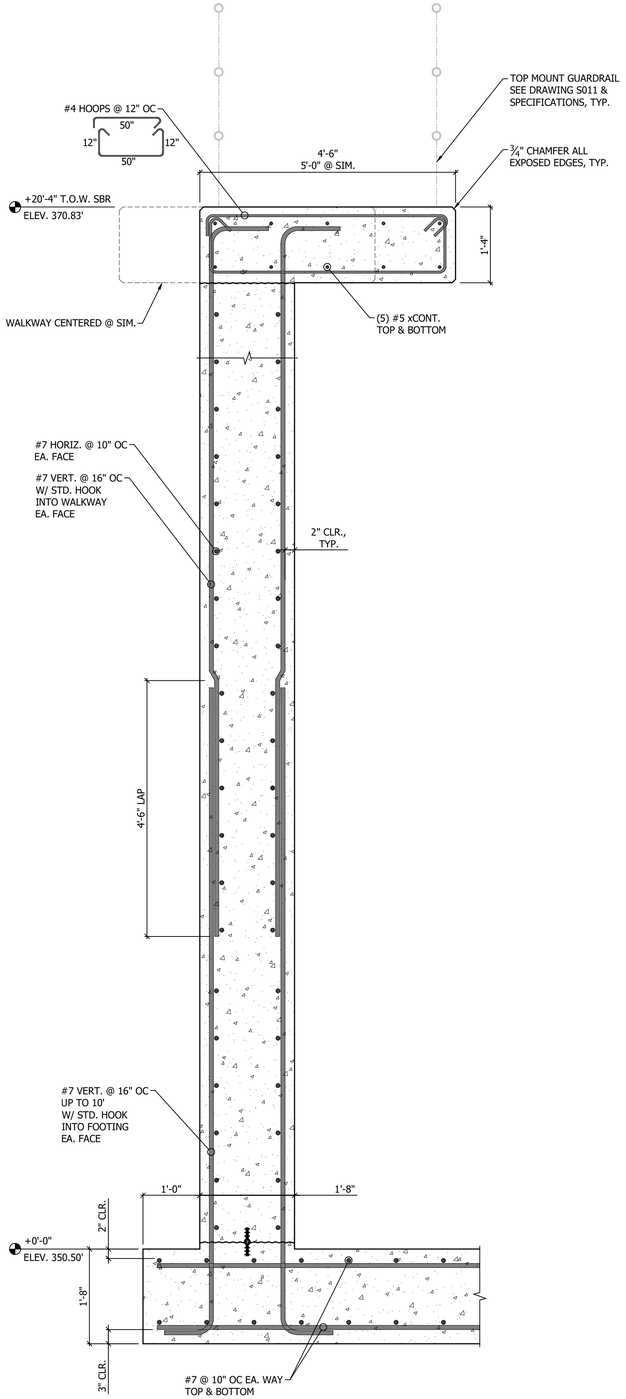
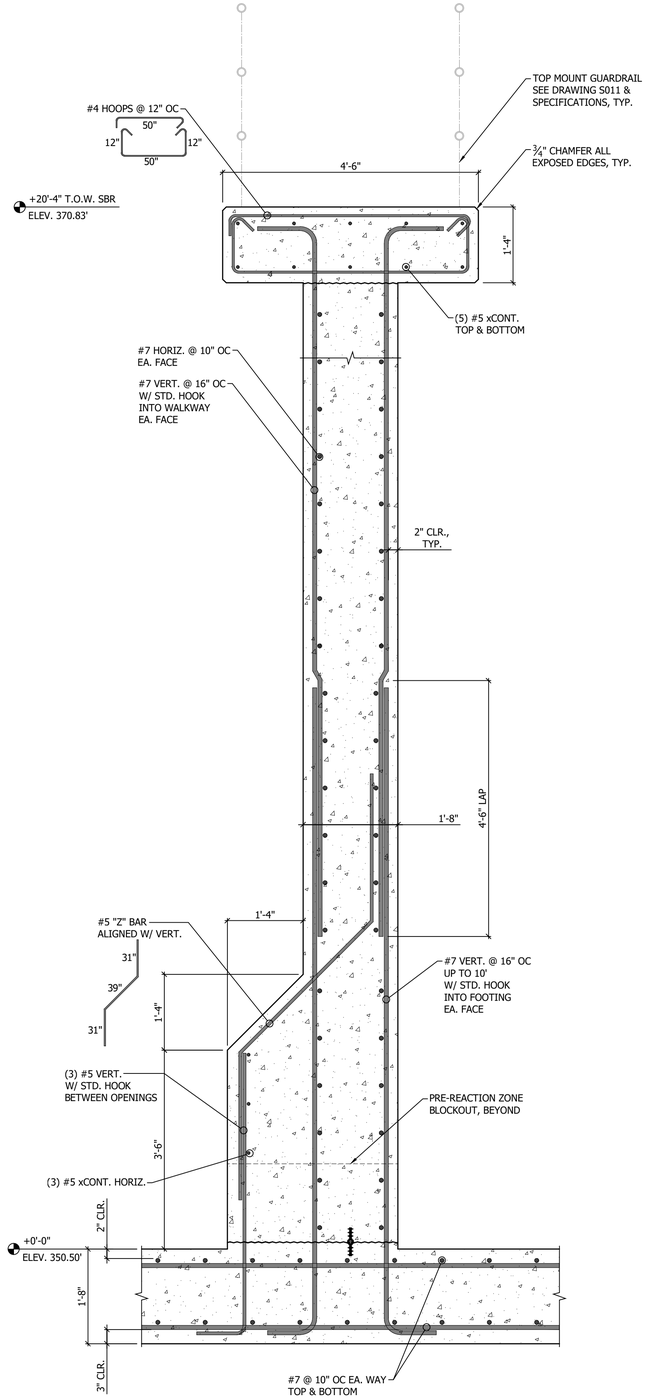
May 19, 2026-7:26:13 am G:\JOBS-2023\231048 - AUMSVILLE WWTP\231048 AUMSVILLE WWTP 05-19-2026.DWG, SNC



WALL SECTION - SBR

3/4" = 1'-0"

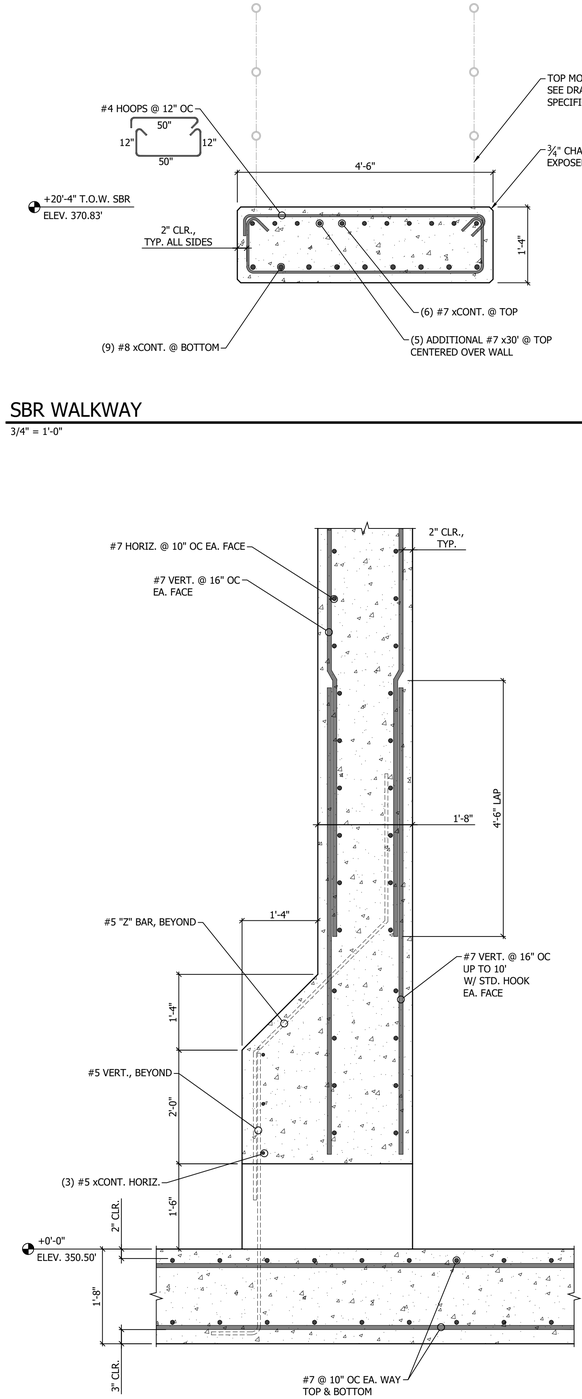
1 S207



WALL SECTION - SBR PRE-REACTION

3/4" = 1'-0"

2 S207



SBR WALKWAY

3/4" = 1'-0"

3 S207

WALL SECTION - SBR PRE-REACTION BLOCKOUT

3/4" = 1'-0"

4 S207

MSC ENGINEERS
CONSULTING STRUCTURAL ENGINEERS
SINCE 1925
3457 Ryan Place N.E.
Salem, OR 97301
503.585.7587
msceng@msceng.com

BY	DESCRIPTION	NO.	DATE
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DSN. CBS
DRN. SMC
CKD. CBS
DATE: MAY 26

REGISTERED PROFESSIONAL ENGINEER
63202
DIGITALLY SIGNED
OREGON
CAMERON B. SWARTWOUT
EXPIRES: JUNE 30, 2028

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
3841 Fairview Industrial Dr. S.E., Suite 100, Salem, OR 97302
Phone: (503) 585-2474 Fax: (503) 585-3986
E-mail: westech@westech-eng.com

CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

SBR DETAILS

DRAWING
S207
88 OF 223

JOB NUMBER
231048

5/19/2026 7:26:15 AM
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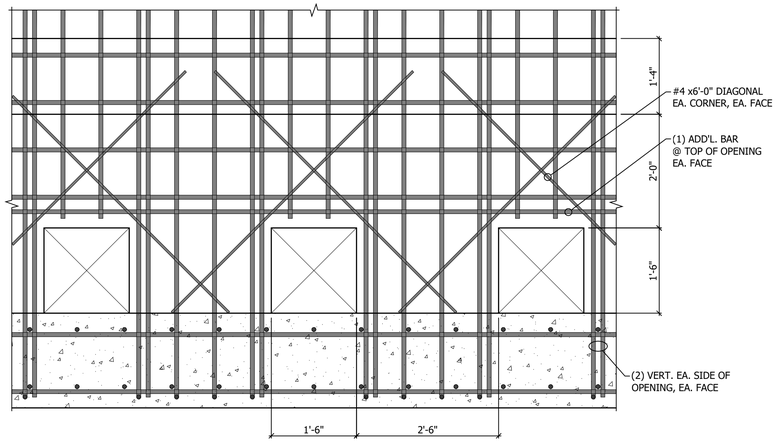
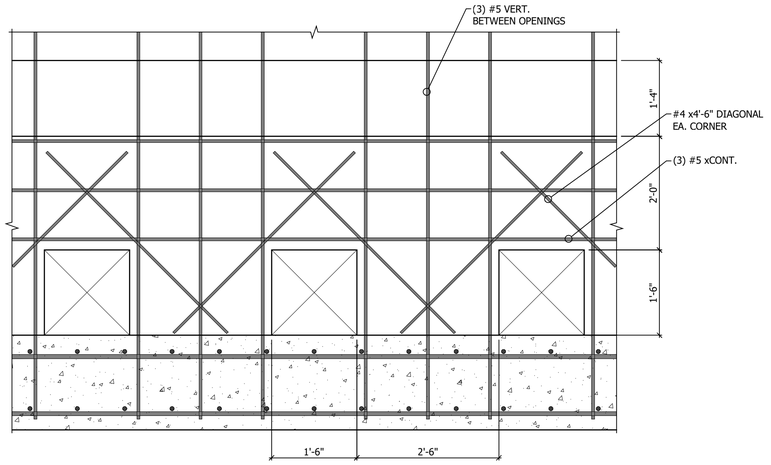
May 19, 2026-7:26:15 am G:\JOBS-2023\231048 - AUMSVILLE WWTP\231048 AUMSVILLE WWTP 05-19-2026.DWG, SMC



SBR PRE-REACTION BLOCKOUT

3/4" = 1'-0"

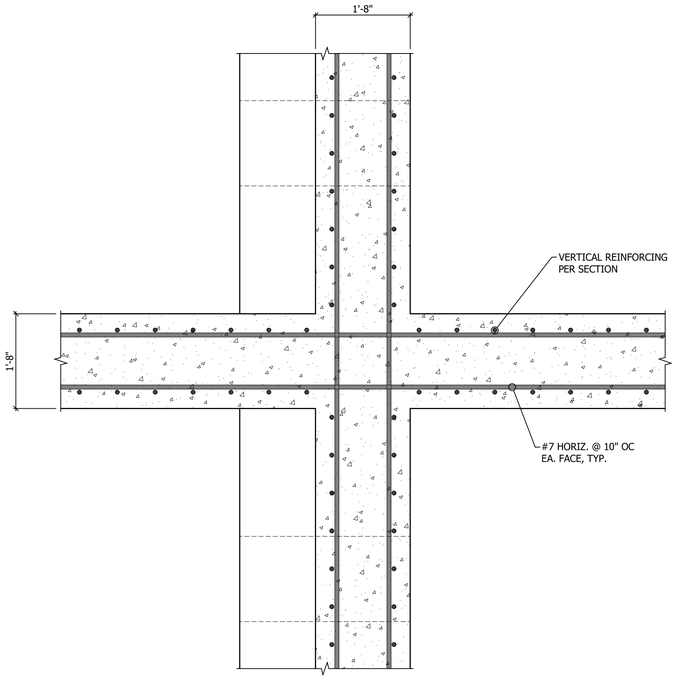
1 S208



SBR PRE-REACTION BLOCKOUT

3/4" = 1'-0"

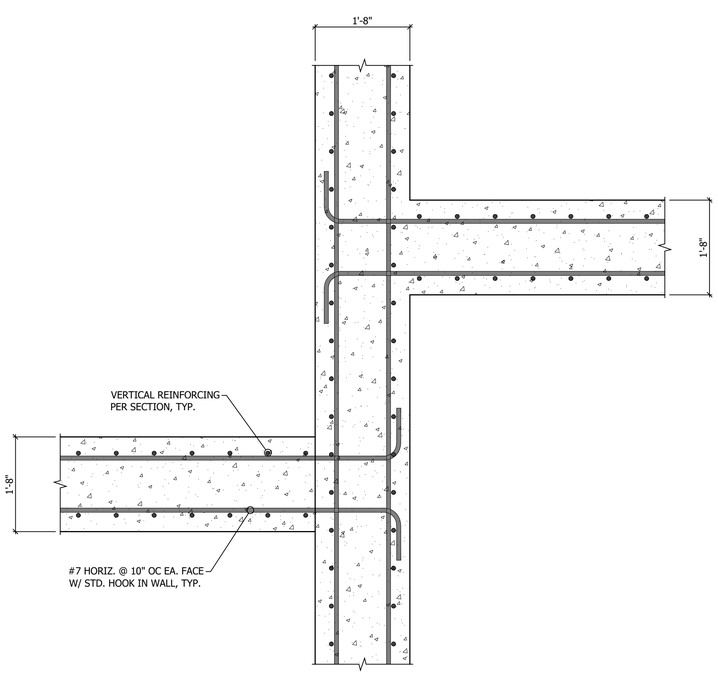
2 S208



PRE-REACTION AND SBR WALL INTERSECTION

3/4" = 1'-0"

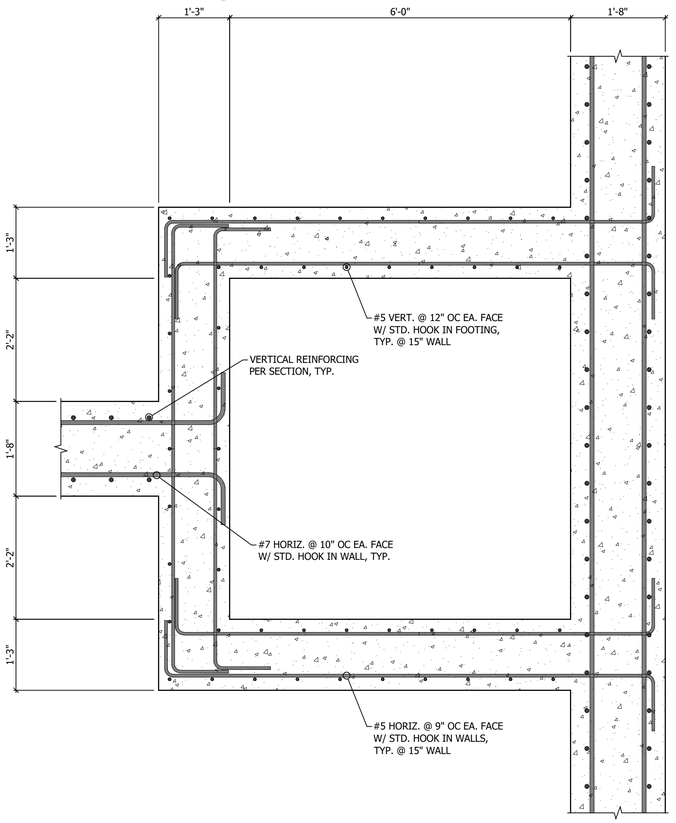
3 S208



PRE-REACTION AND HEADWORKS WALL INTERSECTION

3/4" = 1'-0"

4 S208



SBR AND DECANTER BOX WALL INTERSECTION

3/4" = 1'-0"

5 S208

MSC ENGINEERS
CONSULTING STRUCTURAL ENGINEERS
SINCE 1925
3430 Ridgewood Place N.E.
Salem, OR 97301
503-585-2474
mscengineers.com

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DSN. CBS
DRN. SMC
CKD. CBS
DATE: MAY '26

REGISTERED PROFESSIONAL ENGINEER
63202
DIGITALLY SIGNED
OREGON
CAMERON B. SWARTWOUT
2026
EXPIRES: JUNE 30, 2028

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E-mail: westech@westech-eng.com

CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

SBR
DETAILS

DRAWING
S208
89 OF 223

JOB NUMBER
231048

5/19/2026 7:26:16 AM
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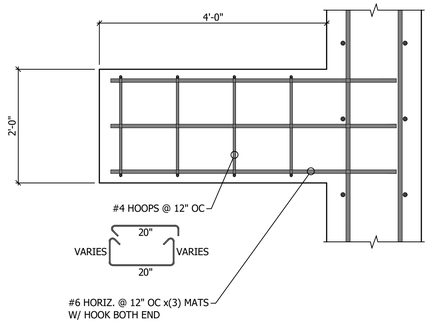
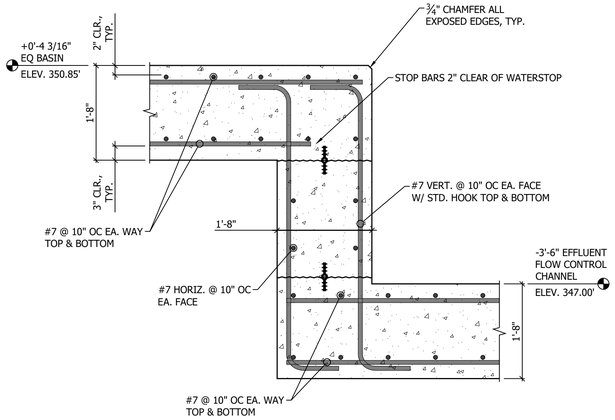
REFER TO 1/S207 FOR ADDITIONAL INFORMATION



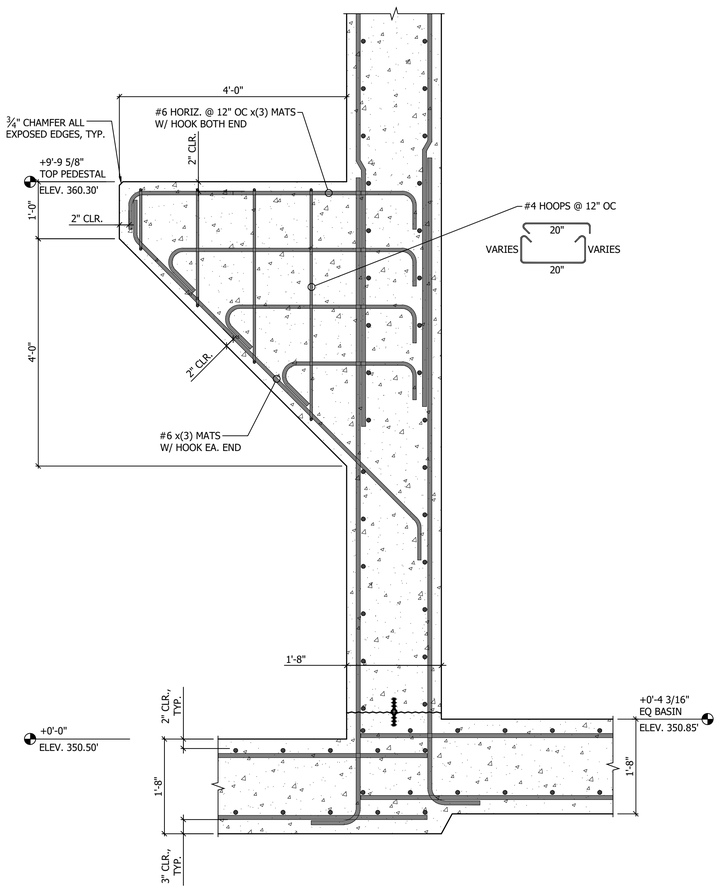
TOP VIEW



SLAB STEP @ EQ BASIN

3/4" = 1'-0"

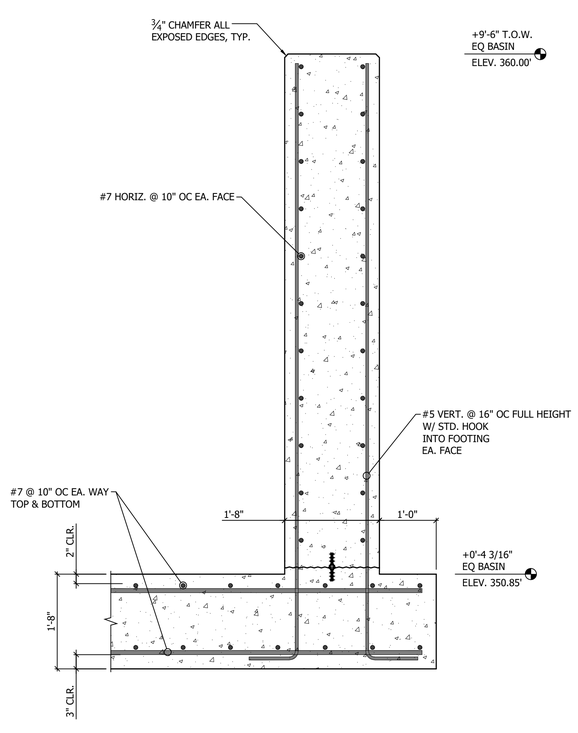
2 S209



WALL SECTION - SBR & EQ BASIN @ DECANTER CORBEL

3/4" = 1'-0"

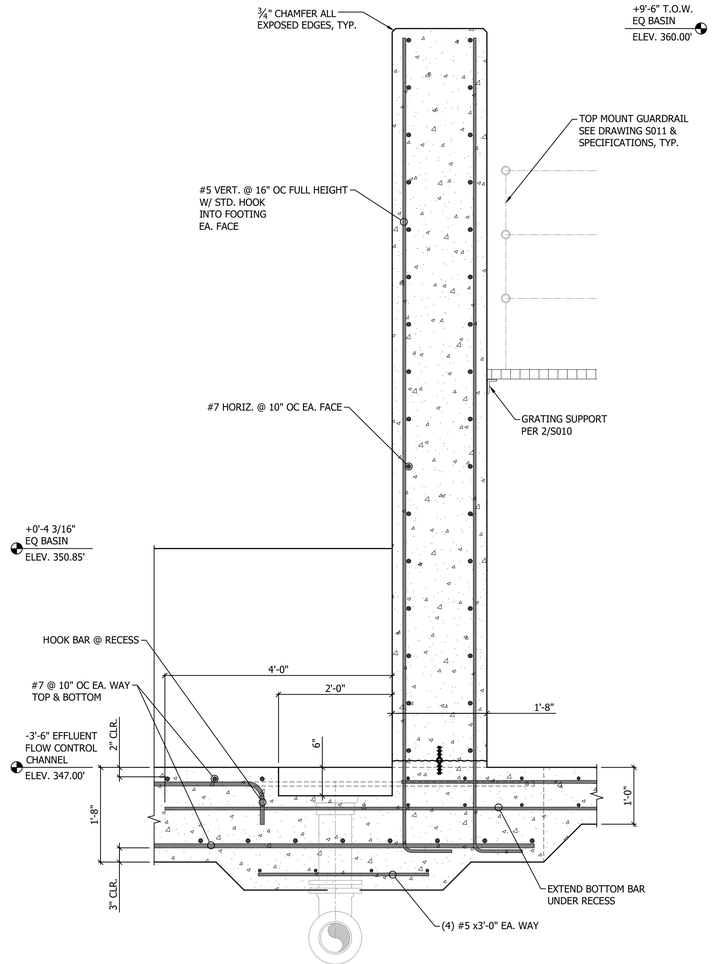
1 S209



WALL SECTION - EQ BASIN

3/4" = 1'-0"

3 S209



WALL SECTION - EQ BASIN & FLOW CHANNEL

3/4" = 1'-0"

4 S209

MSC ENGINEERS
CONSULTING STRUCTURAL ENGINEERS
SINCE 1925

NO.	DATE	DESCRIPTION	BY
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CKD. CBS
DATE: MAY '26

REGISTERED PROFESSIONAL ENGINEER
63202
DIGITALLY SIGNED
OREGON
CAMERON B. SWEARINGEN
EXPIRES: JUNE 30, 2028

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CONSULTING ENGINEERS AND PLANNERS
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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

SBR DETAILS

DRAWING
S209
90 OF 223

JOB NUMBER
231048

5/19/2026 7:26:17 AM
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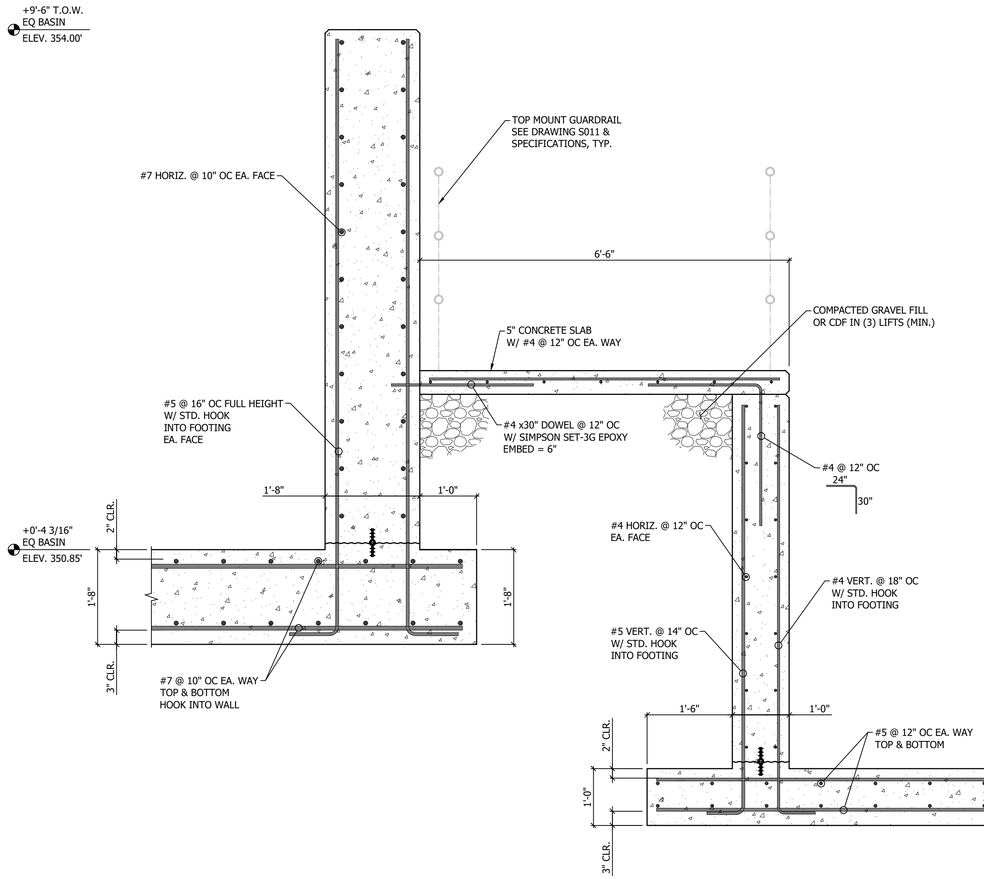
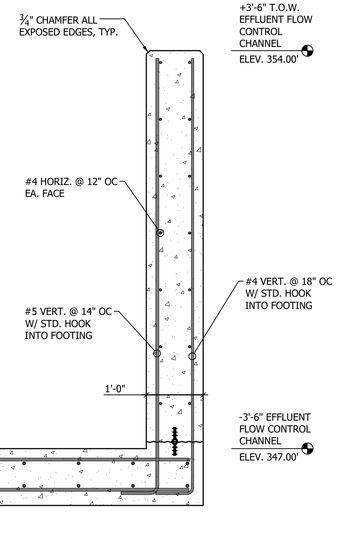
May 19, 2026-7:26:17 am G:\JOBS-2023\231048 - AUMSVILLE WWTP\231048 AUMSVILLE WWTP 05-19-2026.DWG, SMC

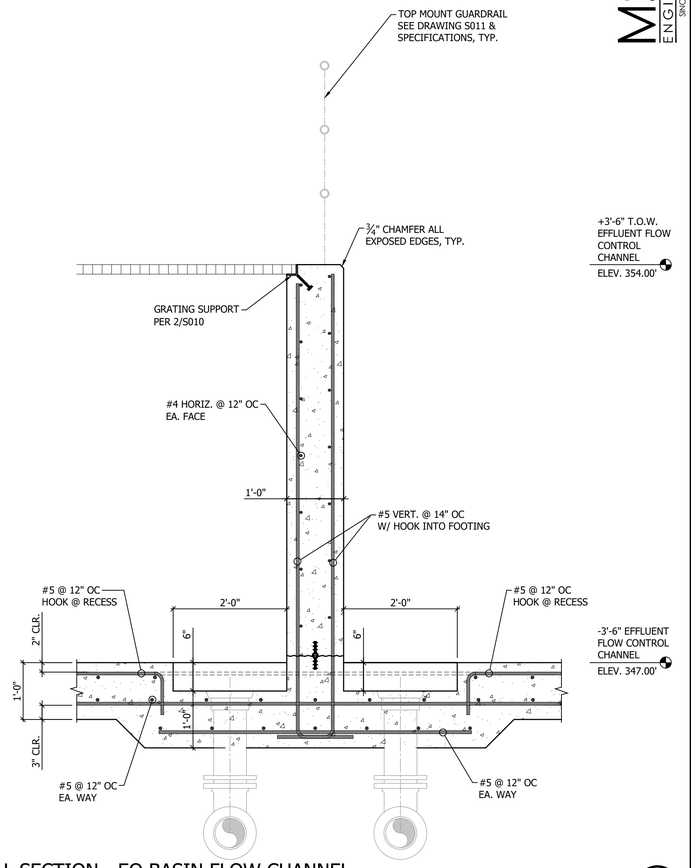


WALL SECTION - EQ BASIN AND EQ BASIN FLOW CHANNEL

3/4" = 1'-0"

1 S210

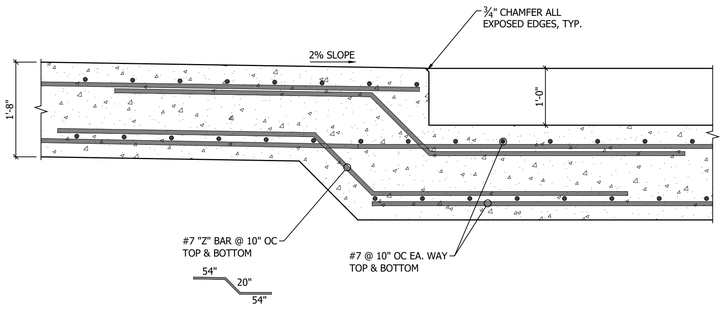




WALL SECTION - EQ BASIN FLOW CHANNEL

3/4" = 1'-0"

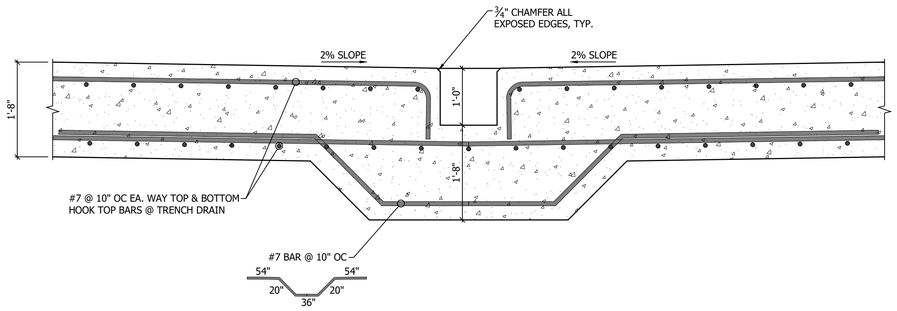
2 S210



SBR DRAIN

3/4" = 1'-0"

3 S210



SBR DRAIN

3/4" = 1'-0"

4 S210

MSC ENGINEERS
CONSULTING STRUCTURAL ENGINEERS
SINCE 1925
3470 Ryan Place N.E.
Salem, OR 97301
503.585.2787
msceng@msceng.com

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OREGON
CAMERON B. SWEARINGEN
EXPIRES: JUNE 30, 2028

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Phone: (503) 585-2474 Fax: (503) 585-3986
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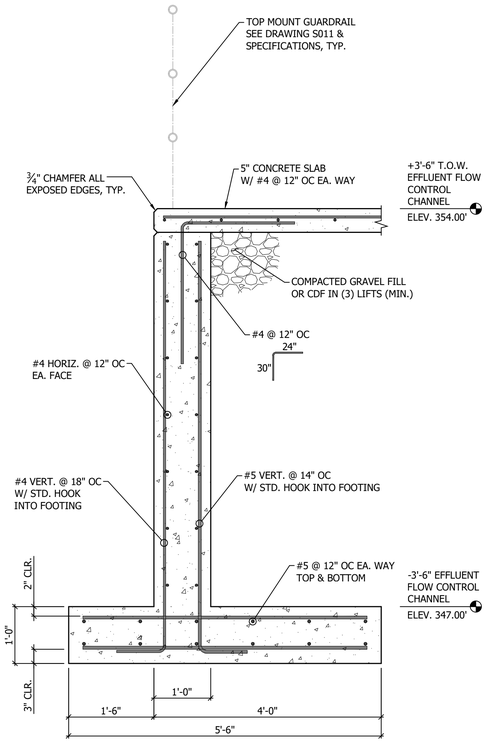
CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

SBR DETAILS

DRAWING
S210
91 OF 223

JOB NUMBER
231048

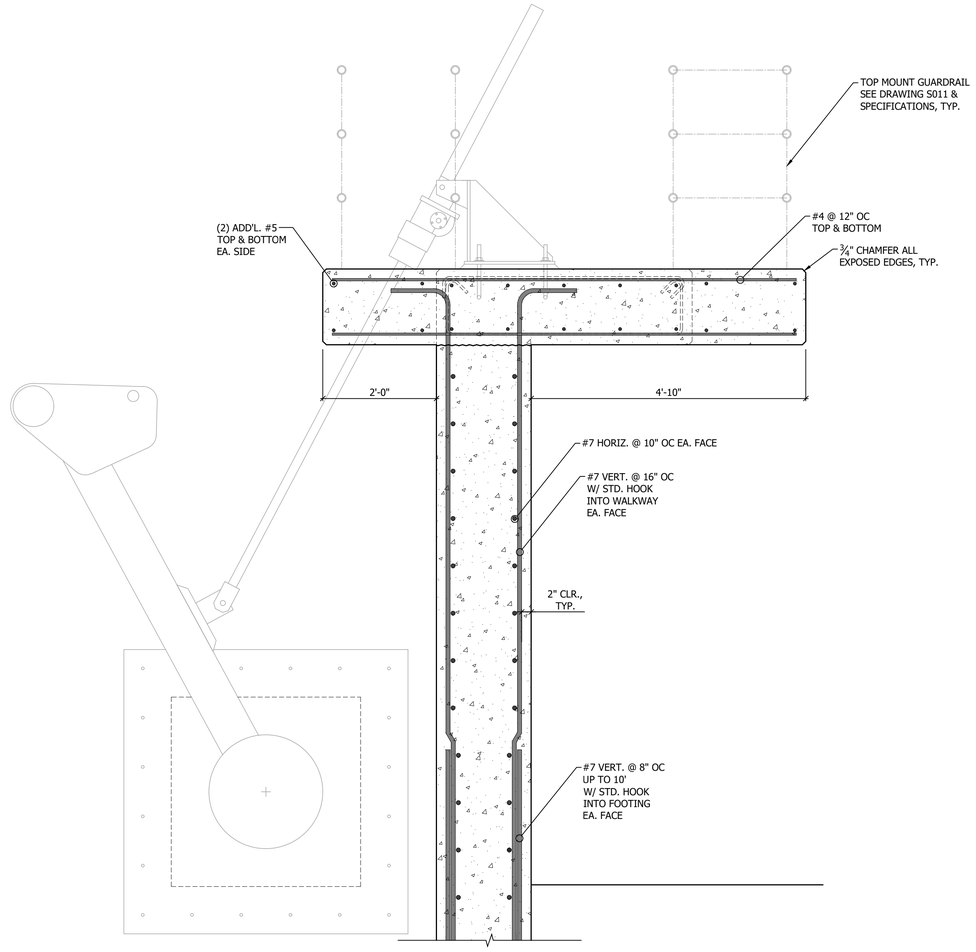
5/19/2026 7:26:19 AM
G:\Jobs-2023\231048 - Aumsville WWTP\231048_Aumsville WWTP_05-19-2026.dwg, (S210 tab)
May 19, 2026-7:26:19 am G:\JOBS-2023\231048 - AUMSVILLE WWTP\231048 AUMSVILLE WWTP 05-19-2026.DWG, SMC



WALL SECTION - EQ BASIN FLOW CHANNEL

3/4" = 1'-0"

1 / S211



WALL SECTION - DECANTER DRIVE

3/4" = 1'-0"

2 / S211

MSC ENGINEERS
CONSULTING STRUCTURAL ENGINEERS
SINCE 1925
345 Trade Street SE Suite 201
Salem, OR 97301
503.485.2471
mscengineers.com

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

VERIFY SCALE
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DSN. CBS
DRN. SMC
CKD. CBS
DATE: MAY 26

REGISTERED PROFESSIONAL ENGINEER
63202
DIGITALLY SIGNED
OREGON
CAMERON B. SWEARINGEN
2026
EXPIRES: JUNE 30, 2028

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
3841 Fairview Industrial Dr. S.E., Suite 100, Salem, OR 97302
Phone: (503) 585-2474 Fax: (503) 585-3986
E-mail: westech@westech-eng.com

CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

SBR
DETAILS

DRAWING
S211
92 OF 223

JOB NUMBER
231048

5/19/2026 7:26:20 AM
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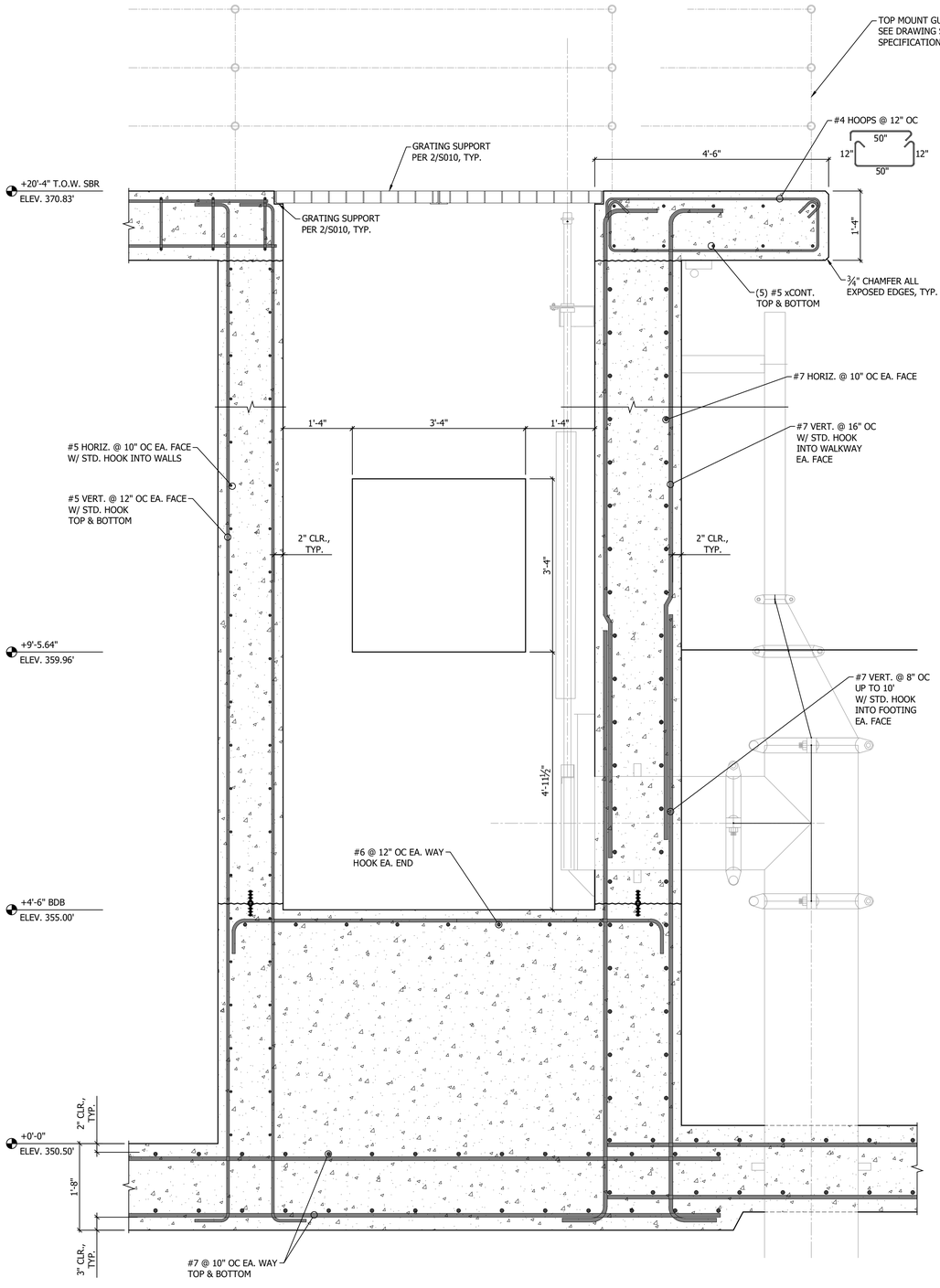
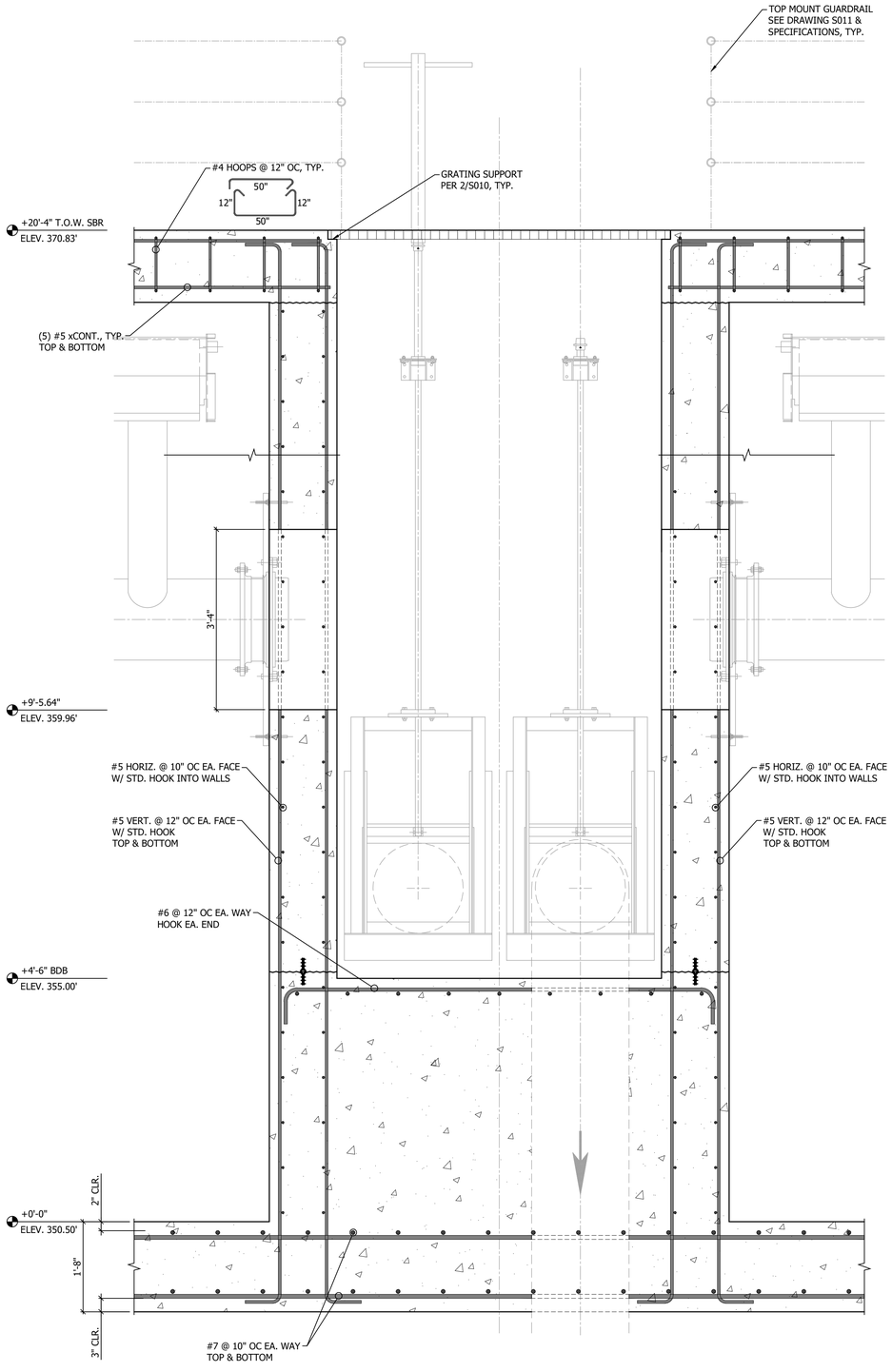
May 19, 2026-7:26:20 am G:\JOBS-2023\231048 - AUMSVILLE WWTP\231048 AUMSVILLE WWTP (05-19-2026.DWG, SMC



WALL SECTION - DECANTER BOX

3/4" = 1'-0"

1 / S212



WALL SECTION - DECANTER BOX

3/4" = 1'-0"

2 / S212

MSC ENGINEERS
CONSULTING STRUCTURAL ENGINEERS
SINCE 1925
1420 Tigertail Road, Suite 201
Albany, OR 97321
(541) 704-0123
msc-engineers.com

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DRN. SMC
CKD. CBS
DATE: MAY '26

REGISTERED PROFESSIONAL ENGINEER
63202
DIGITALLY SIGNED
OREGON
CAMERON B. SWAYNGIM
EXPIRES: JUNE 30, 2028

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
3841 Fairview Industrial Dr. S.E., Suite 100, Salem, OR 97302
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E-mail: westech@westech-eng.com

CITY OF AUMSVILLE, OREGON

WASTEWATER TREATMENT PLANT IMPROVEMENTS

SBR
DETAILS

DRAWING
S212
93 OF 223

JOB NUMBER
231048

5/19/2026 7:26:22 AM
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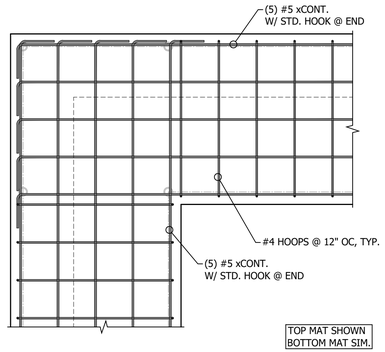
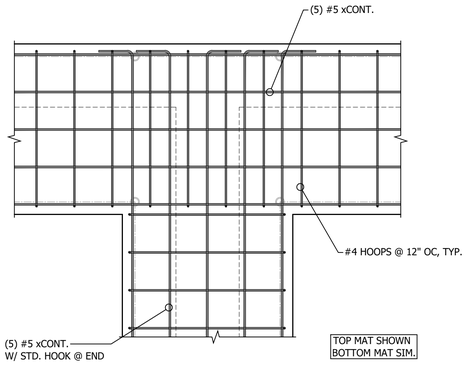


SBR WALKWAY CORNER

1/2" = 1'-0"

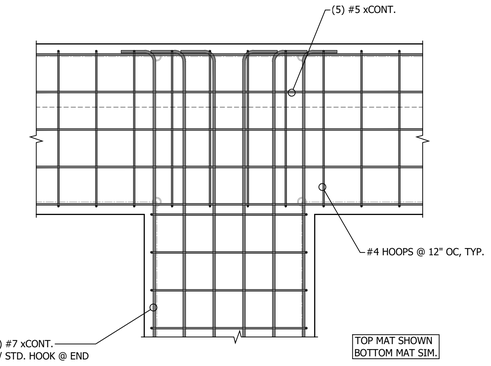
1 S213



SBR WALKWAY INTERSECTION

1/2" = 1'-0"

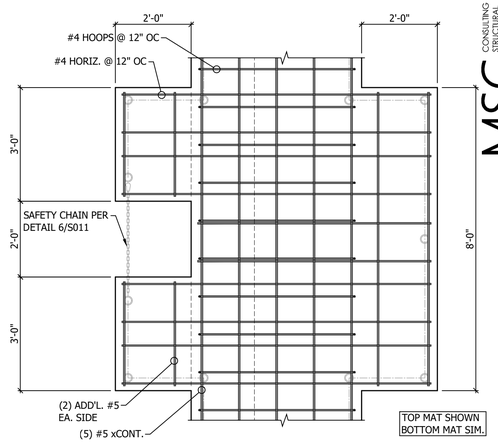
2 S213



SBR WALKWAY INTERSECTION

1/2" = 1'-0"

3 S213

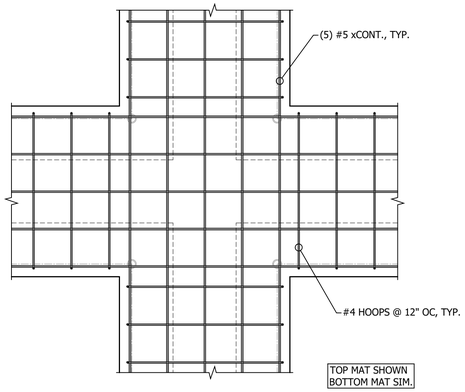


SBR WALKWAY INTERSECTION @ DECANTER

1/2" = 1'-0"

4 S213

NOTE: REFER TO SHEET S010
ADDITIONAL INFORMATION

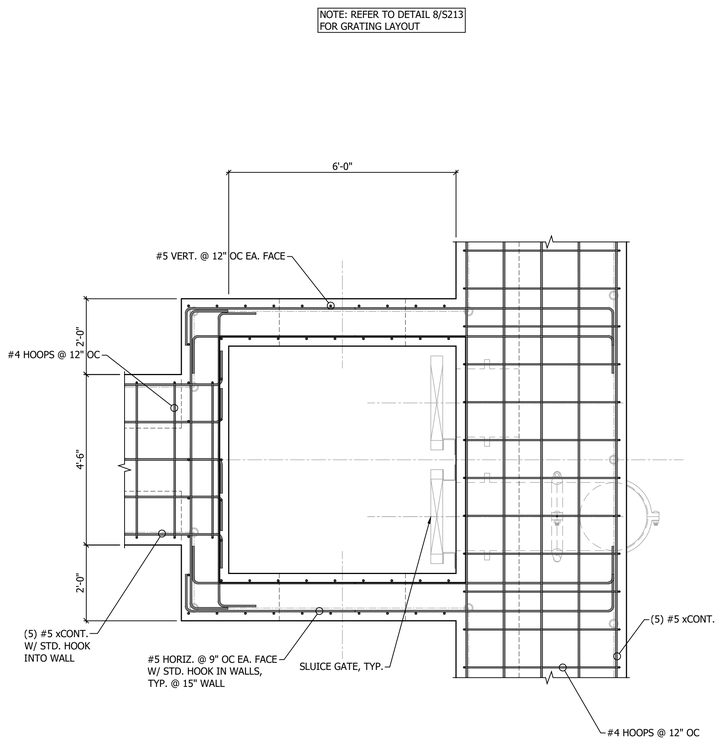


SBR WALKWAY INTERSECTION

1/2" = 1'-0"

5 S213

NOTE: REFER TO DETAIL 8/S213
FOR GRATING LAYOUT



SBR WALKWAY INTERSECTION @ DECANTER BOX

1/2" = 1'-0"

7 S213

GRATING DIMENSIONS ARE NOMINAL. FABRICATE TO PROVIDE CLEAR SPAN BETWEEN GRATING & SUPPORTS PER SHEET S010 & PER MANUFACTURER SPECIFICATIONS

DECANT BOX GRATING PLAN

1/2" = 1'-0"

8 S213

MSC ENGINEERS
CONSULTING STRUCTURAL ENGINEERS
SINCE 1925
3430 Ridgewood Place N.E.
Salem, OR 97301
(503) 585-8778
msceng@wavecable.com

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

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DSN. CBS
DRN. SMC
CKD. CBS
DATE: MAY '26

REGISTERED PROFESSIONAL ENGINEER
63202
DIGITALLY SIGNED
OREGON
CAMERON B. SWEARINGEN
EXPIRES: JUNE 30, 2028

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
3841 Fairview Industrial Dr. S.E., Suite 100, Salem, OR 97302
Phone: (503) 585-2474 Fax: (503) 585-3986
E-mail: westech@westech-eng.com

CITY OF AUMSVILLE, OREGON

WASTEWATER TREATMENT PLANT IMPROVEMENTS

SBR DETAILS

DRAWING
S213
94 OF 223

JOB NUMBER
231048

5/19/2026 7:26:23 AM
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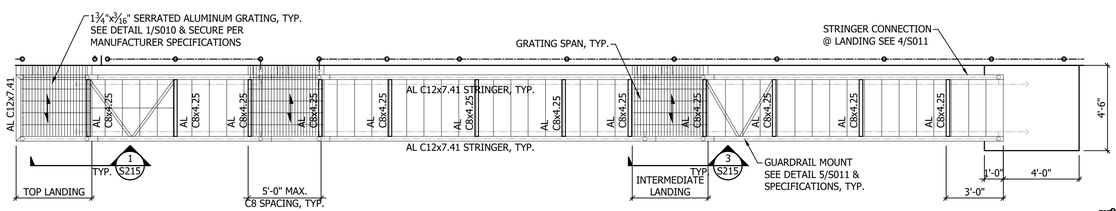
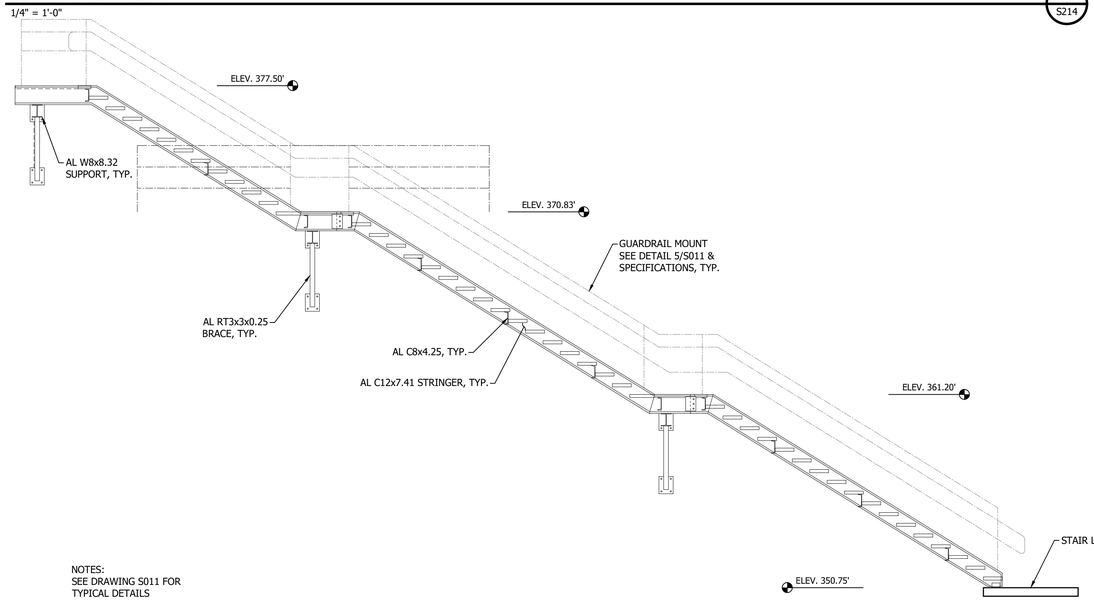


SBR - STAIR PLAN

1/4" = 1'-0"

1 / S214

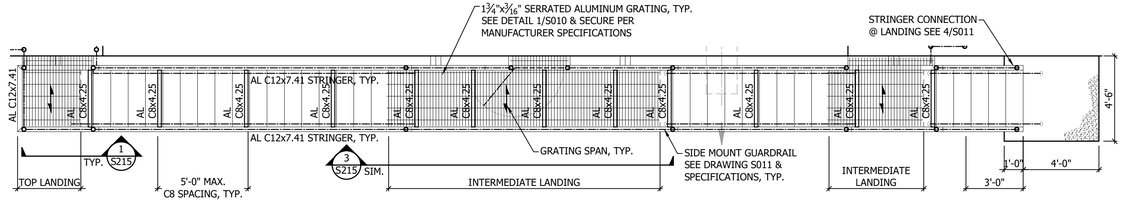


NOTES:
SEE DRAWING S011 FOR
TYPICAL DETAILS

SBR - STAIR SECTION

1/4" = 1'-0"

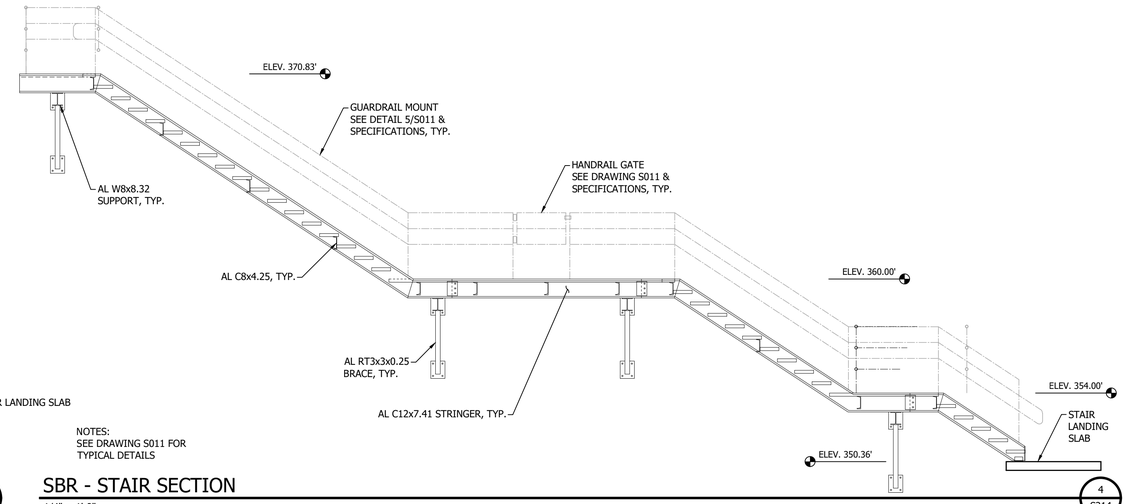
3 / S214



SBR - STAIR PLAN

1/4" = 1'-0"

2 / S214

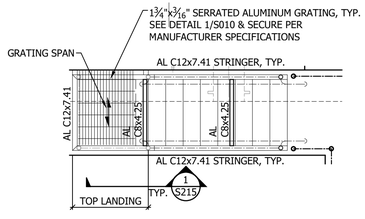


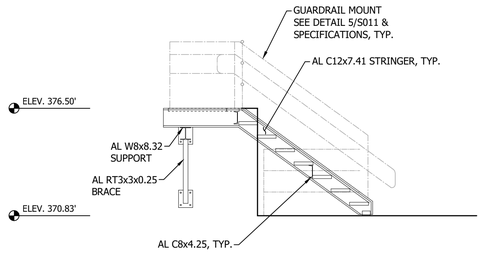
NOTES:
SEE DRAWING S011 FOR
TYPICAL DETAILS

SBR - STAIR SECTION

1/4" = 1'-0"

4 / S214





NOTES:
SEE DRAWING S011 FOR
TYPICAL DETAILS

SBR - STAIR PLAN

1/4" = 1'-0"

5 / S214

SBR - STAIR SECTION

1/4" = 1'-0"

6 / S214

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

VERIFY SCALE
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DSN. CBS
DRN. SMC
CKD. CBS
DATE: MAY '26

REGISTERED PROFESSIONAL ENGINEER
63202
DIGITALLY SIGNED
OREGON
CAMERON B. SWARTWEIN
2026
EXPIRES: JUNE 30, 2028

MSC ENGINEERS
CONSULTING STRUCTURAL ENGINEERS
SINCE 1925

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
3841 Fairview Industrial Dr. S.E., Suite 100, Salem, OR 97302
Phone: (503) 585-2474 Fax: (503) 585-3986
E-mail: westech@westech-eng.com

CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

SBR
STAIR PLANS AND SECTIONS

DRAWING
S214
95 OF 223

JOB NUMBER
231048

5/19/2026 7:26:24 AM
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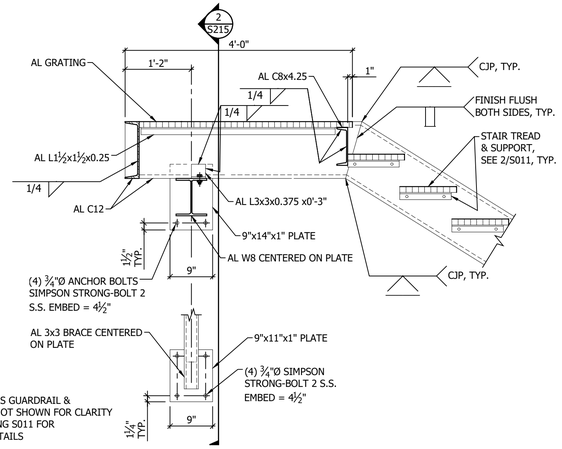
May 19, 2026-7:26:24 am G:\JOBS-2023\231048 - AUMSVILLE WWTP\231048 AUMSVILLE WWTP 05-19-2026.DWG, SMC

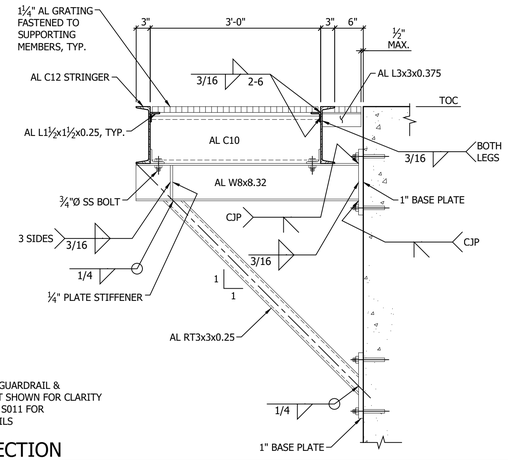


NOTES:
CONTINUOUS GUARDRAIL &
HANDRAIL NOT SHOWN FOR CLARITY
SEE DRAWING S011 FOR
TYPICAL DETAILS

STAIR CONNECTION

3/4" = 1'-0"

1 S215

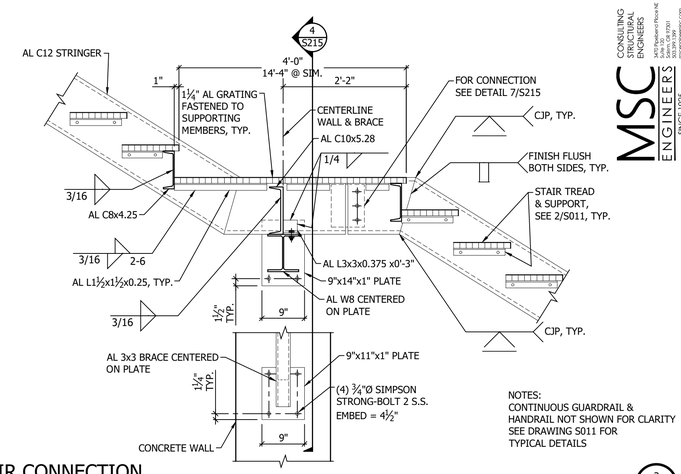


NOTES:
CONTINUOUS GUARDRAIL &
HANDRAIL NOT SHOWN FOR CLARITY
SEE DRAWING S011 FOR
TYPICAL DETAILS

STAIR CONNECTION

3/4" = 1'-0"

2 S215



NOTES:
CONTINUOUS GUARDRAIL &
HANDRAIL NOT SHOWN FOR CLARITY
SEE DRAWING S011 FOR
TYPICAL DETAILS

STAIR CONNECTION

3/4" = 1'-0"

3 S215

NOTES:
CONTINUOUS GUARDRAIL &
HANDRAIL NOT SHOWN FOR CLARITY
SEE DRAWING S011 FOR
TYPICAL DETAILS

STAIR CONNECTION

3/4" = 1'-0"

4 S215

NOTES:
GUARDRAIL NOT SHOWN

STAIR CONNECTION

1 1/2" = 1'-0"

5 S215

STAIR CONNECTION

1 1/2" = 1'-0"

6 S215

NOTES:
GUARDRAIL NOT SHOWN

STAIR CONNECTION

1 1/2" = 1'-0"

7 S215

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

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DSN. CBS
DRN. SMC
CKD. CBS
DATE: MAY '26

REGISTERED PROFESSIONAL ENGINEER
63202
DIGITALLY SIGNED
OREGON
CAMERON B. SWEARINGEN
EXPIRES: JUNE 30, 2028

MSC ENGINEERS
CONSULTING STRUCTURAL ENGINEERS
SINCE 1925

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
3841 Fairview Industrial Dr. S.E., Suite 100, Salem, OR 97302
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CITY OF AUMSVILLE, OREGON

WASTEWATER TREATMENT PLANT IMPROVEMENTS

STAIR DETAILS

DRAWING
S215
96 OF 223

JOB NUMBER
231048

5/19/2026 7:26:26 AM
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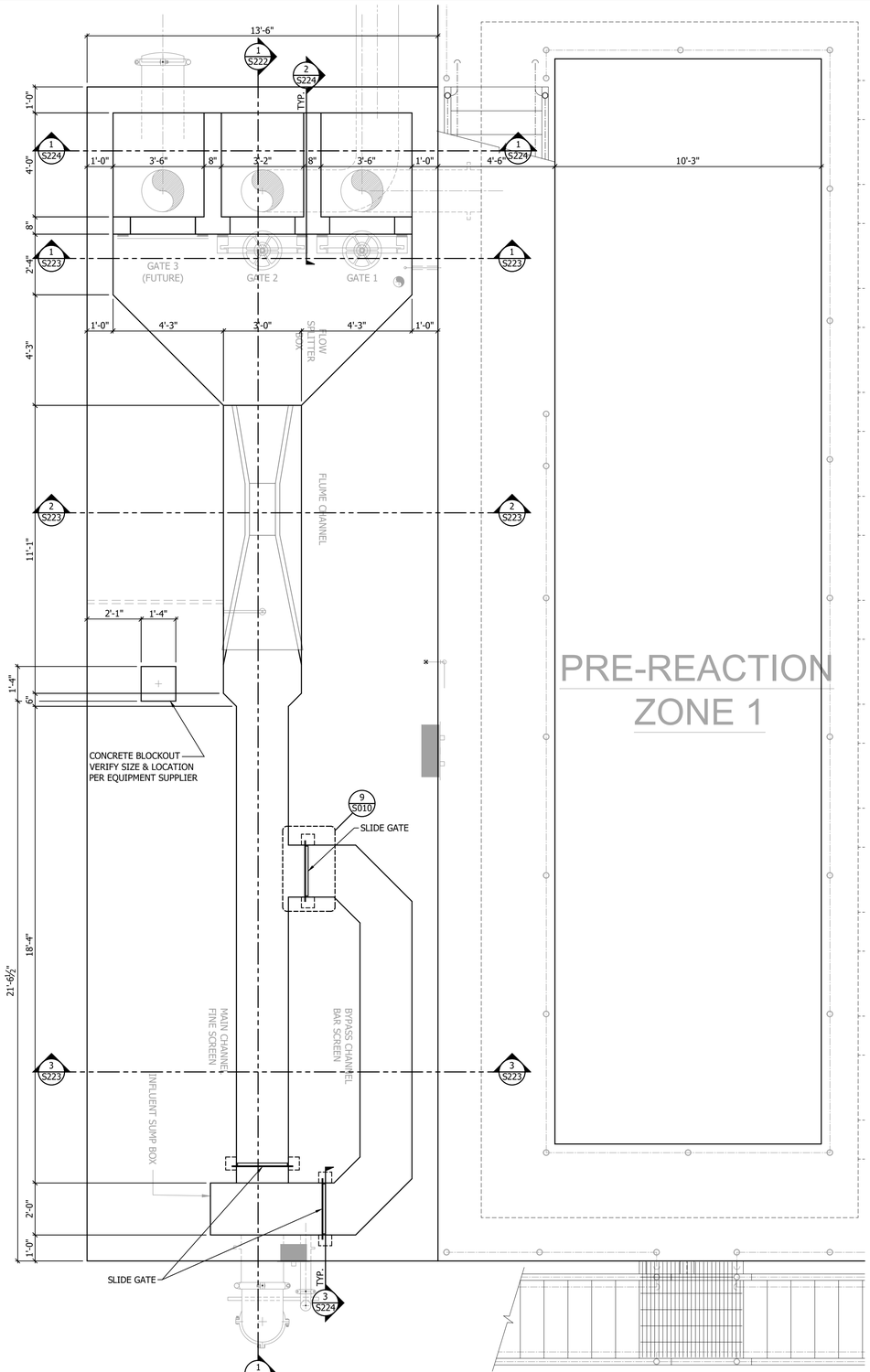
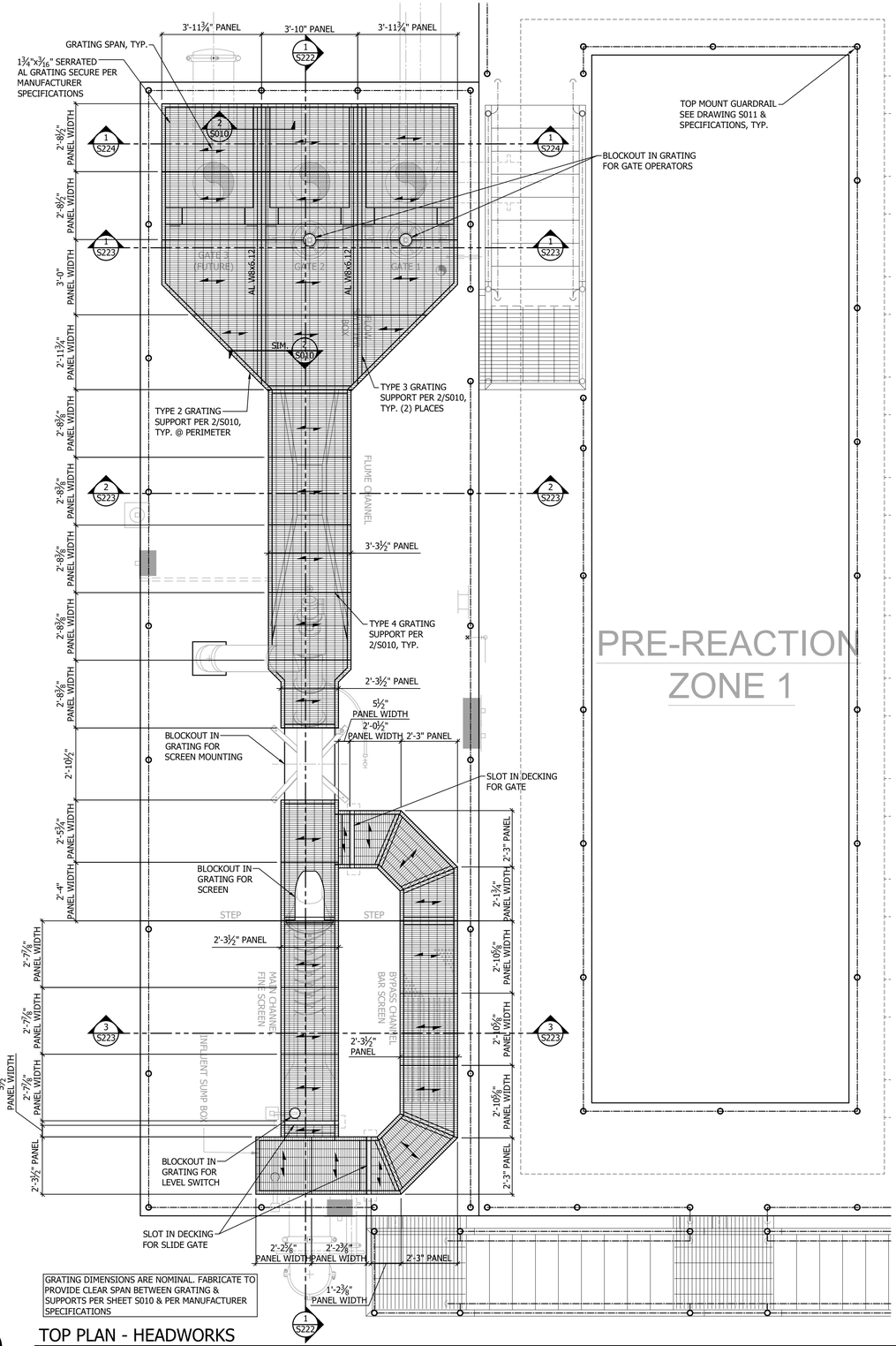


BOTTOM PLAN - HEADWORKS

3/8" = 1'-0"

1 S221



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TOP PLAN - HEADWORKS

3/8" = 1'-0"

2 S221

MSC ENGINEERS
CONSULTING STRUCTURAL ENGINEERS
SINCE 1925
3430 Ridgeview Place NE
Salem, OR 97301
503.585.2474
mscengineering.com

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

DSN. CBS
DRN. SMC
CKD. CBS
DATE: MAY '26

REGISTERED PROFESSIONAL ENGINEER
OREGON JULY 31, 2007
CAMERON B. SWARTWOUT
63202
DIGITALLY SIGNED
EXPIRES: JUNE 30, 2028

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
3841 Fairview Industrial Dr. S.E., Suite 100, Salem, OR 97302
Phone: (503) 585-2474 Fax: (503) 585-3986
E-mail: westech@westech-eng.com

CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

HEADWORKS
TOP AND BOTTOM PLANS

DRAWING
S221
97 OF 223

JOB NUMBER
231048

5/19/2026 7:26:27 AM
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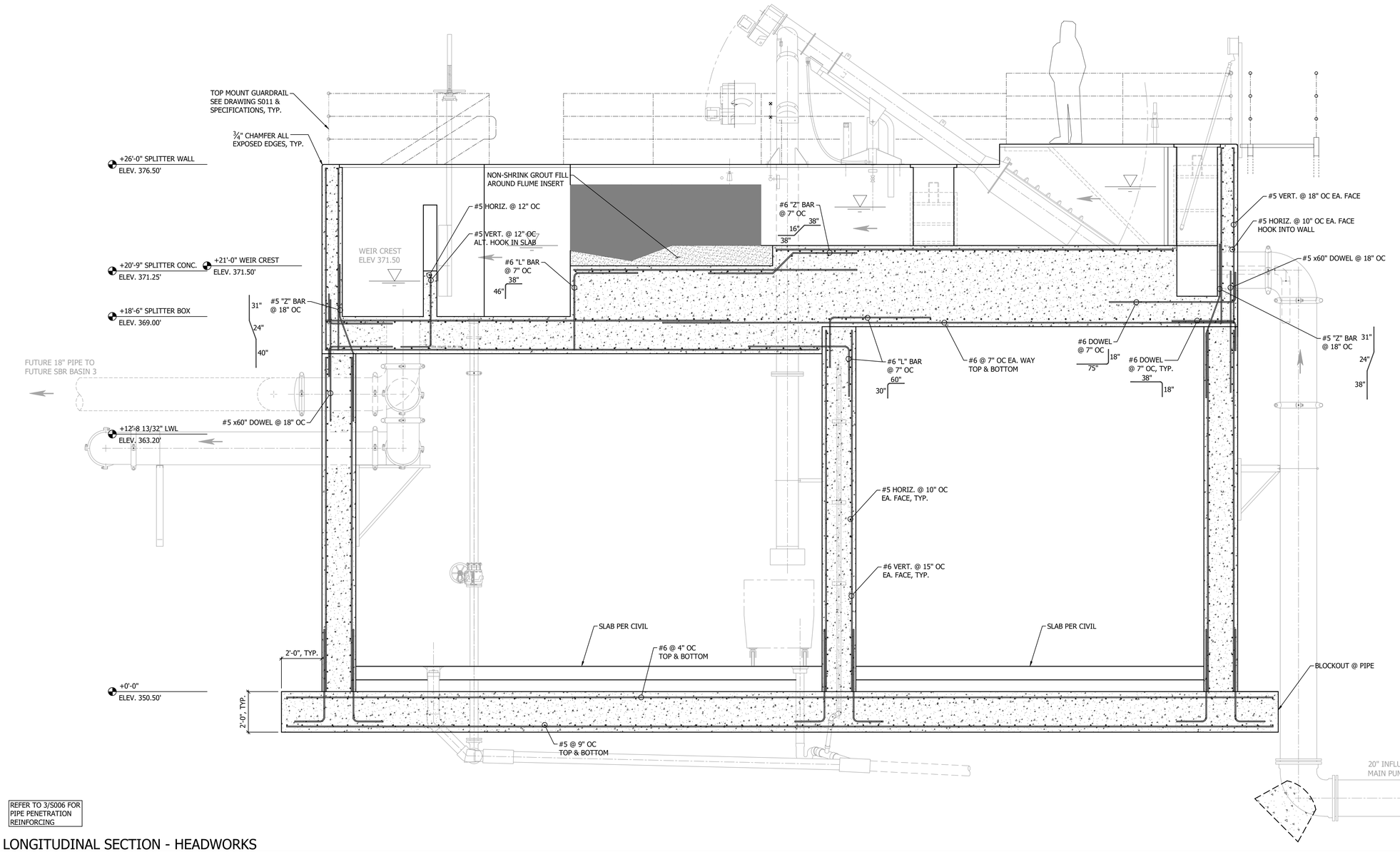

REFER TO 3/S006 FOR PIPE PENETRATION REINFORCING

LONGITUDINAL SECTION - HEADWORKS

3/8" = 1'-0"

1 / S222

MSC ENGINEERS — CONSULTING STRUCTURAL ENGINEERS — SINCE 1925

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

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DSN. CBS
DRN. SMC
CKD. CBS
DATE: MAY '26

REGISTERED PROFESSIONAL ENGINEER — OREGON — 63202 — DIGITALLY SIGNED — EXPIRES: JUNE 30, 2028

CAMERON B. SWARTWOUT — 2026

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
3841 Fabriview Industrial Dr. S.E., Suite 100, Salem, OR 97302
Phone: (503) 585-2474 Fax: (503) 585-3986
E-mail: westech@westech-eng.com

CITY OF AUMSVILLE, OREGON

WASTEWATER TREATMENT PLANT IMPROVEMENTS

HEADWORKS SECTIONS

DRAWING
S222
98 OF 223

JOB NUMBER
231048

5/19/2026 7:26:29 AM
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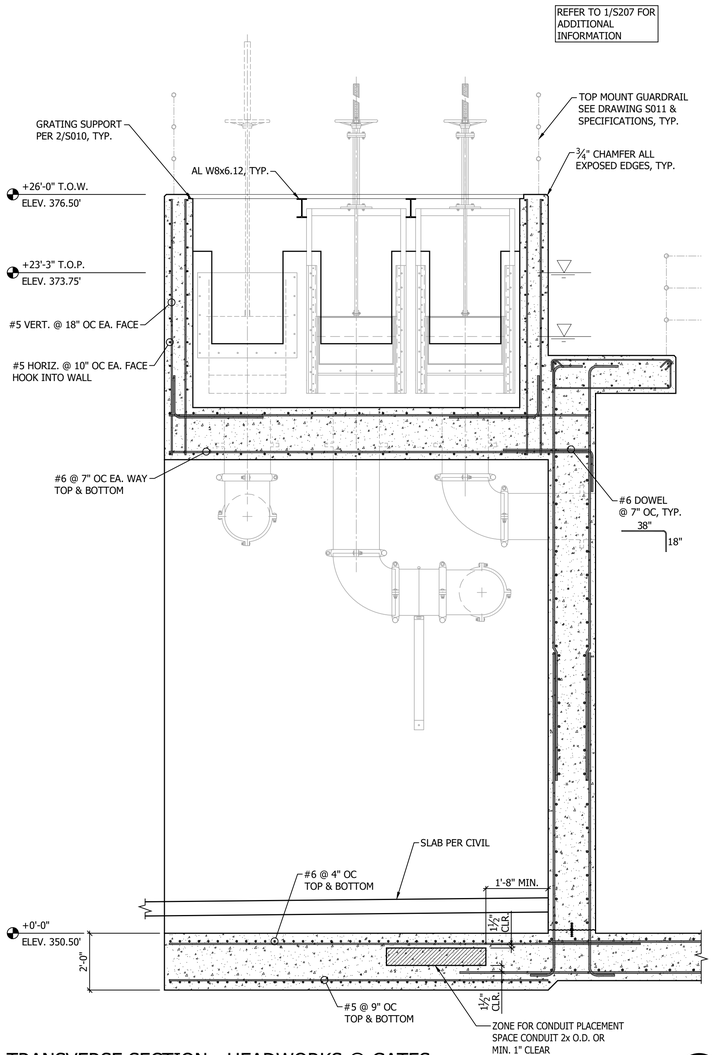
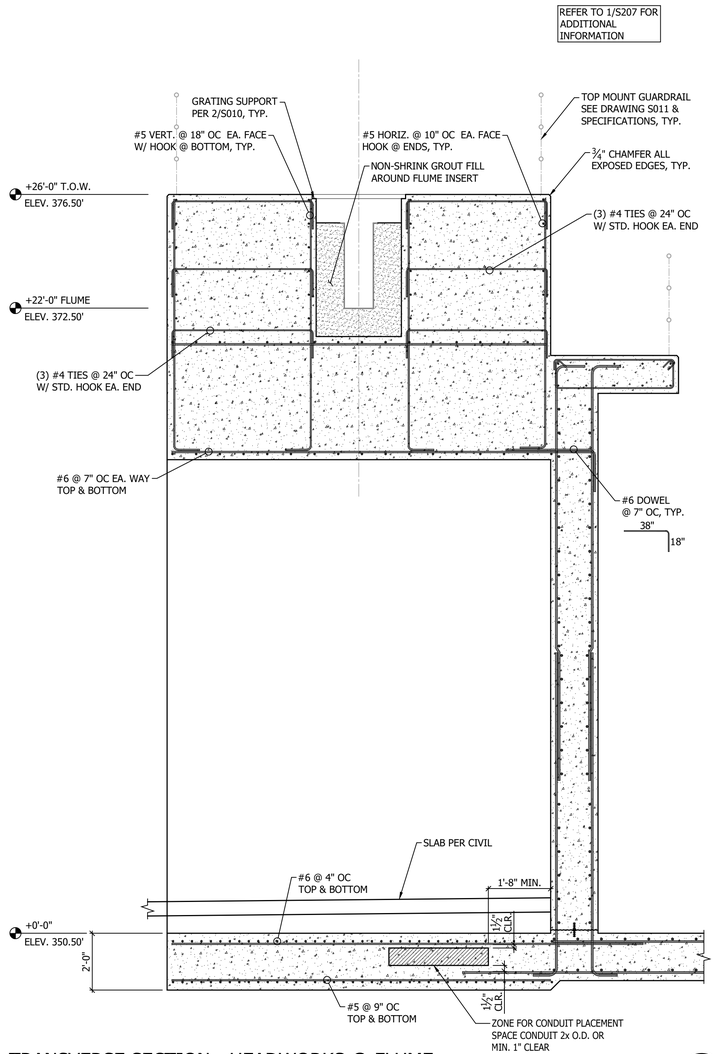
May 19, 2026-7:26:29 am G:\JOBS-2023\231048 - AUMSVILLE WWTP\231048 AUMSVILLE WWTP 05-19-2026.DWG, SMC



TRANSVERSE SECTION - HEADWORKS @ GATES

3/8" = 1'-0"

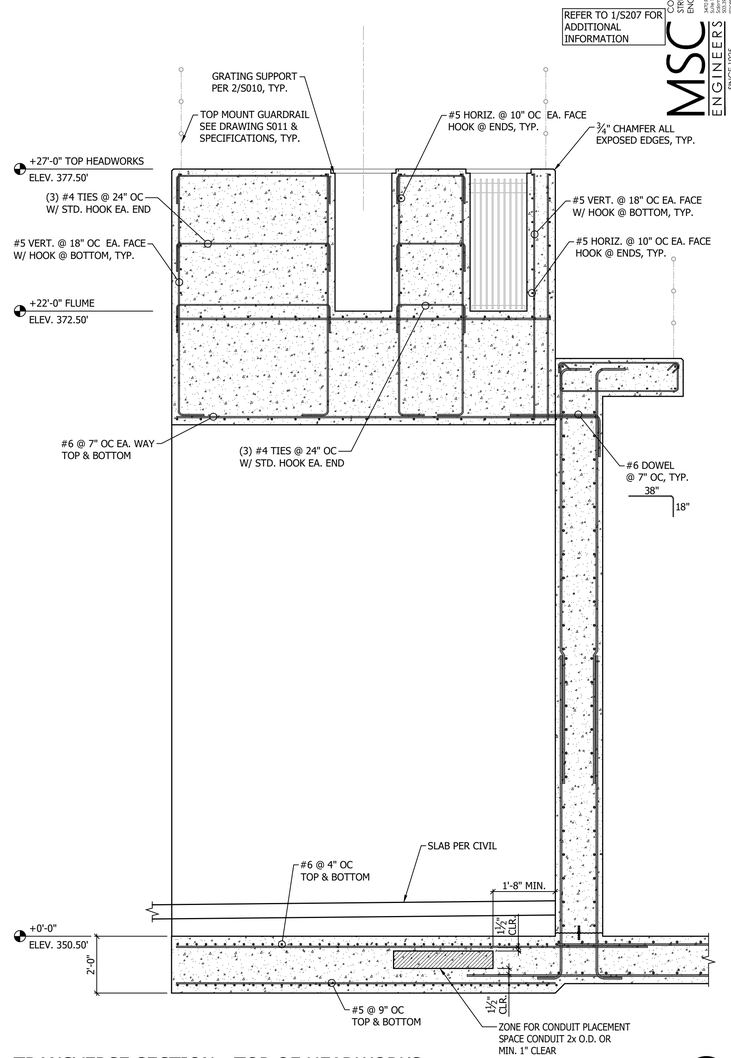
1 S223



TRANSVERSE SECTION - HEADWORKS @ FLUME

3/8" = 1'-0"

2 S223



TRANSVERSE SECTION - TOP OF HEADWORKS

3/8" = 1'-0"

3 S223

MSC ENGINEERS
CONSULTING STRUCTURAL ENGINEERS
SINCE 1925
340 Thomas Phone NE
Suite 200
Salem, OR 97301
503.585.2474
mscengineers.com

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

VERIFY SCALE
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DSN. CBS
DRN. SMC
CKD. CBS
DATE: MAY 26

REGISTERED PROFESSIONAL ENGINEER
63202
DIGITALLY SIGNED
OREGON
CAMERON B. SWARTWOUT
EXPIRES: JUNE 30, 2028

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
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E-mail: westech@westech-eng.com

CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

HEADWORKS SECTIONS

DRAWING
S223
99 OF 223

JOB NUMBER
231048

5/19/2026 7:26:30 AM
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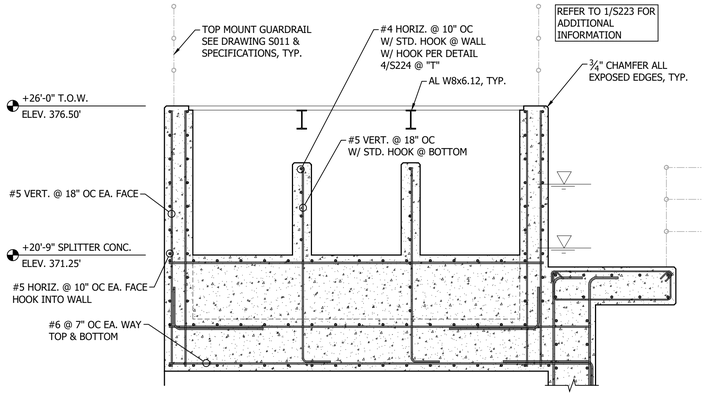
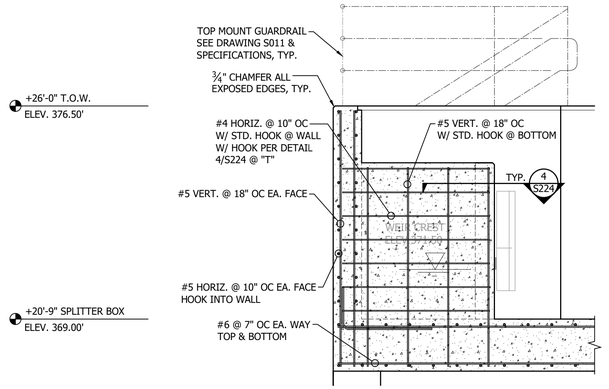


TRANSVERSE SECTION - HEADWORKS @ GATES

3/8" = 1'-0"

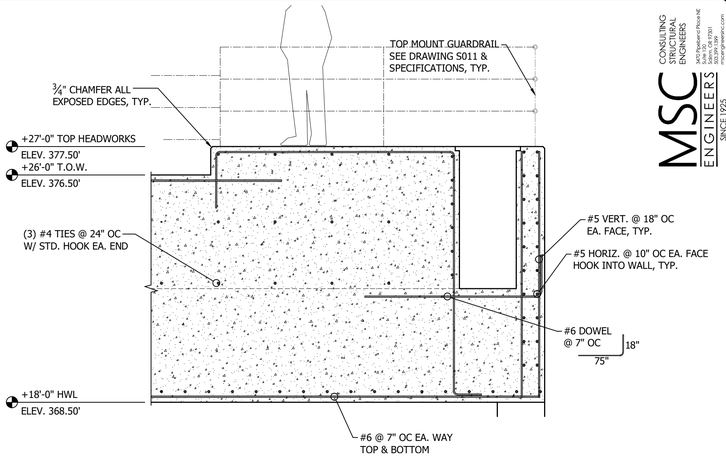
1 S224



TRANSVERSE SECTION - HEADWORKS @ GATES

3/8" = 1'-0"

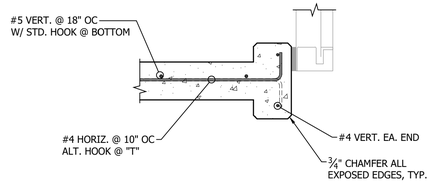
2 S224



TRANSVERSE SECTION - HEADWORKS @ FLUME

3/8" = 1'-0"

3 S224



HEADWORKS BAFFLE

3/4" = 1'-0"

4 S224

MSC ENGINEERS
CONSULTING STRUCTURAL ENGINEERS
SINCE 1925
3431 Stanton Place NE
Salem, OR 97301
503-779-2474
mscengineers.com

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		REVISIONS	

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DRN. SMC
CKD. CBS
DATE: MAY 26

REGISTERED PROFESSIONAL ENGINEER
63202
DIGITALLY SIGNED
OREGON
CAMERON B. SWARTWOUT
EXPIRES: JUNE 30, 2028

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
3841 Fairview Industrial Dr. S.E., Suite 100, Salem, OR 97302
Phone: (503) 585-2474 Fax: (503) 585-3986
E-mail: westech@westech-eng.com

CITY OF AUMSVILLE, OREGON

WASTEWATER TREATMENT PLANT IMPROVEMENTS

HEADWORKS SECTIONS

DRAWING
S224
100 OF 223

JOB NUMBER
231048

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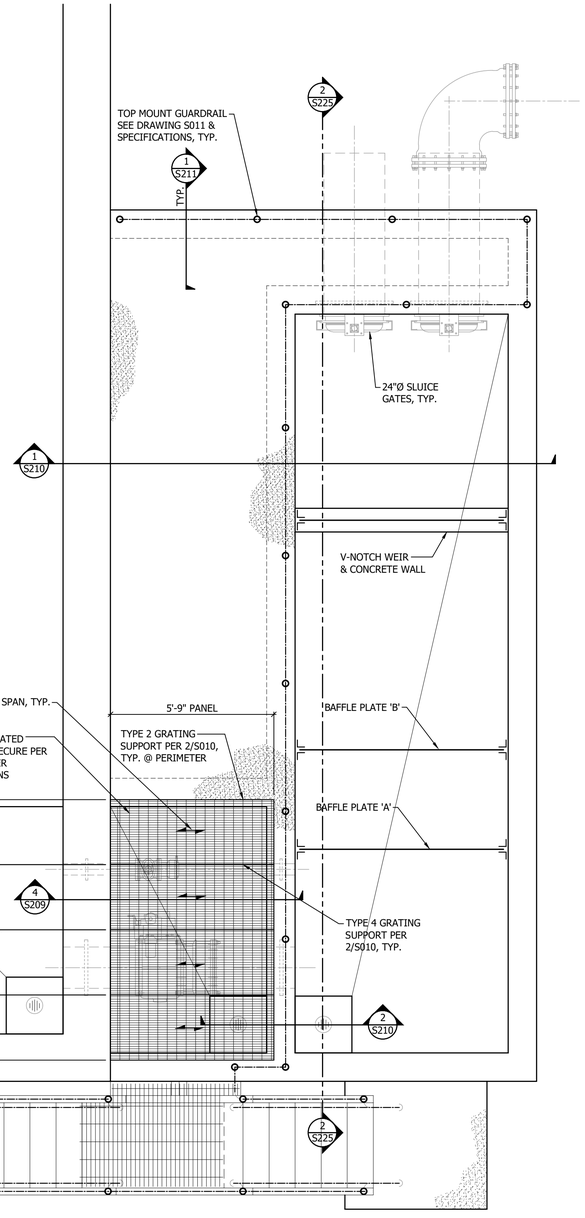
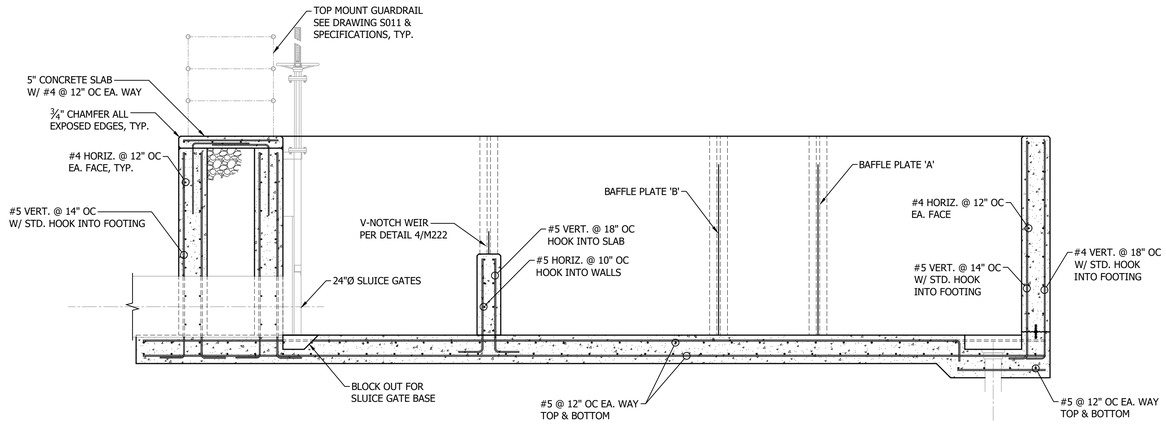


GRATING DIMENSIONS ARE NOMINAL. FABRICATE TO PROVIDE CLEAR SPAN BETWEEN GRATING & SUPPORTS PER SHEET S010 & PER MANUFACTURER SPECIFICATIONS

TOP PLAN - EQ BASIN FLOW CHANNEL

3/8" = 1'-0"

1
S225



EQ BASIN FLOW CHANNEL LONGITUDINAL SECTION

3/8" = 1'-0"

2
S225

MSC ENGINEERS
CONSULTING STRUCTURAL ENGINEERS
SINCE 1925
345 Trademark Place NE
Salem, OR 97301
503.585.2474
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CKD. CBS
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REGISTERED PROFESSIONAL ENGINEER
63202
DIGITALLY SIGNED
OREGON
CAMERON B. SWEYNGIN
EXPIRES: JUNE 30, 2028

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
3841 Fabview Industrial Dr. S.E., Suite 100, Salem, OR 97302
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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

EQ BASIN FLOW CHANNEL PLAN & SECTION

DRAWING
S225
101 OF 223

JOB NUMBER
231048

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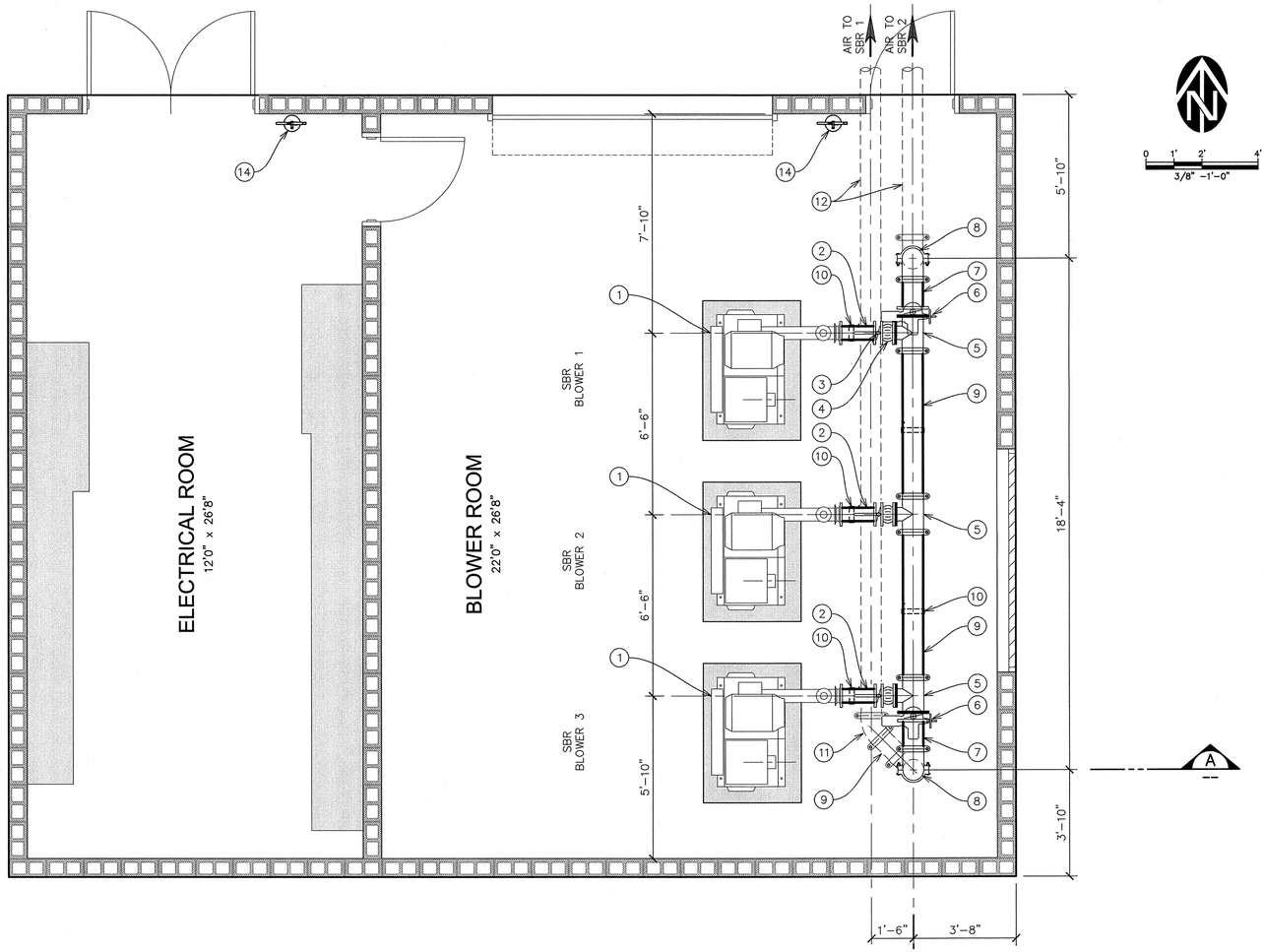
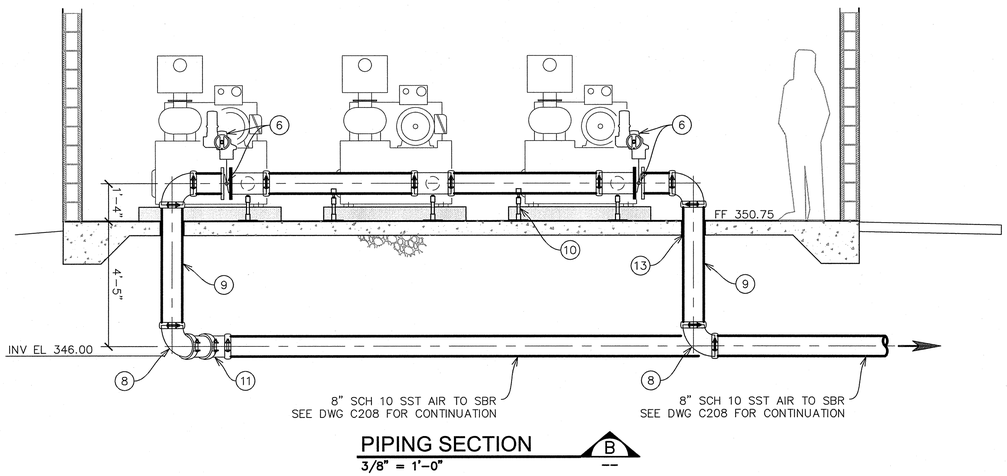
KEY CALLOUTS - BLOWER BUILDING

NOTE: ALL GROOVED JOINTS ARE TO BE FLEXIBLE JOINT STYLE GROOVE AND COUPLERS, UNLESS OTHERWISE NOTED.

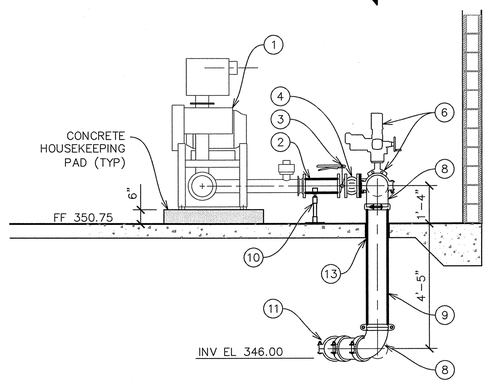
1. SBR BLOWER FURNISHED BY SBR MANUFACTURER. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
2. 5" SCH 10 SST SPOOL (FLxFL).
3. 5" WAFER STYLE BUTTERFLY VALVE FURNISHED BY SBR MANUFACTURER. INSTALL PER MANUFACTURER'S RECOMMENDATIONS. (TYP OF 3).
4. 5" FLEXIBLE RUBBER COUPLING (FLxFL) W/ SST CONTROL RODS AS SPECIFIED.
5. 8"x8"x5" SCH 10 SST REDUCING TEE (GRxGRxGR), W/ STAINLESS STEEL FLANGE ADAPTER AND GROOVED COUPLINGS.
6. 8" ACTUATED CONTROL VALVE W/ MOTORIZED ACTUATOR FURNISHED BY SBR MANUFACTURER. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
7. 8" SCH 10 SST SPOOL (FLxGR).
8. 8" SCH 10 SST 90° BEND (GRxGR) W/ STAINLESS STEEL GROOVED COUPLINGS.
9. 8" SCH 10 SST SPOOL (GRxGR).
10. TYPE A PIPE SUPPORT. SEE DWG M003.
11. 8" SCH 10 SST 45° BEND (GRxGR) W/ SST GROOVED COUPLINGS.
12. 8" LPA TO SBR.
13. TYPE A FLOOR PENETRATION (TYP). SEE DTL 1, DWG M002.
14. FIRE EXTINGUISHER AS SPECIFIED.



BLOWER BUILDING PLAN
3/8" = 1'-0"



PIPING SECTION B
3/8" = 1'-0"



PIPING SECTION A
3/8" = 1'-0"

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DSN. CB
DRN. TMT
CKD. CB
DATE: MAY 2026

REGISTERED PROFESSIONAL ENGINEER
OREGON
JAN. 14, 2020
CHRISTOPHER J. BRUCATO
RENEWS: 12/31/2027

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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

BLOWER BUILDING MECHANICAL PLAN & SECTIONS

DRAWING
M201
102 OF 223

JOB NUMBER
2599.3220.0

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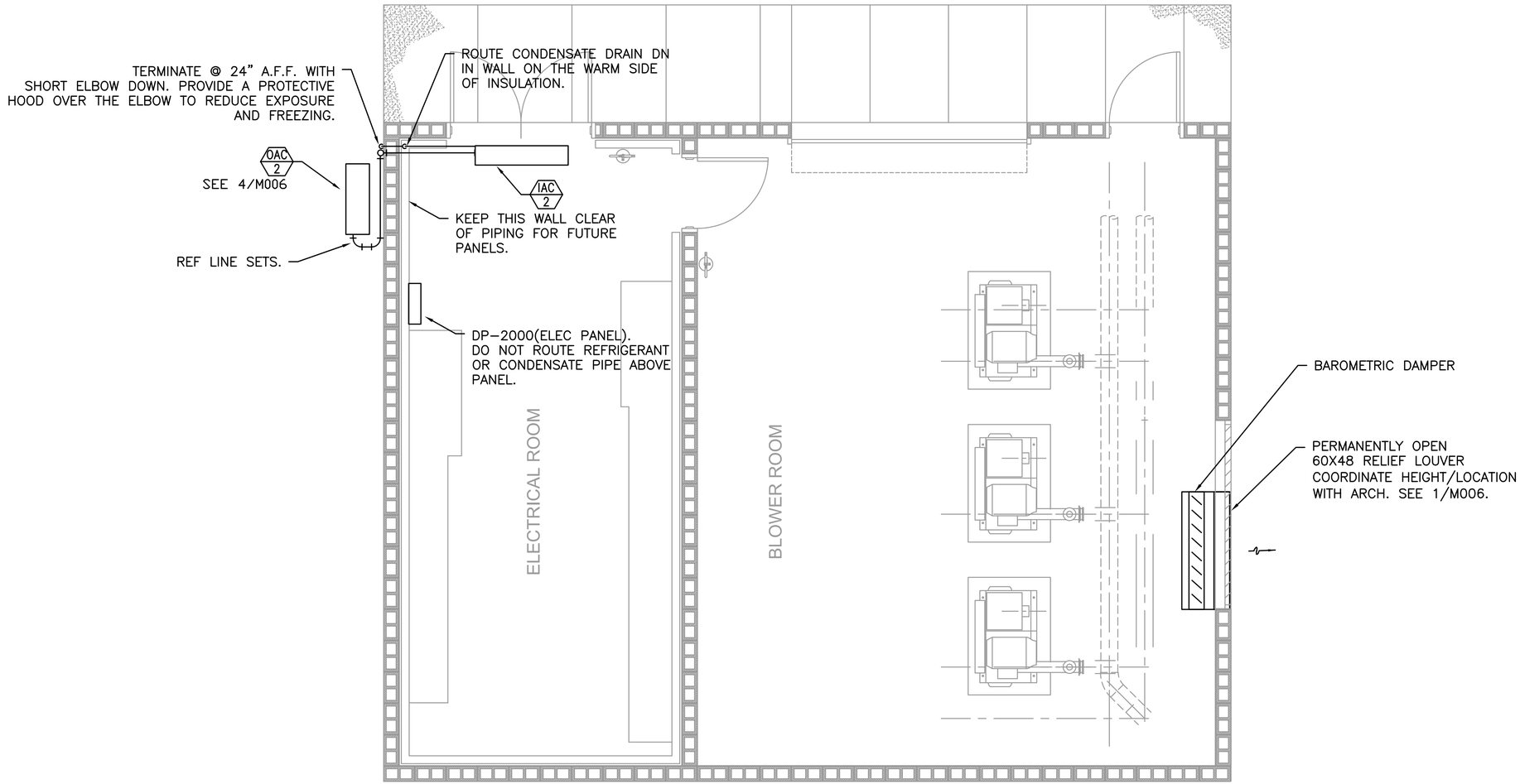
MFIA INC. Consulting Engineers
2007 S.E. Ash St.
Portland, OR 97214
PHN: (503) 234-0548
FAX: (503) 234-0677
WWW.MFIA-ENG.COM
CONTACT: TAKAKO BAKER



0 1' 2' 4'
3/8" = 1'-0"

BLOWER BUILDING HVAC PLAN
3/8" = 1'-0"

NO.	DATE	DESCRIPTION	BY

REVISIONS

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DRN. TB
CKD. TB
DATE: MAY 2026

REGISTERED PROFESSIONAL ENGINEER
OREGON
JULY 9, 1995
TAKAKO M. BAKER
70946PE
EXPIRES: 12/31/27

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

BLOWER BUILDING HVAC PLAN

DRAWING
M203
103 OF 223

JOB NUMBER
2599.3220.0

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0 4' 8' 16'
1/8" = 1'-0"

SBR BASIN 2

PRE-REACTION ZONE 2

SBR BASIN 1

PRE-REACTION ZONE 1

EQUALIZATION BASIN

FINE BUBBLE DISK MEMBRANES & 4" PVC AIR DISTRIBUTION PIPING FURNISHED BY SBR SUPPLIER, INSTALLED BY CONTRACTOR (TYP). LAYOUT AND SPACING PER SBR EQUIPMENT MANUFACTURER. SUPPORT AERATION PIPING USING GUIDE SUPPORTS. SEE DETAILS 2, 3, & 4, DWG M001.

WAS PUMP

6" SBR DRAIN (TYP 2)

FLOOR DRAIN TROUGH (TYP)

6" 90° D.I. BEND (MJxMJ) W/ RETAINER GLANDS INV = 345.74

6" D.I. SPOOL (PExPE)

6" 45° D.I. BEND (MJxMJ) W/ RETAINER GLANDS

8" SST AIR SUPPLY DROP LEG

6" DR-DI DRAIN PIPE W/ RESTRAINED JOINTS S=2.0%

6" 90° D.I. BEND (MJxMJ) W/ RETAINER GLANDS INV = 344.84

6" DR-DI DRAIN PIPE W/ RESTRAINED JOINTS S=2.0%

8" AIR PIPES & FITTINGS

HEADWORKS SUPPORT WALLS & FOOTINGS

4" INFLUENT FROM PLANT PUMP STATION

20" INFLUENT FORCEMAIN FROM MAIN PUMP STATION SEE DWG C105

8" LPA INSTALL AT INV=346.00

6" SBR DRAINS

SBR DRAIN VALVES SEE DTL 2, DWG M211

6" INV 344.00

8" AIR PIPES FROM BLOWER BLDG

48" DRAIN MH SEE DWG C117

4" SLFM-PVC S=2.5%

INV=346.00

INV=345.48

ALL PIPE JOINTS AND FITTINGS RESTRAINED

INV=345.50

20" BYP-DI S=0.4%

20" BYP-DI ALL JOINTS SHALL BE RESTRAINED

INV=345.26

INV=345.13

EQ BASIN O/F

20" BYP-PVC S=0.57% TO LAGOON CELL 2

8" DRAIN PIPE

4" SLFM-PVC S=2.36%

INV=343.80

8" TO PLANT PUMP STATION

6" SLUDGE TO CELL 1

6" SLUDGE PIPE FROM DAF BLDG SEE DWG C107

48" DRAIN MH SEE DWG C117

BASIN DRAINS SEE DWG M221

2" NPW

16'-0"

47'-0"

2'-0"

19'

18'

14'

4'

SBR MECHANICAL BOTTOM PLAN
1/8" = 1'-0"

FD-1 FLOOR DRAIN
J.R. SMITH 2005Y WITH 6" GRATE & 4" OUTLET
RIM EL 351.45

FINISHED CONCRETE SURFACE SLOPED TO DRAIN SEE CIVIL DRAWINGS

6"x4" WYE

CONSTRUCT TRAP PER UPC

SCREENINGS AREA DRAIN DETAIL
N.T.S. — 1 / M211

NOTE: ALL UNDERGROUNG PIPELINE TRENCHES SHALL BE CLASS I.

KEY CALLOUTS

1. STAINLESS STEEL WALL-MOUNT SLUICE GATES AS SPECIFIED.
2. AIR SUPPLY MANIFOLD FURNISHED BY SBR MANUFACTURER. INSTALL PER MFTR'S RECOMMENDATIONS. SUPPORT USING SIMPLE SUPPORT BRACKET. SEE DTL ON DWG M001. SUPPORT SPACING PER SBR EQUIPMENT MFTR (5' O.C. MAX).
3. INSTALL 12" SCH 40 STAINLESS STEEL WALL PIPE (FLxFL) W/ SST BLIND FLANGES ON EACH END. SET FLANGES 6" FROM WALL FACES. SET CENTERLINE OF PIPE 4 FT ABOVE FLOOR. SEE TYPE 'F' PIPE PENETRATION, DWG M002.
4. 4" D.I. 90° BEND AND CL 50 D.I. PIPE (PExGR) W/ FLEXIBLE GROOVE CUT, VERTICAL DRAIN PIPE. SEE DWG M218.
5. 4" CL 50 D.I. PIPE (PExPE).
6. 4" MAX ADAPTER, TRANSITION FROM D.I. TO PVC.
7. 4" 3034 PVC SPOOL (TYP).
8. 4" 45° PVC BEND (HxH).
9. 2" SCH 40 VENT PIPE PER UPC. SEE DWG M218.
10. 2" SCH 40 PVC PIPE, S=2% MIN.
11. 2" 45° PVC BEND.
12. 6" PVC TEE & 6"x2" ADAPTER BUSHING.
13. AREA DRAIN W/ P-TRAP. SEE DTL 1, DWG M211.
14. 6"x4" PVC WYE, (HxHxH).
15. 6" 3034 PVC SEWER DRAIN PIPE. SEE DWG C117.
16. 6" CLEANOUT. SEE STD DTL 411, DWG C007.
17. 6"x6" PVC WYE, (HxHxH), SPOOL & 6" 45° BEND (HxH).
18. 20" CL 50 D.I. WALL SPOOL (PExPE). LENGTH TO MATCH WALL THICKNESS. SEE TYPE 'K' PENETRATION DTL, DWG M002.
19. 20" D.I. 90° BEND (GRxGR), & 20" CL 50 D.I. WALL SPOOL (PExGR). LENGTH TO EXTEND 1 FT BEYOND WALL. SEE TYPE 'K' PENETRATION DTL, DWG M002.
20. 20" D.I. 90° BEND (MJxMJ) W/ RETAINER GLANDS.
21. 20" D.I. SLEEVE COUPLING (MJxMJ) W/ RETAINER GLANDS. INSTALL 2 FT FROM FOOTING.
22. 20" D.I. TEE (MJxMJxMJ) W/ RETAINER GLANDS.
23. 4" D.I. 90° BEND (MJxMJ) W/ RETAINER GLANDS & TB.
24. 4" D.I. 45° BEND (MJxMJ) W/ RETAINER GLANDS & TB.
25. 20" D.I. 11¼° BEND (MJxMJ) W/ RETAINER GLANDS.
26. AIR PURGE SUMP ASSEMBLY, PER DTL 7, DWG M001.
27. 6" D.I. SLEEVE COUPLING (MJxMJ) W/ RETAINER GLANDS. INSTALL 2 FT FROM FOOTING (TYP 2).
28. 4" D.I. SLEEVE COUPLING (MJxMJ). INSTALL 2 FT FROM BEND.

SBR DRAIN VALVE DETAIL
N.T.S. — 2 / M211

6" D.I. SBR DRAINS
6" CL 53 D.I. SPOOL (FLxFL), (TYP OF 2)
6"x6" WYE (FLxFLxFL) W/ THRUST BLOCK
6" PLUG VALVE (FLxMJ) W/ RETAINER GLAND (TYP OF 3)
6" CL 50 D.I. TO SAN SEWER MH
6" 45° BEND (FLxFL) W/ THRUST BLOCK

PLUG VALVE NOTE: GEAR ACTUATED W/ VALVE BOX, INSTALL SHAFT HORIZONTAL, PLUG UP WHEN OPEN.

NO.	DATE	DESCRIPTION	BY
1		REVISIONS	

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CKD. CB
DATE: MAY 2026

REGISTERED PROFESSIONAL ENGINEER
OREGON JAN. 14, 2022 CHRISTOPHER J. BRIDGATO
86473PE
RENEWS: 12/31/2027

WESTECH ENGINEERING, INC.
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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

SBR & EQUALIZATION BASIN MECHANICAL BOTTOM PLAN

DRAWING M211
104 OF 223
JOB NUMBER 2599.3220.0

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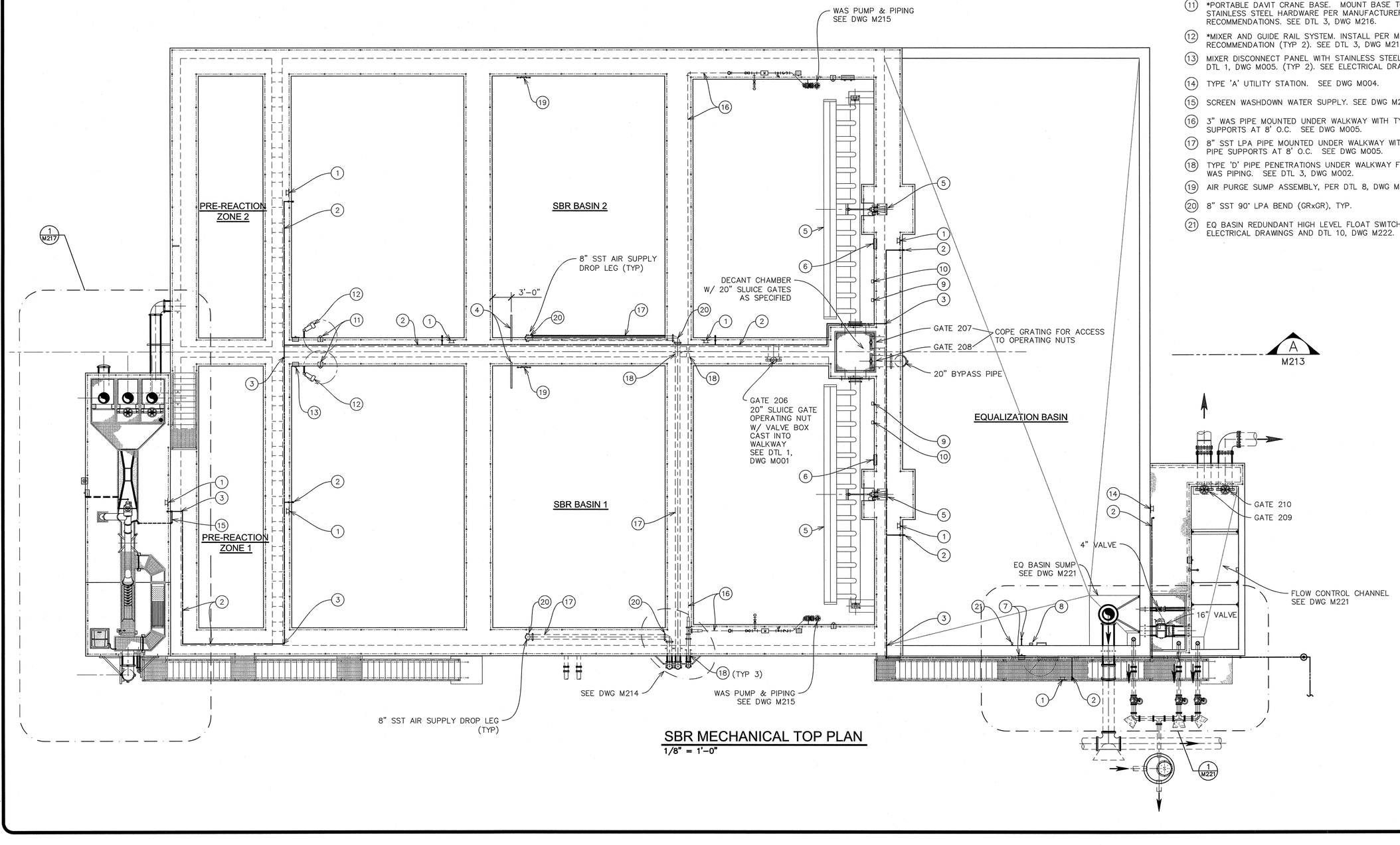
0 4' 8' 16'
1/8" = 1'-0"

* XYLEM SBR EQUIPMENT PROVIDED BY SBR MANUFACTURER, INSTALLED BY CONTRACTOR PER MFTR'S RECOMMENDATIONS. CONTRACTOR TO FURNISH AND INSTALL ALL MOUNTING HARDWARE, INCLUDING FABRICATED STANDS.

NOTE: ALL GROOVED PIPE JOINTS FOR AIR AND WAS PIPING SHALL BE FLEXIBLE JOINT STYLE GROOVE AND COUPLERS.

KEY CALLOUTS

1. TYPE 'B' UTILITY STATION. SEE DWG M004.
2. 1½" NPW SCH 80 PVC WASHDOWN WATER PIPING. MOUNT UNDER WALKWAY W/ TYPE 'H' SUPPORTS AT 8' O.C. PAINT AS SPECIFIED. SEE DWG M003.
3. TYPE D PIPE PENETRATION THROUGH WALL BELOW WALKWAY. SEE DWG M002. PROVIDE BENDS AS REQ'D TO DEFLECT PIPE BELOW WALKWAY.
4. *D.O. PROBE W/ RAIL MOUNT HOLDER AND ANALYZER. SEE DTL 5, DWG M001.
5. *DECANTER MECHANISM & DRIVE, FURNISHED BY SBR MANUFACTURER, INSTALL PER MFTR'S RECOMMENDATIONS.
6. *LOCAL DECANTER CONTROLLER FURNISHED BY SBR EQUIPMENT SUPPLIER. CONTRACTOR TO INSTALL WITH STAINLESS STEEL STAND PER DTL 1, DWG M005. SET STAND ADJACENT TO DECANTER PER MANUFACTURER'S RECOMMENDATIONS.
7. EQ. BASIN LEVEL TRANSDUCER AND TRANSMITTER ENCLOSURE W/ STAND. MOUNT TRANSDUCER TO FACE OF CONCRETE WALK W/ MANUFACTURER'S MOUNTING BRACKET AS SPECIFIED. SEE DTL 6, DWG M001.
8. EQ. BASIN STAFF GAUGE AS SPECIFIED. MOUNT TO CONCRETE WALL. LOCATE WHERE STAIRWAY LANDING MATCHES EQ. BASIN WALL HEIGHT.
9. *SBR STORM FLOAT PER DTL 1, DWG M216. PROVIDE STAINLESS STEEL MOUNTING HARDWARE AND MOUNT PER SBR MANUFACTURER'S RECOMMENDATIONS.
10. *SBR LEVEL TRANSDUCER PER DTL 2, DWG M216. PROVIDE STAINLESS STEEL MOUNTING BRACKET SIMILAR TO DTL 6, DWG M001. MOUNT PER SBR MANUFACTURER'S RECOMMENDATIONS.
11. *PORTABLE DAVIT CRANE BASE. MOUNT BASE TO WALL WITH STAINLESS STEEL HARDWARE PER MANUFACTURER'S RECOMMENDATIONS. SEE DTL 3, DWG M216.
12. *MIXER AND GUIDE RAIL SYSTEM. INSTALL PER MFTR'S RECOMMENDATION (TYP 2). SEE DTL 3, DWG M216.
13. MIXER DISCONNECT PANEL WITH STAINLESS STEEL STAND PER DTL 1, DWG M005. (TYP 2). SEE ELECTRICAL DRAWINGS.
14. TYPE 'A' UTILITY STATION. SEE DWG M004.
15. SCREEN WASHDOWN WATER SUPPLY. SEE DWG M217.
16. 3" WAS PIPE MOUNTED UNDER WALKWAY WITH TYPE 'M' PIPE SUPPORTS AT 8' O.C. SEE DWG M005.
17. 8" SST LPA PIPE MOUNTED UNDER WALKWAY WITH TYPE 'M' PIPE SUPPORTS AT 8' O.C. SEE DWG M005.
18. TYPE 'D' PIPE PENETRATIONS UNDER WALKWAY FOR LPA AND WAS PIPING. SEE DTL 3, DWG M002.
19. AIR PURGE SUMP ASSEMBLY, PER DTL 8, DWG M001.
20. 8" SST 90° LPA BEND (GRxGR), TYP.
21. EQ BASIN REDUNDANT HIGH LEVEL FLOAT SWITCH. SEE ELECTRICAL DRAWINGS AND DTL 10, DWG M222.



SBR MECHANICAL TOP PLAN
1/8" = 1'-0"

NO.	DATE	DESCRIPTION	BY
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DRN. TMT
CKD. CB
DATE: MAY 2026

REGISTERED PROFESSIONAL ENGINEER
OREGON
JAN. 14, 2005
CHRISTOPHER J. BRUCKA
56473PE
RENEWS: 12/31/2027

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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

SBR & EQUALIZATION BASIN MECHANICAL TOP PLAN

DRAWING M212
105 OF 223

JOB NUMBER 2599.3220.0

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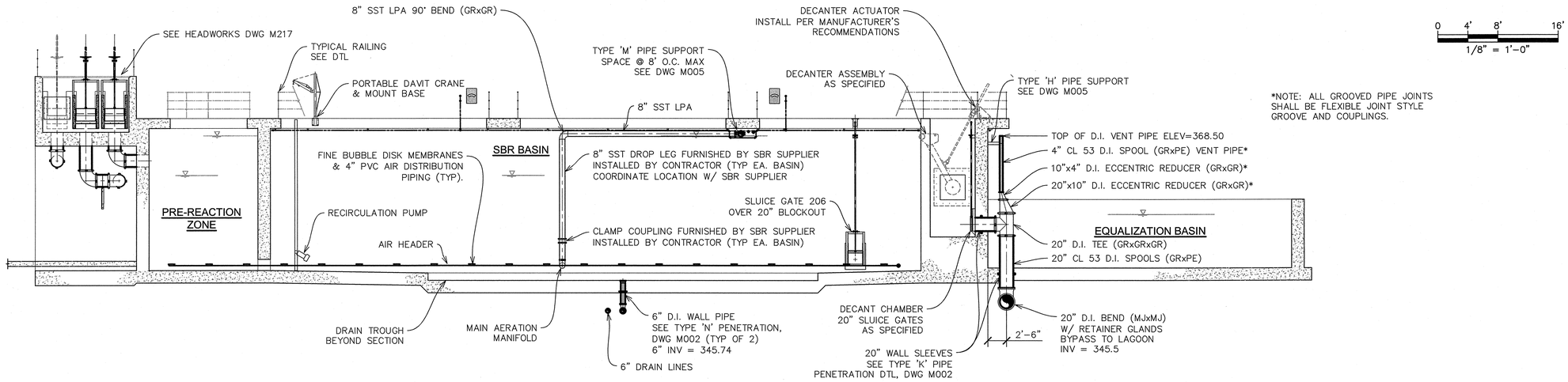
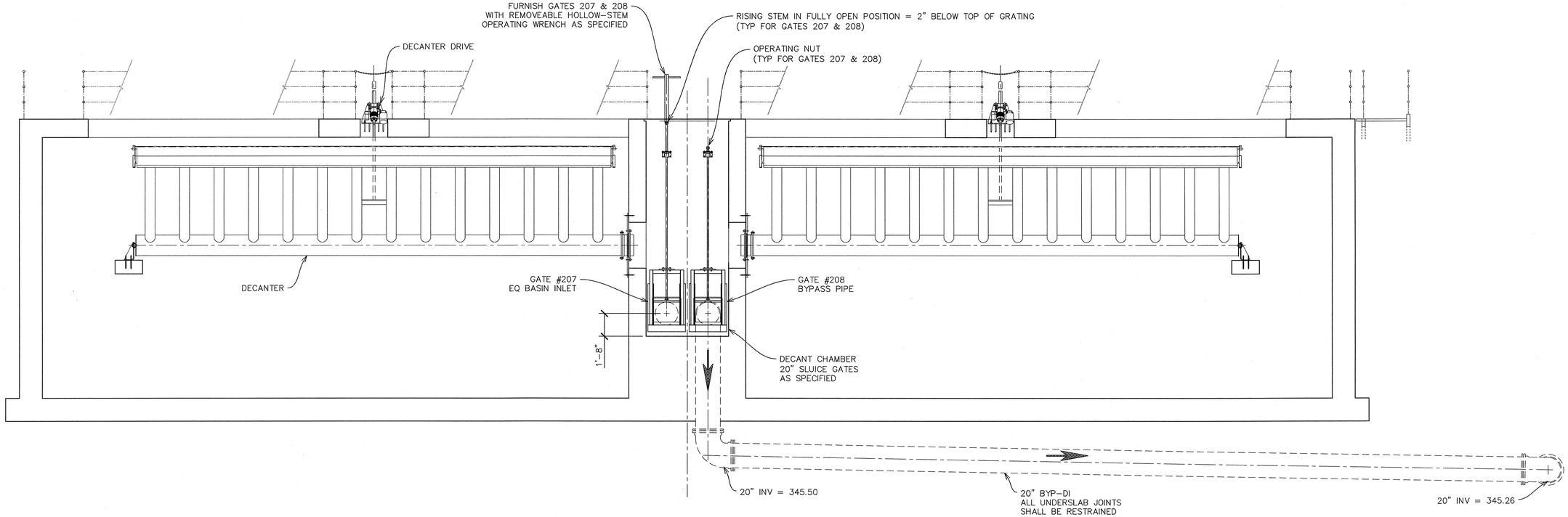


SBR SECTION A
1/8" = 1'-0" M213



SBR SECTION B
1/4" = 1'-0" M213

NO.	DATE	DESCRIPTION REVISIONS	BY
1			

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

DSN. CB
DRN. TMT
CKD. CB
DATE: MAY 2026

REGISTERED PROFESSIONAL ENGINEER
OREGON JULY 14, 2005
CHRISTOPHER T. BRUCKNER
56473PE
RENEW: 12/31/2027

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
3841 Fairview Industrial Dr. S.E., Suite 100, Salem, OR 97302
Phone: (503) 585-2474 Fax: (503) 585-3986
E-mail: westech@westech-eng.com

CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

SBR & EQUALIZATION BASIN MECHANICAL SECTIONS

DRAWING
M213
106 OF 223

JOB NUMBER
2599.3220.0

5/26/2026 12:18:40 PM
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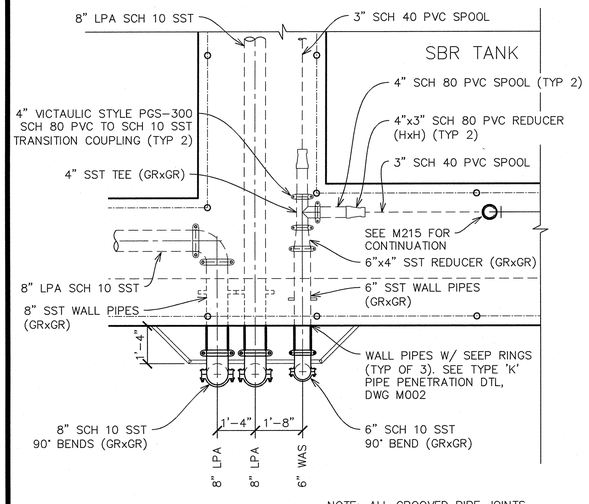
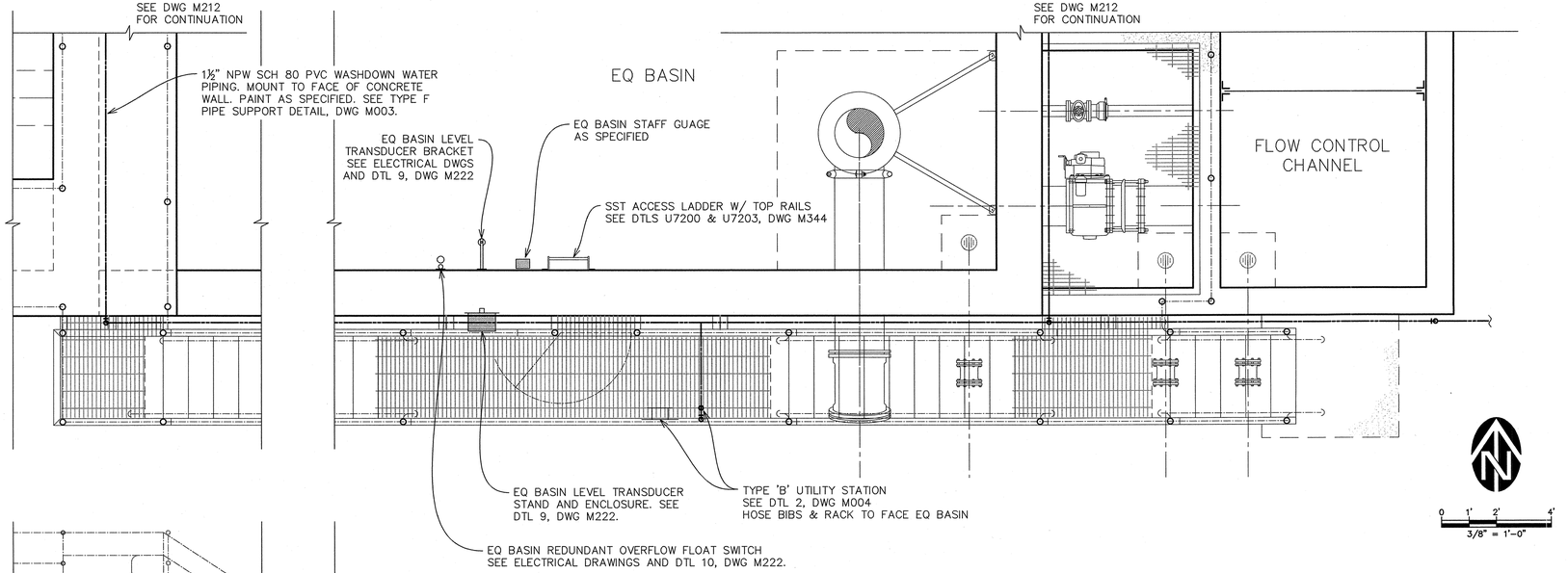
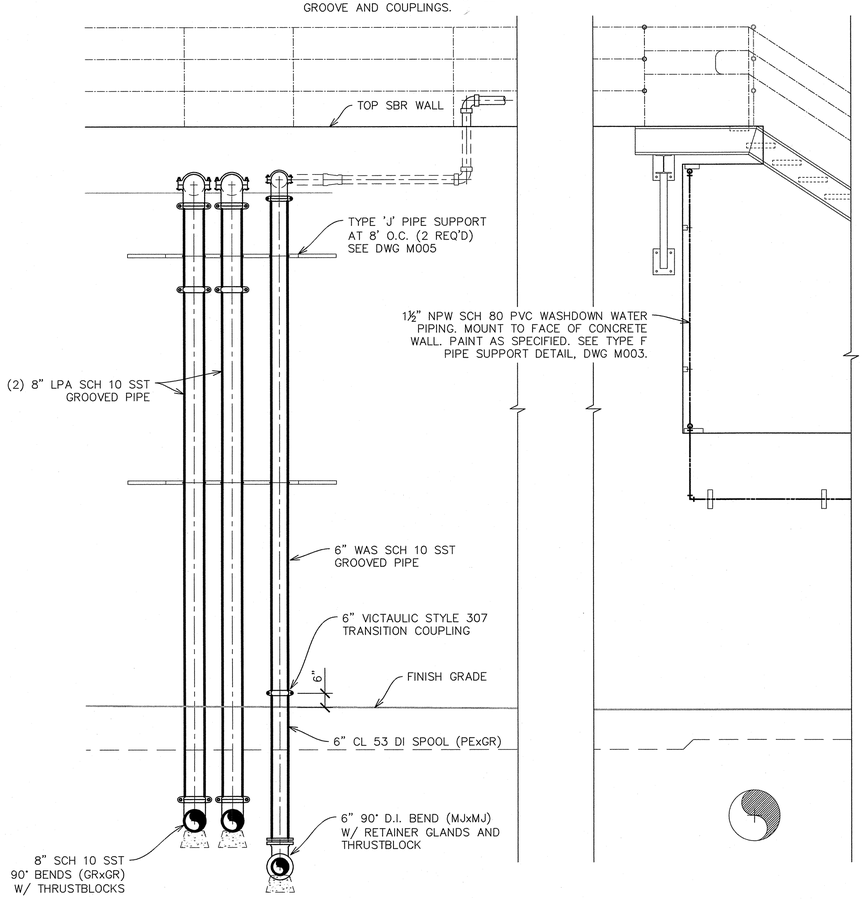
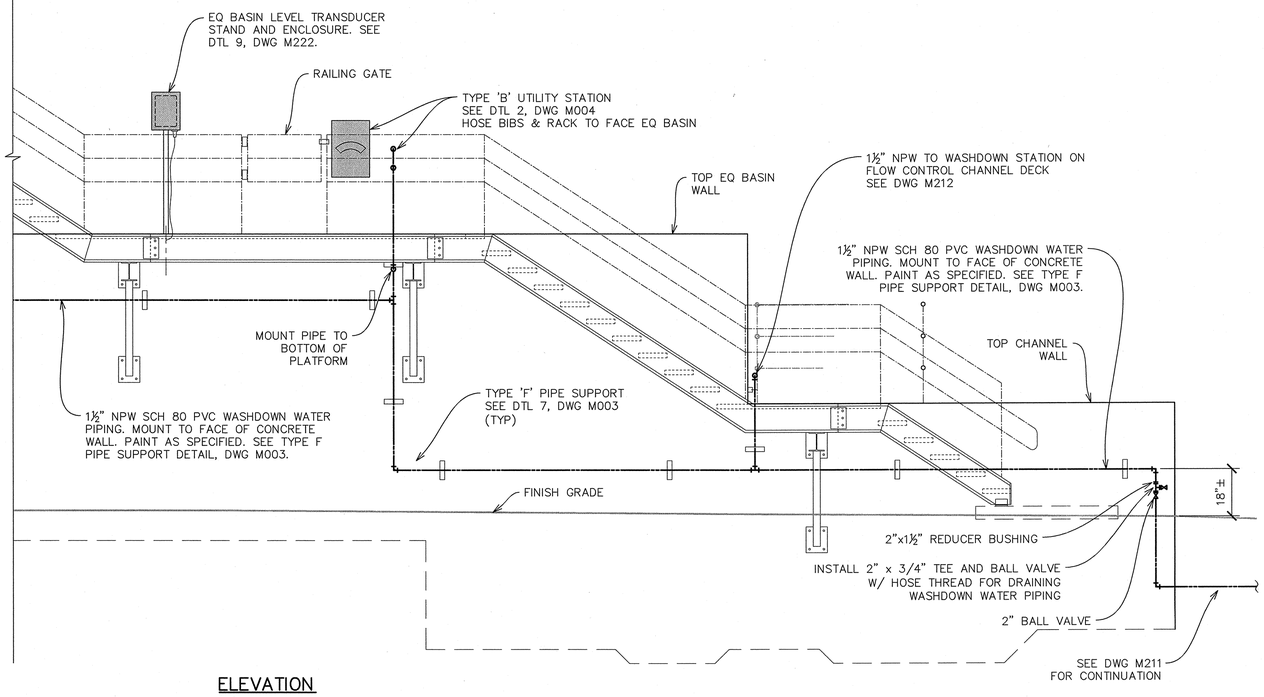




PLAN

NOTE: ALL GROOVED PIPE JOINTS SHALL BE FLEXIBLE JOINT STYLE GROOVE AND COUPLINGS.





ELEVATION

EQ BASIN WASHDOWN WATER DETAIL
3/8" = 1'-0"
1 / M214

NO.	DATE	DESCRIPTION	BY
1		REVISIONS	

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING.
0 1"
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

DSN. CB
DRN. TMT
CKD. CB
DATE: MAY 2026

REGISTERED PROFESSIONAL ENGINEER
OREGON
JAN. 14, 2005
CHRISTOPHER J. BROKAW
86473PE
RENEWS: 12/31/2027

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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

SBR AND EQUALIZATION BASIN MECHANICAL DETAILS

DRAWING
M214
107 OF 223

JOB NUMBER
2599.3220.0

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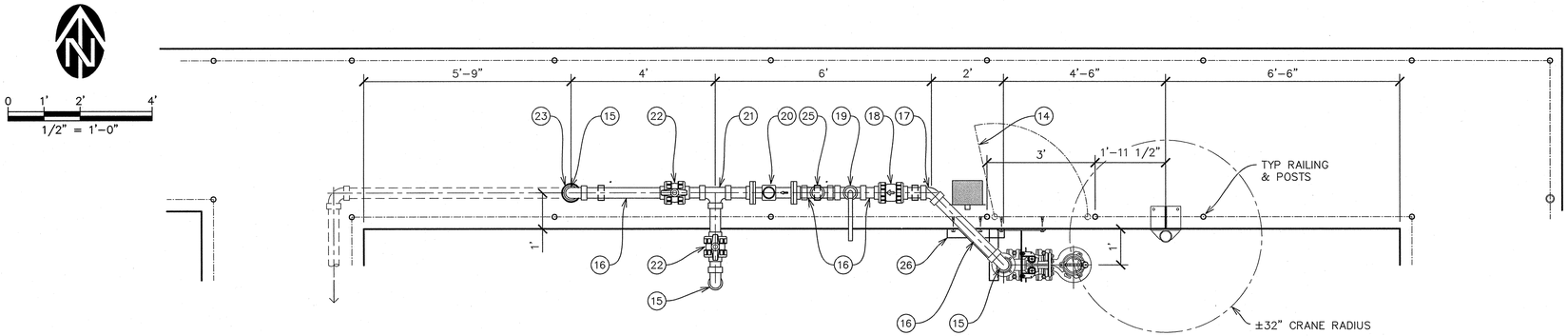
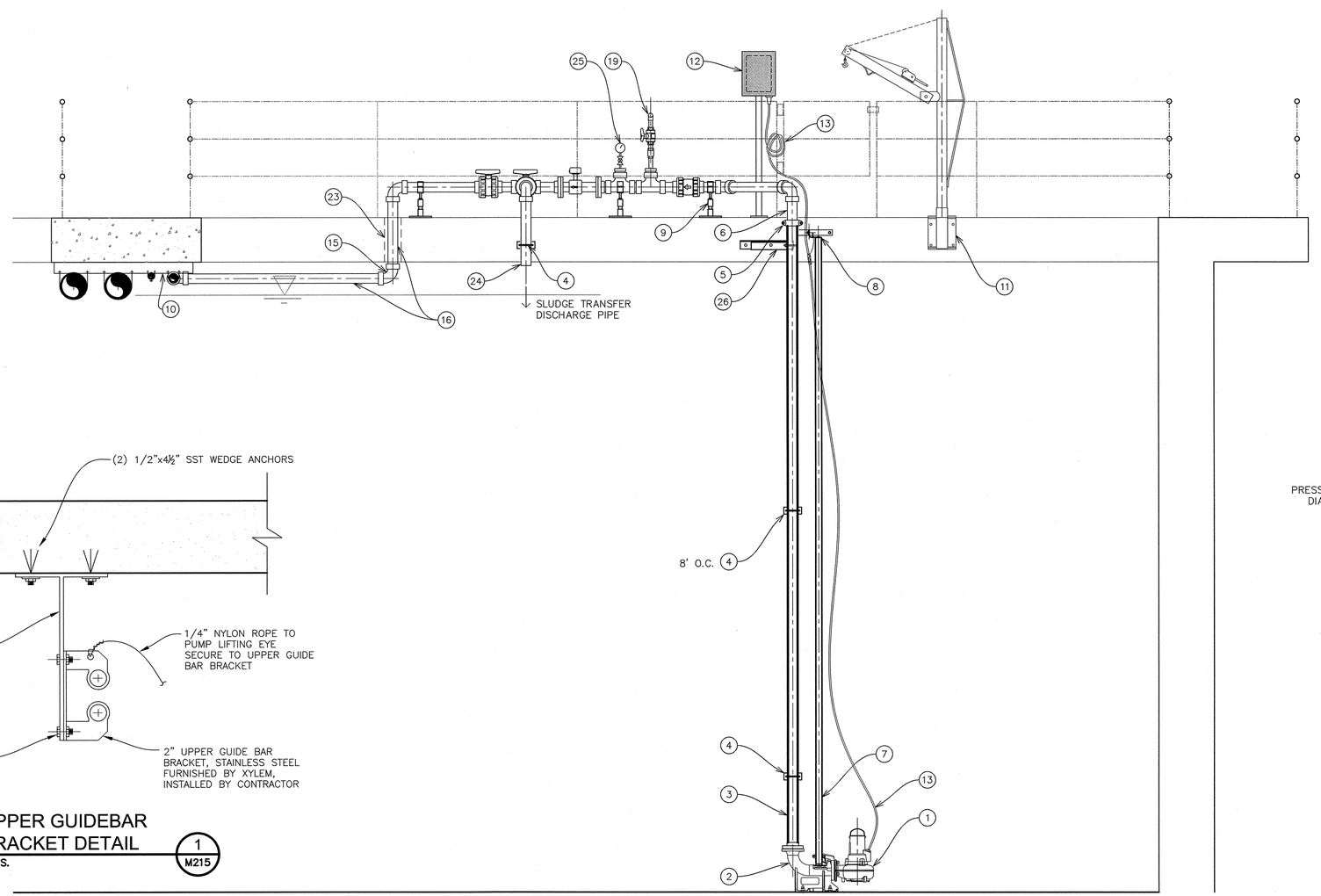


W.A.S. PIPING DETAIL
1/2" = 1'-0"



W.A.S. PUMP SECTION
1/2" = 1'-0"

A

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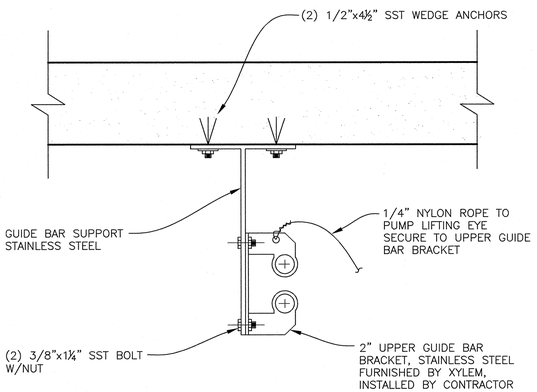
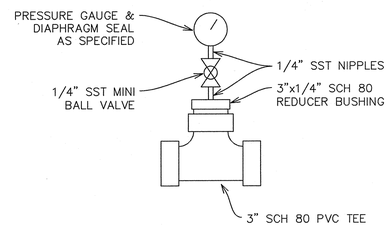


UPPER GUIDEBAR BRACKET DETAIL
N.T.S.

1 / M215

KEY CALLOUTS - W.A.S. PUMPS

1. SUBMERSIBLE 3" NON-CLOG SEWAGE PUMP. FURNISHED BY XYLEM, INSTALLED BY CONTRACTOR.
2. 3-INCH PUMP DISCHARGE BASE ELBOW. FURNISHED BY XYLEM, INSTALLED BY CONTRACTOR.
3. 3-INCH SCH 10 SST DISCHARGE PIPE (FLxGR).
4. TYPE C PIPE SUPPORT. SEE DTL 4, DWG M003.
5. VICTAULIC TRANSITION COUPLING
6. 3" SCH 80 PVC SPOOL (GRxPE).
7. 2" SCH 40 STAINLESS STEEL GUIDE BARS. FURNISHED & INSTALLED BY THE CONTRACTOR.
8. UPPER GUIDE BAR BRACKET. SEE DTL 1, DWG M215.
9. TYPE A PIPE SUPPORT. SEE DTL 1, DWG M003.
10. TYPE M PIPE SUPPORT. SEE DWG M005.
11. PORTABLE DAVIT CRANE AS SPECIFIED. MOUNT BASE TO WALL WITH STAINLESS STEEL HARDWARE PER MANUFACTURER'S RECOMMENDATIONS.
12. LOCAL PUMP DISCONNECT PANEL. SEE ELECTRICAL DRAWINGS. MOUNT ON STAINLESS STEEL STAND PER DETAIL 1, DWG M005.
13. PUMP POWER CABLE. PROVIDE EACH CABLE WITH A STAINLESS STEEL BASKET CABLE GRIP ATTACHED TO HOOK ON RAILING.
14. RAILING GATE, SEE STRUCTURAL DRAWINGS.
15. 3" SCH 80 PVC 90° BEND (HxH)
16. 3" SCH 80 PVC SPOOL
17. 3" SCH 80 PVC 45° BEND (HxH)
18. 3" PVC TRU-UNION CHECK VALVE (HxH)
19. MANUAL AIR RELIEF:
    3" PVC TEE (HxHxH)
    3"x1" PVC REDUCER BUSHING
    1" PVC SPOOLS & FITTINGS AS REQUIRED
    1" BALL CHECK VALVE
    1" BALL VALVE
    TURN DISCHARGE TOWARDS TANK
20. 3" FLOW METER AS SPECIFIED (FLxFL) SEE ELECTRICAL DRAWINGS.
21. 3" PVC TEE (HxHxH)
22. 3" PVC TRU-UNION BALL VALVE (HxH)
23. TYPE 'A' PENETRATION, DTL 1, DWG M002.
24. 3" SCH 80 PVC SPOOL. EXTEND DISCHARGE BELOW DECK.
25. 3" SCH 80 PVC TEE & PRESSURE GAUGE ASSEMBLY. SEE DTL 2, DWG M215.
26. TYPE H PIPE SUPPORT. SEE DWG M005.



PRESSURE GAUGE ASSEMBLY
N.T.S.

2 / M215

NO.	DATE	DESCRIPTION	BY
1		REVISIONS	

VERIFY SCALE
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DSN. CB
DRN. TMT
CKD. CB
DATE: MAY 2026

REGISTERED PROFESSIONAL ENGINEER
OREGON
JAN. 14, 1994
CHRISTOPHER J. BRADLEY
RENEWS: 12/31/2027

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CONSULTING ENGINEERS AND PLANNERS
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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

W.A.S. PUMP & PIPING DETAIL & SECTION

DRAWING
M215
108 OF 223

JOB NUMBER
2599.3220.0

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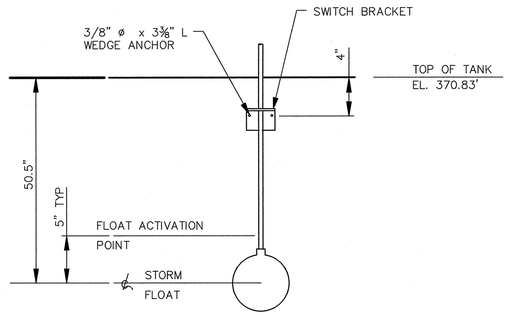
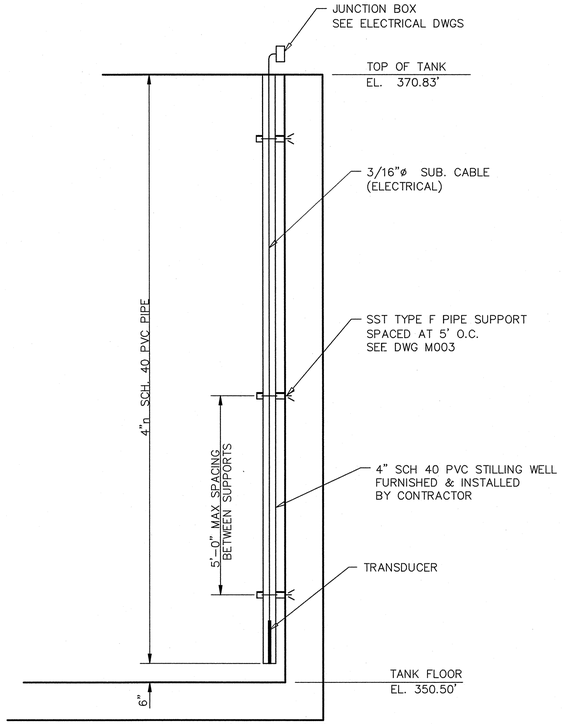


SBR FLOAT SWITCH INSTALLATION

N.T.S.

1 / M216



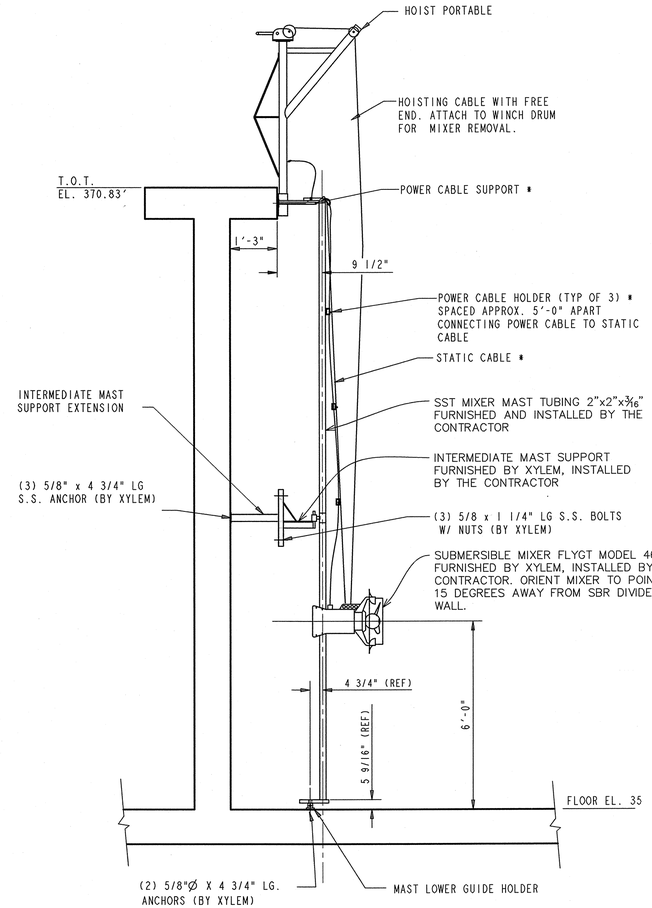
NOTES:

1. ELECTRICAL CABLE TO BE TIED OFF w/ CORD GRIP NEAR JUNCTION BOX.
2. PRIOR TO INSTALLING PVC PIPE, DRILL A SERIES OF 1/2" HOLES 2'-0" ON CENTER ALONG THE FULL LENGTH OF THE PIPE. THIS WILL PREVENT THE PIPE FROM ACTING LIKE AN AIRLIFT.

LEVEL TRANSDUCER ASSEMBLY DETAIL

N.T.S.

2 / M216

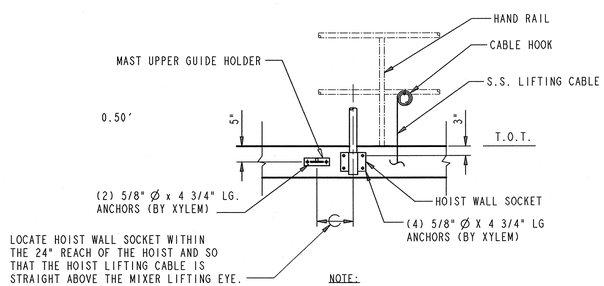


- SUPPLIED WITH MIXER

SBR BASIN MIXER ASSEMLY

N.T.S.

3 / M216



NOTE:

COIL AND TIE WRAP EXCESS HOISTING CABLE TO RAILING AS NECESSARY FOR ALL BUT ONE OF THE MIXERS. ONE UNIT'S CABLE CAN BE ATTACHED DIRECTLY TO THE HOIST.

MIXER MOUNT DETAIL

N.T.S.

4 / M216

NO.	DATE	DESCRIPTION	BY
1		REVISIONS	

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DRN. TMT
CKD. CB
DATE: MAY 2026

REGISTERED PROFESSIONAL ENGINEER
OREGON
JAN. 14, 2005
CHRISTOPHER J. BRADICH
RENEWS: 12/31/2027

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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

SBR MECHANICAL DETAILS

DRAWING
M216
109 OF 223

JOB NUMBER
2599.3220.0

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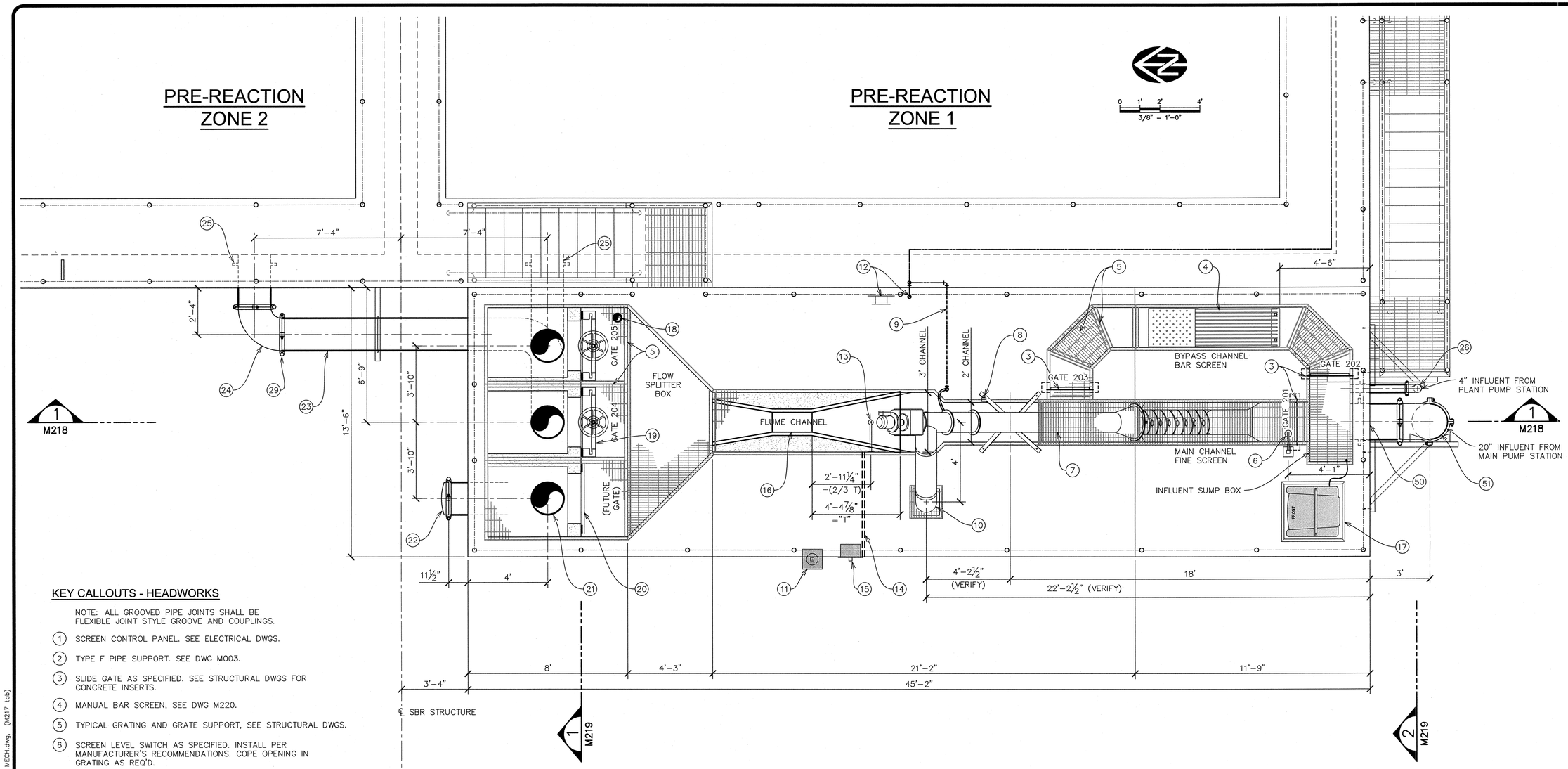

KEY CALLOUTS - HEADWORKS

NOTE: ALL GROOVED PIPE JOINTS SHALL BE FLEXIBLE JOINT STYLE GROOVE AND COUPLINGS.

1. SCREEN CONTROL PANEL. SEE ELECTRICAL DWGS.
2. TYPE F PIPE SUPPORT. SEE DWG M003.
3. SLIDE GATE AS SPECIFIED. SEE STRUCTURAL DWGS FOR CONCRETE INSERTS.
4. MANUAL BAR SCREEN, SEE DWG M220.
5. TYPICAL GRATING AND GRATE SUPPORT, SEE STRUCTURAL DWGS.
6. SCREEN LEVEL SWITCH AS SPECIFIED. INSTALL PER MANUFACTURER'S RECOMMENDATIONS. COPE OPENING IN GRATING AS REQ'D.
7. SHAFTLESS SPIRAL FINESCREEN AS SPECIFIED. INSTALL PER MFTR'S RECOMMENDATIONS.
8. SCREEN E-STOP SWITCH AS SPECIFIED.
9. SCREEN WATER SUPPLY CONNECTION. SEE DTL 7, DWG M220.
10. SCREENINGS DISCHARGE CHUTE TO DUMPSTER BELOW. COORDINATE LOCATION AND SIZE WITH SCREEN MANUFACTURER. SEE DWG
11. RAIN GAUGE AS SPECIFIED WITH STAINLESS STEEL STAND. SEE DTL 3, DWG M220.
12. TYPE 'B' UTILITY STATION. SEE DWG M004.
13. ULTRASONIC FLOW METER SENSOR & MOUNTING BRACKET. SEE DTL 6, DWG M220.
14. ELECTRICAL CONDUIT FOR LEVEL SENSOR CABLE CAST INTO CONCRETE.
15. FLOW METER TRANSMITTER ENCLOSURE W/ STAINLESS STEEL STAND. SEE DTL 6, DWG M220.
16. 12" PARSHALL FLUME (FRP INSERT) AS SPECIFIED.
17. INFLUENT SAMPLER AS SPECIFIED W/ STAINLESS STEEL STAND AND SUCTION PIPE. SEE DTL 8, DWG M220.
18. 4" D.I. DRAIN PIPE (PExGR) & SEEP RING, W/ FLEXIBLE GROOVE CUTS, CAST INTO CONCRETE. TYPE K PIPE PENETRATION. SEE DWG M002.
19. SST WALL MOUNT SLUICE GATE AS SPECIFIED, (TYP OF 2).
20. BLOCK OFF SPLITTER BOX #3 W/ 42"W x 36"H x ¼" ALUMINUM PLATE. ATTACH W/ ⅜" EPOXY ANCHORS @ 8" O.C.
21. 18" D.I. OUTLET PIPES CAST INTO CONCRETE (TYP OF 3). TYPE K PIPE PENETRATION. SEE DWG M002.
22. 18" D.I. CAP W/ VICTAULIC COUPLING.
23. 18" CL 53 D.I. PIPE (GRxGR) W/ FLEXIBLE GROOVE CUTS (TYP AT ALL VICTAULIC COUPLINGS).
24. 18" D.I. 90° BEND W/ VICTAULIC COUPLINGS.
25. 18" D.I. WALL PIPE (PExGR) & SEEP RING, W/ FLEXIBLE GROOVE CUTS, CAST INTO CONCRETE. EXTEND OUTSIDE WALL AS SHOWN. TYPE K PENETRATION, SEE DWG M002.
26. 4" D.I. BEND W/ VICTAULIC COUPLINGS. 4" D.I. WALL PIPE (PExGR) & SEEP RING, W/ FLEXIBLE GROOVE CUTS, CAST INTO CONCRETE. EXTEND TO MATCH PIPE SUPPORT (VERIFY). TYPE K PIPE PENETRATION, SEE DWG M002.
27. 20" D.I. BEND (MJxMJ) W/ RETAINER GLANDS & THRUST BLOCK.
28. TYPE A PIPE PENETRATION. SEE DWG M002.
29. D.I. GROOVED COUPLING.
30. TYPE H PIPE SUPPORT. SEE DWG M005.
31. REFUSE CONTAINER (BY OWNER). VERIFY SIZE TO COORDINATE CHUTE HEIGHT.
32. 4" VICTAULIC COUPLING.
33. 4" CL 53 D.I. PIPE (PExGR) W/ FLEXIBLE GROOVE CUT.
34. 4" MEGAFLANGE ADAPTER.
35. 4" PLUG VALVE W/ HANDWHEEL (FLxFL). INSTALL W/ PLUG DOWN WHEN CLOSED.
36. 4" CL 53 D.I. PIPE (PExFL).
37. TYPE 'D' CONCRETE PENETRATION. SEE DWG M002.
38. 4" D.I. BEND (MJxMJ) W/ RETAINER GLANDS & THRUST BLOCK.
39. 20" CL 53 D.I. SPOOL (PExPE).
40. 20" 45° D.I. BEND (MJxMJ) W/ RETAINER GLANDS. SEE DWG C105.
41. 4" PIPE NOT SHOWN FOR CLARITY. INSTALL CL 53 D.I. SPOOL BETWEEN FITTINGS. SEE DWG C105.
44. HEAT TRACE AND INSULATE PLANT PUMP STATION FORCEMAIN PIPE, AS SPECIFIED.
45. 4" FLOW METER (FLxFL). SEE ELECTRICAL DWGS.
46. 4" CL 53 D.I. PIPE (FLxGR) W/ FLEXIBLE GROOVE CUT.
47. 4" CL 53 D.I. PIPE (GRxGR) W/ FLEXIBLE GROOVE CUT.
48. 2" SCH 40 VENT PIPE FOR FLOOR DRAIN PER UPC. SEE DWG M211. MOUNT TO WALL WITH TYPE F PIPE SUPPORT SYSTEM. SEE DWG M003. EXTEND TO 15 FT ABOVE FINISH GRADE.
49. 6" 3034 PVC PIPE & FITTINGS AS REQ'D TO CLEANOUT. SEE DTL 411, DWG C007.
50. 20" D.I. WALL PIPE (PExGR) & SEEP RING W/ FLEXIBLE GROOVE CUTS, CAST INTO CONCRETE. TYPE K PENETRATION. SEE DWG M002.
51. 20" D.I. 90° BEND (GRxGR) W/ VICTAULIC COUPLINGS.
52. 20" CL 53 D.I. PIPE (GRxGR) W/ FLEXIBLE GROOVE CUTS.
53. 20" CL 53 D.I. PIPE (PExGR) W/ FLEXIBLE GROOVE CUT.

HEADWORKS MECHANICAL PLAN

3/8" = 1'-0"

NO.	DATE	DESCRIPTION	BY
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VERIFY SCALE
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0 1"
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

DSN. CB
DRN. TMT
CKD. CB
DATE: MAY 2026

REGISTERED PROFESSIONAL ENGINEER
56473PE
OREGON
JAN. 14, 1983
CHRISTOPHER J. BRUCKNER
RENEWS: 12/31/2027

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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

HEADWORKS MECHANICAL PLAN

DRAWING
M217
110 OF 223

JOB NUMBER
2599.3220.0

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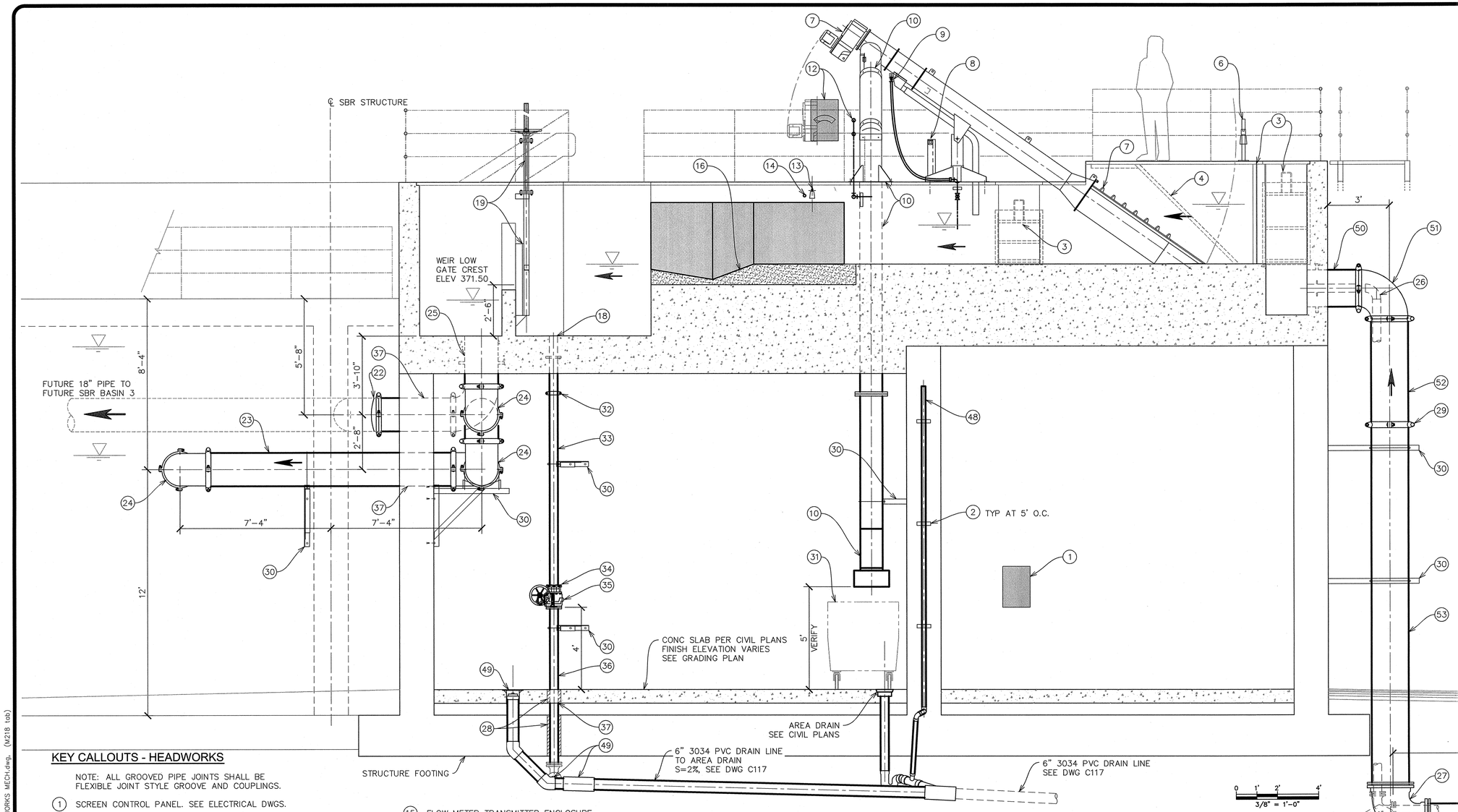

KEY CALLOUTS - HEADWORKS

NOTE: ALL GROOVED PIPE JOINTS SHALL BE FLEXIBLE JOINT STYLE GROOVE AND COUPLINGS.

1. SCREEN CONTROL PANEL. SEE ELECTRICAL DWGS.
2. TYPE F PIPE SUPPORT. SEE DWG M003.
3. SLIDE GATE AS SPECIFIED. SEE STRUCTURAL DWGS FOR CONCRETE INSERTS.
4. MANUAL BAR SCREEN, SEE DWG M220.
5. TYPICAL GRATING AND GRATE SUPPORT, SEE STRUCTURAL DWGS.
6. SCREEN LEVEL SWITCH AS SPECIFIED. INSTALL PER MANUFACTURER'S RECOMMENDATIONS. COPE OPENING IN GRATING AS REQ'D.
7. SHAFTLESS SPIRAL FINESCREEN AS SPECIFIED. INSTALL PER MFTR'S RECOMMENDATIONS.
8. SCREEN E-STOP SWITCH AS SPECIFIED.
9. SCREEN WATER SUPPLY CONNECTION. SEE DTL 7, DWG M220.
10. SCREENINGS DISCHARGE CHUTE TO DUMPSTER BELOW. COORDINATE LOCATION AND SIZE WITH SCREEN MANUFACTURER. SEE DWG
11. RAIN GAUGE AS SPECIFIED WITH STAINLESS STEEL STAND. SEE DTL 3, DWG M220.
12. TYPE 'B' UTILITY STATION. SEE DWG M004.
13. ULTRASONIC FLOW METER SENSOR & MOUNTING BRACKET. SEE DTL 6, DWG M220.
14. ELECTRICAL CONDUIT FOR LEVEL SENSOR CABLE CAST INTO CONCRETE.
15. FLOW METER TRANSMITTER ENCLOSURE W/ STAINLESS STEEL STAND. SEE DTL 6, DWG M220.
16. 12" PARSHALL FLUME (FRP INSERT) AS SPECIFIED.
17. INFLUENT SAMPLER AS SPECIFIED W/ STAINLESS STEEL STAND AND SUCTION PIPE. SEE DTL 8, DWG M220.
18. 4" D.I. DRAIN PIPE (PExGR) & SEEP RING, W/ FLEXIBLE GROOVE CUTS, CAST INTO CONCRETE. TYPE K PIPE PENETRATION. SEE DWG M002.
19. SST WALL MOUNT SLUICE GATE AS SPECIFIED, (TYP OF 2).
20. BLOCK OFF SPLITTER BOX #3 W/ 42"W x 36"H x ¼" ALUMINUM PLATE. ATTACH W/ ⅜" EPOXY ANCHORS @ 8" O.C.
21. 18" D.I. OUTLET PIPES CAST INTO CONCRETE (TYP OF 3). TYPE K PIPE PENETRATION. SEE DWG M002.
22. 18" D.I. CAP W/ VICTAULIC COUPLING.
23. 18" CL 53 D.I. PIPE (GRxGR) W/ FLEXIBLE GROOVE CUTS (TYP AT ALL VICTAULIC COUPLINGS).
24. 18" D.I. 90° BEND W/ VICTAULIC COUPLINGS.
25. 18" D.I. WALL PIPE (PExGR) & SEEP RING, W/ FLEXIBLE GROOVE CUTS, CAST INTO CONCRETE. EXTEND OUTSIDE WALL AS SHOWN. TYPE K PENETRATION, SEE DWG M002.
26. 4" D.I. BEND W/ VICTAULIC COUPLINGS. 4" D.I. WALL PIPE (PExGR) & SEEP RING, W/ FLEXIBLE GROOVE CUTS, CAST INTO CONCRETE. EXTEND TO MATCH PIPE SUPPORT (VERIFY). TYPE K PIPE PENETRATION, SEE DWG M002.
27. 20" D.I. BEND (MJxMJ) W/ RETAINER GLANDS & THRUST BLOCK.
28. TYPE A PIPE PENETRATION. SEE DWG M002.
29. D.I. GROOVED COUPLING.
30. TYPE H PIPE SUPPORT. SEE DWG M005.
31. REFUSE CONTAINER (BY OWNER). VERIFY SIZE TO COORDINATE CHUTE HEIGHT.
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34. 4" MEGAFLANGE ADAPTER.
35. 4" PLUG VALVE W/ HANDWHEEL (FLxFL). INSTALL W/ PLUG DOWN WHEN CLOSED.
36. 4" CL 53 D.I. PIPE (PExFL).
37. TYPE 'D' CONCRETE PENETRATION. SEE DWG M002.
38. 4" D.I. BEND (MJxMJ) W/ RETAINER GLANDS & THRUST BLOCK.
39. 20" CL 53 D.I. SPOOL (PExPE).
40. 20" 45° D.I. BEND (MJxMJ) W/ RETAINER GLANDS. SEE DWG C105.
41. 4" PIPE NOT SHOWN FOR CLARITY. INSTALL CL 53 D.I. SPOOL BETWEEN FITTINGS. SEE DWG C105.
44. HEAT TRACE AND INSULATE PLANT PUMP STATION FORCEMAIN PIPE, AS SPECIFIED.
45. 4" FLOW METER (FLxFL). SEE ELECTRICAL DWGS.
46. 4" CL 53 D.I. PIPE (FLxGR) W/ FLEXIBLE GROOVE CUT.
47. 4" CL 53 D.I. PIPE (GRxGR) W/ FLEXIBLE GROOVE CUT.
48. 2" SCH 40 VENT PIPE FOR FLOOR DRAIN PER UPC. SEE DWG M211. MOUNT TO WALL WITH TYPE F PIPE SUPPORT SYSTEM. SEE DWG M003. EXTEND TO 15 FT ABOVE FINISH GRADE.
49. 6" 3034 PVC PIPE & FITTINGS AS REQ'D TO CLEANOUT. SEE DTL 411, DWG C007.
50. 20" D.I. WALL PIPE (PExGR) & SEEP RING W/ FLEXIBLE GROOVE CUTS, CAST INTO CONCRETE. TYPE K PENETRATION. SEE DWG M002.
51. 20" D.I. 90° BEND (GRxGR) W/ VICTAULIC COUPLINGS.
52. 20" CL 53 D.I. PIPE (GRxGR) W/ FLEXIBLE GROOVE CUTS.
53. 20" CL 53 D.I. PIPE (PExGR) W/ FLEXIBLE GROOVE CUT.

HEADWORKS MECHANICAL SECTION

1 M218

3/8" = 1'-0"

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NO.	DATE	DESCRIPTION BY
		REVISIONS
1		

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
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DSN. CB
DRN. TMT
CKD. CB
DATE: MAY 2026

REGISTERED PROFESSIONAL ENGINEER
OREGON
JANUARY 14, 1994
CHRISTOPHER T. BRUCATO
86473PE
RENEWS: 12/31/2027

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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

HEADWORKS MECHANICAL SECTION

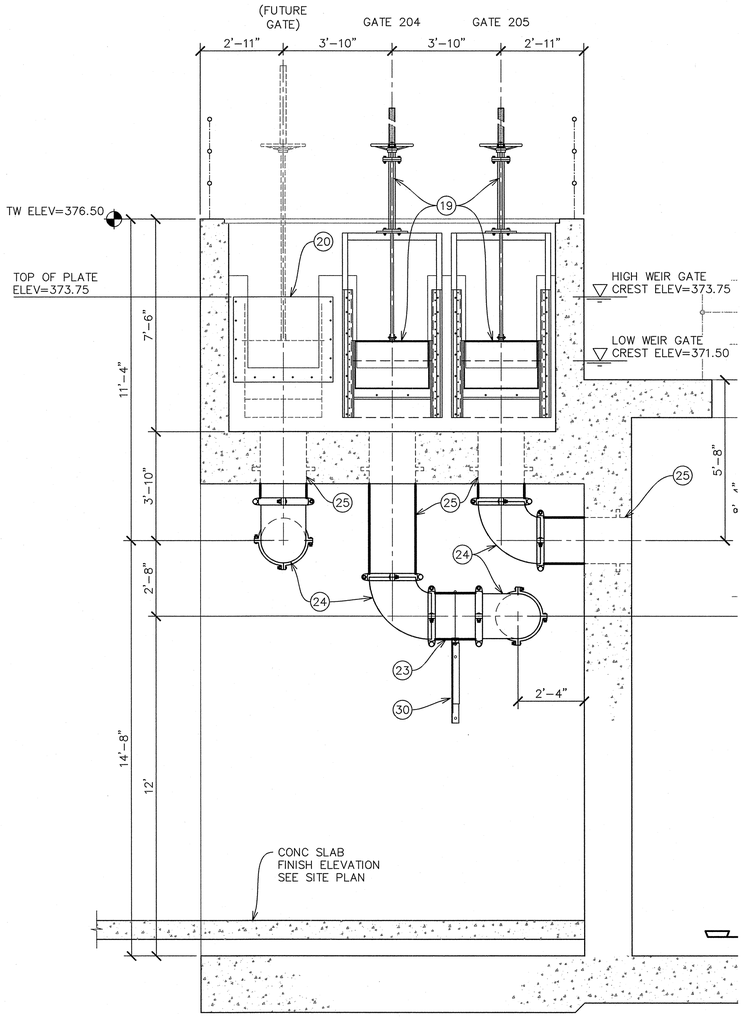
DRAWING
M218
111 OF 223

JOB NUMBER
2599.3220.0

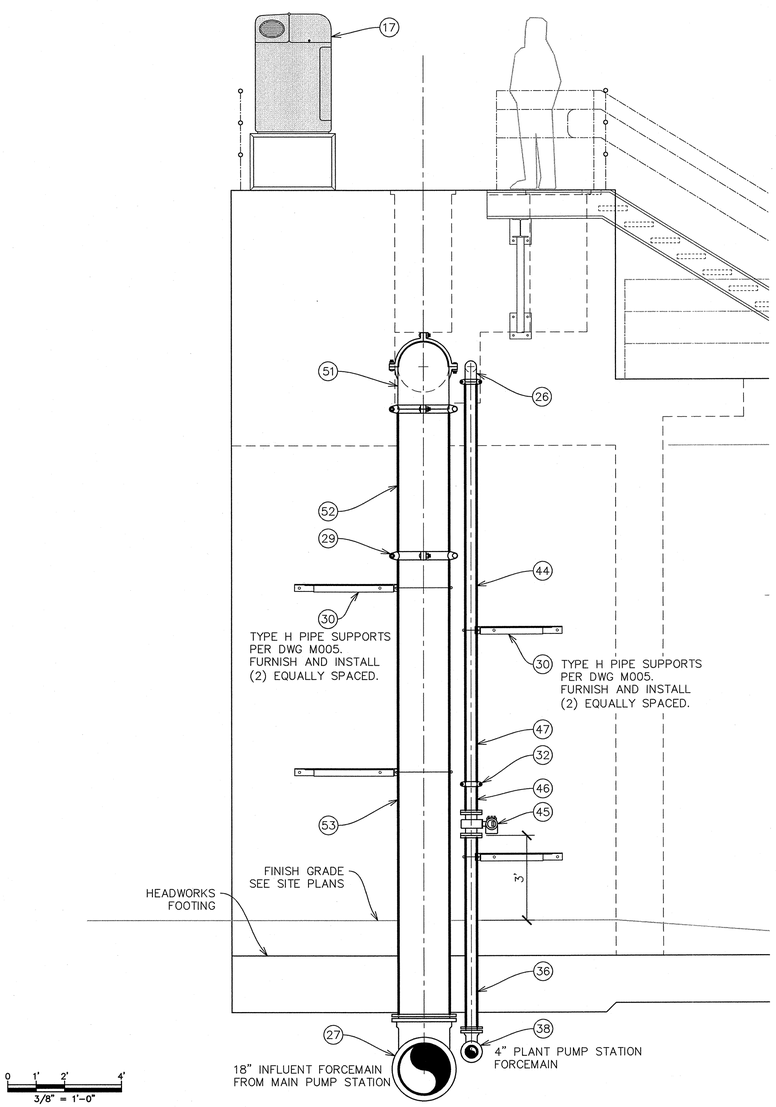
KEY CALLOUTS - HEADWORKS

NOTE: ALL GROOVED PIPE JOINTS SHALL BE FLEXIBLE JOINT STYLE GROOVE AND COUPLINGS.

1. SCREEN CONTROL PANEL. SEE ELECTRICAL DWGS.
2. TYPE F PIPE SUPPORT. SEE DWG M003.
3. SLIDE GATE AS SPECIFIED. SEE STRUCTURAL DWGS FOR CONCRETE INSERTS.
4. MANUAL BAR SCREEN, SEE DWG M220.
5. TYPICAL GRATING AND GRATE SUPPORT, SEE STRUCTURAL DWGS.
6. SCREEN LEVEL SWITCH AS SPECIFIED. INSTALL PER MANUFACTURER'S RECOMMENDATIONS. COPE OPENING IN GRATING AS REQ'D.
7. SHAFTLESS SPIRAL FINESCREEN AS SPECIFIED. INSTALL PER MFTR'S RECOMMENDATIONS.
8. SCREEN E-STOP SWITCH AS SPECIFIED.
9. SCREEN WATER SUPPLY CONNECTION. SEE DTL 7, DWG M220.
10. SCREENINGS DISCHARGE CHUTE TO DUMPSTER BELOW. COORDINATE LOCATION AND SIZE WITH SCREEN MANUFACTURER. SEE DWG
11. RAIN GAUGE AS SPECIFIED WITH STAINLESS STEEL STAND. SEE DTL 3, DWG M220.
12. TYPE 'B' UTILITY STATION. SEE DWG M004.
13. ULTRASONIC FLOW METER SENSOR & MOUNTING BRACKET. SEE DTL 6, DWG M220.
14. ELECTRICAL CONDUIT FOR LEVEL SENSOR CABLE CAST INTO CONCRETE.
15. FLOW METER TRANSMITTER ENCLOSURE W/ STAINLESS STEEL STAND. SEE DTL 6, DWG M220.
16. 12" PARSHALL FLUME (FRP INSERT) AS SPECIFIED.
17. INFLUENT SAMPLER AS SPECIFIED W/ STAINLESS STEEL STAND AND SUCTION PIPE. SEE DTL 8, DWG M220.
18. 4" D.I. DRAIN PIPE (PExGR) & SEEP RING, W/ FLEXIBLE GROOVE CUTS, CAST INTO CONCRETE. TYPE K PIPE PENETRATION. SEE DWG M002.
19. SST WALL MOUNT SLUICE GATE AS SPECIFIED, (TYP OF 2).
20. BLOCK OFF SPLITTER BOX #3 W/ 42"W x 36"H x ¼" ALUMINUM PLATE. ATTACH W/ ⅜" EPOXY ANCHORS @ 8" O.C.
21. 18" D.I. OUTLET PIPES CAST INTO CONCRETE (TYP OF 3). TYPE K PIPE PENETRATION. SEE DWG M002.
22. 18" D.I. CAP W/ VICTAULIC COUPLING.
23. 18" CL 53 D.I. PIPE (GRxGR) W/ FLEXIBLE GROOVE CUTS (TYP AT ALL VICTAULIC COUPLINGS).
24. 18" D.I. 90° BEND W/ VICTAULIC COUPLINGS.
25. 18" D.I. WALL PIPE (PExGR) & SEEP RING, W/ FLEXIBLE GROOVE CUTS, CAST INTO CONCRETE. EXTEND OUTSIDE WALL AS SHOWN. TYPE K PENETRATION, SEE DWG M002.
26. 4" D.I. BEND W/ VICTAULIC COUPLINGS. 4" D.I. WALL PIPE (PExGR) & SEEP RING, W/ FLEXIBLE GROOVE CUTS, CAST INTO CONCRETE. EXTEND TO MATCH PIPE SUPPORT (VERIFY). TYPE K PIPE PENETRATION, SEE DWG M002.
27. 20" D.I. BEND (MJxMJ) W/ RETAINER GLANDS & THRUST BLOCK.



HEADWORKS MECHANICAL SECTION 1
3/8" = 1'-0" M219



0 1' 2' 4'
3/8" = 1'-0"

HEADWORKS MECHANICAL ELEVATION 2
3/8" = 1'-0" M219

28. TYPE A PIPE PENETRATION. SEE DWG M002.
29. D.I. GROOVED COUPLING.
30. TYPE H PIPE SUPPORT. SEE DWG M005.
31. REFUSE CONTAINER (BY OWNER). VERIFY SIZE TO COORDINATE CHUTE HEIGHT.
32. 4" VICTAULIC COUPLING.
33. 4" CL 53 D.I. PIPE (PExGR) W/ FLEXIBLE GROOVE CUT.
34. 4" MEGAFLANGE ADAPTER.
35. 4" PLUG VALVE W/ HANDWHEEL (FLxFL). INSTALL W/ PLUG DOWN WHEN CLOSED.
36. 4" CL 53 D.I. PIPE (PExFL).
37. TYPE 'D' CONCRETE PENETRATION. SEE DWG M002.
38. 4" D.I. BEND (MJxMJ) W/ RETAINER GLANDS & THRUST BLOCK.
39. 20" CL 53 D.I. SPOOL (PExPE).
40. 20" 45° D.I. BEND (MJxMJ) W/ RETAINER GLANDS. SEE DWG C105.
41. 4" PIPE NOT SHOWN FOR CLARITY. INSTALL CL 53 D.I. SPOOL BETWEEN FITTINGS. SEE DWG C105.
44. HEAT TRACE AND INSULATE PLANT PUMP STATION FORCEMAIN PIPE, AS SPECIFIED.
45. 4" FLOW METER (FLxFL). SEE ELECTRICAL DWGS.
46. 4" CL 53 D.I. PIPE (FLxGR) W/ FLEXIBLE GROOVE CUT.
47. 4" CL 53 D.I. PIPE (GRxGR) W/ FLEXIBLE GROOVE CUT.
48. 2" SCH 40 VENT PIPE FOR FLOOR DRAIN PER UPC. SEE DWG M211. MOUNT TO WALL WITH TYPE F PIPE SUPPORT SYSTEM. SEE DWG M003. EXTEND TO 15 FT ABOVE FINISH GRADE.
49. 6" 3034 PVC PIPE & FITTINGS AS REQ'D TO CLEANOUT. SEE DTL 411, DWG C007.
50. 20" D.I. WALL PIPE (PExGR) & SEEP RING W/ FLEXIBLE GROOVE CUTS, CAST INTO CONCRETE. TYPE K PENETRATION. SEE DWG M002.
51. 20" D.I. 90° BEND (GRxGR) W/ VICTAULIC COUPLINGS.
52. 20" CL 53 D.I. PIPE (GRxGR) W/ FLEXIBLE GROOVE CUTS.
53. 20" CL 53 D.I. PIPE (PExGR) W/ FLEXIBLE GROOVE CUT.

NO.	DATE	DESCRIPTION	BY
1		REVISIONS	

VERIFY SCALE
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0 1"
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

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CKD. CB
DATE: MAY 2026

REGISTERED PROFESSIONAL ENGINEER
OREGON JULY 14, 2015 CHRISTOPHER J. BRUCKNER
RENEWS: 12/31/2027

WESTECH ENGINEERING, INC.
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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

HEADWORKS MECHANICAL SECTIONS

DRAWING
M219
112 OF 223

JOB NUMBER
2599.3220.0

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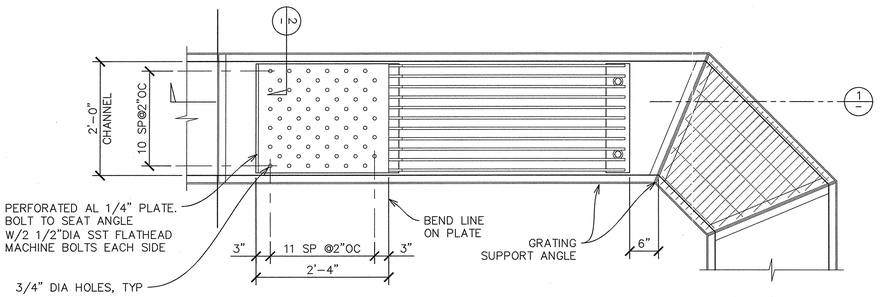

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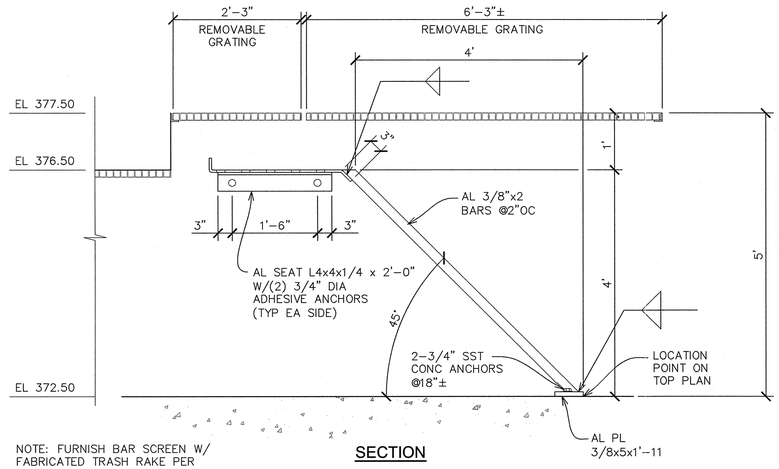
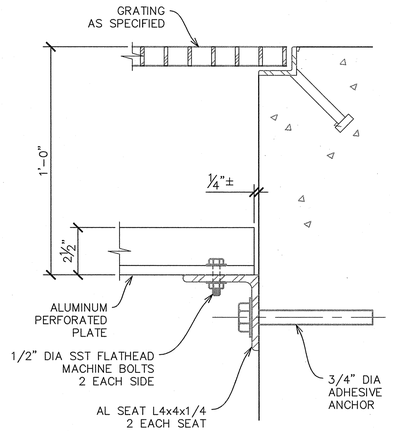


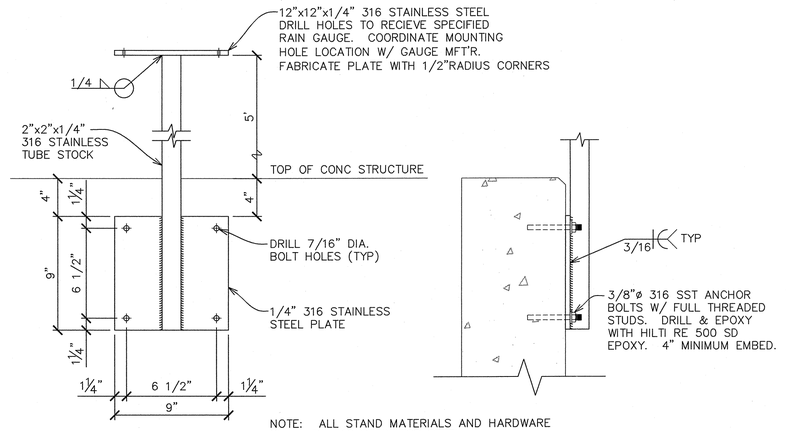
NOTE: FURNISH BAR SCREEN W/ FABRICATED TRASH RAKE PER DETAIL 5, THIS DWG

SECTION

MANUAL BAR SCREEN DETAIL 1
3/4" = 1'-0"



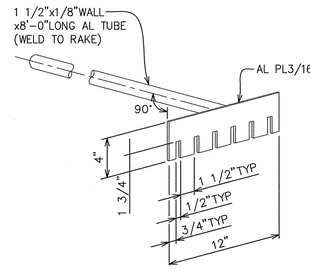
SECTION 2
3" = 1'-0"



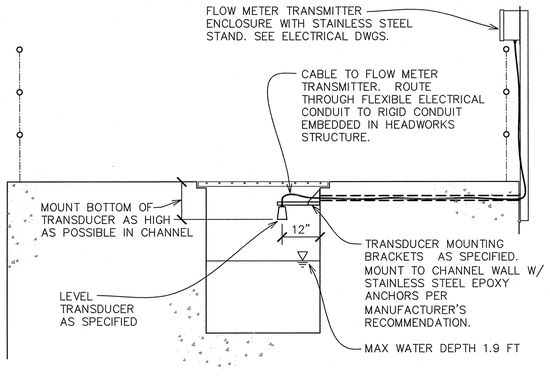
NOTE: ALL STAND MATERIALS AND HARDWARE SHALL BE 316 STAINLESS STEEL.

FRONT SIDE

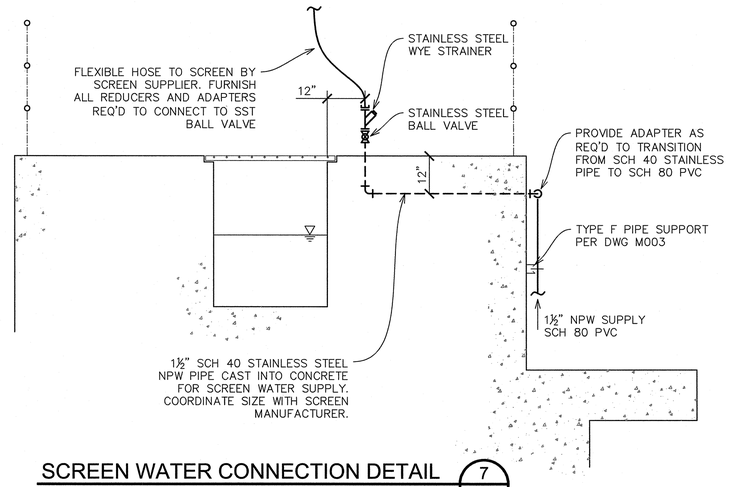
RAIN GAUGE STAND & MOUNTING DETAIL 3
1-1/2" = 1'-0"



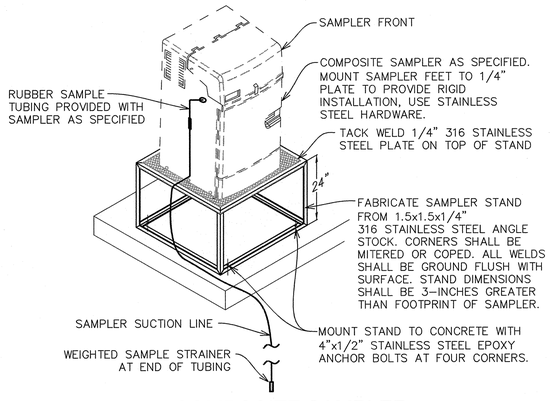
TRASH RAKE DETAIL 5
N.T.S.



INFLUENT FLOW METER TRANSDUCER 6
1/2" = 1'-0"



SCREEN WATER CONNECTION DETAIL 7
N.T.S.



COMPOSITE SAMPLER STAND DETAIL 8
N.T.S.

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DATE: MAY 2026

REGISTERED PROFESSIONAL ENGINEER
OREGON
JAN. 14, 2005
CHRISTOPHER J. BRUNOW
RENEWS: 12/31/2027

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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

HEADWORKS MECHANICAL DETAILS

DRAWING M220
113 OF 223

JOB NUMBER 2599.3220.0

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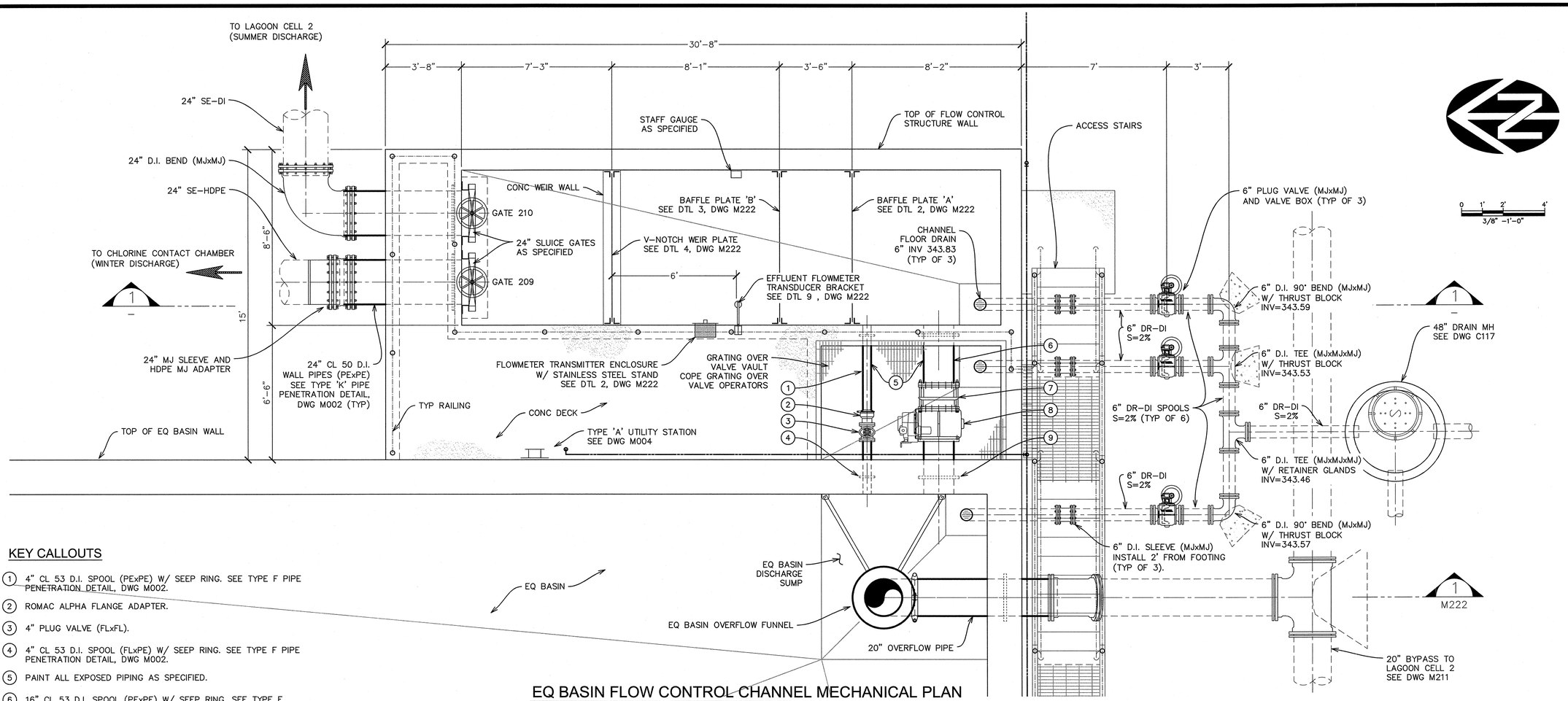
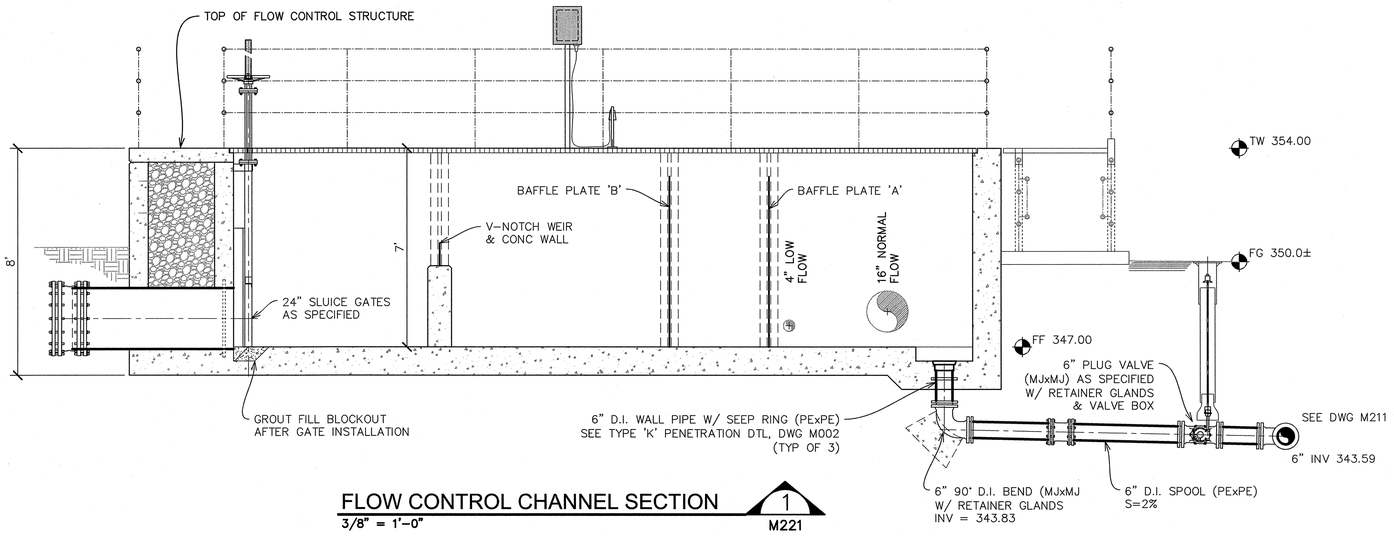


KEY CALLOUTS

1. 4" CL 53 D.I. SPOOL (PExPE) W/ SEEP RING. SEE TYPE F PIPE PENETRATION DETAIL, DWG M002.
2. ROMAC ALPHA FLANGE ADAPTER.
3. 4" PLUG VALVE (FLxFL).
4. 4" CL 53 D.I. SPOOL (FLxPE) W/ SEEP RING. SEE TYPE F PIPE PENETRATION DETAIL, DWG M002.
5. PAINT ALL EXPOSED PIPING AS SPECIFIED.
6. 16" CL 53 D.I. SPOOL (PExPE) W/ SEEP RING. SEE TYPE F PIPE PENETRATION DETAIL, DWG M002.
7. 16" FLANGE COUPLING ADAPTER, ROMAC FCA 501 OR EQUAL.
8. 16" ACTUATED EQ BASIN CONTROL VALVE AS SPECIFIED.
9. 16" CL 53 D.I. SPOOL (FLxPE) W/ SEEP RING. SEE TYPE F PIPE PENETRATION DETAIL, DWG M002.

EQ BASIN FLOW CONTROL CHANNEL MECHANICAL PLAN

3/8" = 1'-0"



FLOW CONTROL CHANNEL SECTION

3/8" = 1'-0"

1 / M221

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REGISTERED PROFESSIONAL ENGINEER
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JAN. 14, 2005
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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

EQ BASIN FLOW CONTROL CHANNEL MECHANICAL PLAN & SECTION

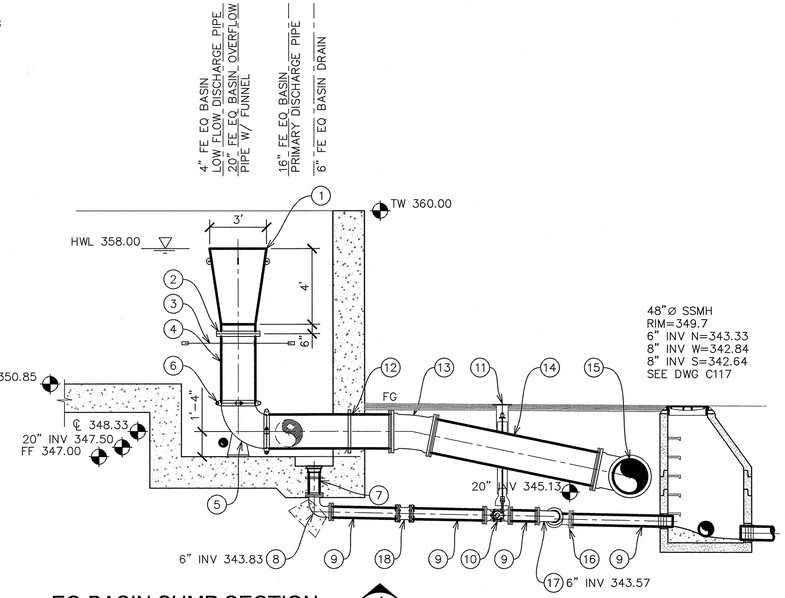
DRAWING
M221
114 OF 223

JOB NUMBER
2599.3220.0

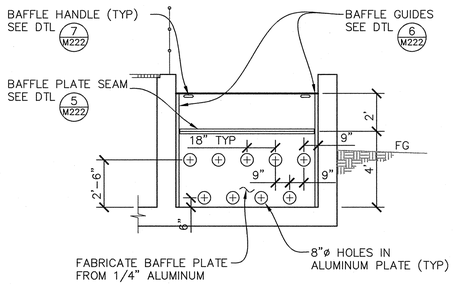
KEY CALLOUTS

NOTE: ALL GROOVED PIPE JOINTS FOR AIR AND WAS PIPING SHALL BE FLEXIBLE JOINT STYLE GROOVE AND COUPLERS.

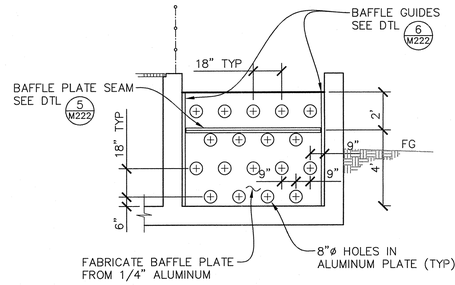
1. FABRICATE FUNNEL FROM 3/16" STEEL PLATE. WELD 3 LIFTING LUGS AT 120°. HOT DIP GALVANIZE AFTER FABRICATION.
2. STD 125# FLANGE. BUTT WELD FUNNEL INSIDE & OUT TO PIPE SPOOL.
3. TYPE 'D' STAINLESS STEEL PIPE SUPPORT. SEE DTL 5, DWG M003.
4. 20" CL 53 D.I. SPOOL (FLxGR).
5. 20" D.I. BASE ELBOW (GRxGR). SEE TYPE 'B' PIPE SUPPORT DTL 2, DWG M003.
6. D.I. GROOVED COUPLING (TYP).
7. 6" D.I. WALL PIPE W/ SEEP RING (PExPE). SEE TYPE 'K' PENETRATION DTL 5, DWG M002.
8. 6" 90° BEND (MJxMJ) W/ TB & RETAINER GLANDS.
9. 6" CL 50 D.I. SPOOL (PExPE) S=2%.
10. 6" ECCENTRIC PLUG VALVE AS SPECIFIED, W/ VALVE BOX AND RETAINER GLAND.
11. VALVE BOX AS SPECIFIED. SIMILAR TO DTL 501, DWG C005.
12. 20" CL 53 D.I. WALL SLEEVE (GRxPE) SEE TYPE 'K' PIPE PENETRATION DTL, DWG M002.
13. 20" D.I. 11¼° BEND (MJxMJ) W/ RETAINER GLANDS.
14. 20" CL 50 D.I. SPOOL (PExPE).
15. 20" D.I. TEE (MJxMJxMJ) W/ RETAINER GLANDS. SEE DWG M211.
16. 6" TEE (MJxMJxMJ) W/ RETAINER GLANDS.
17. 6" 90° BEND (MJxMJ) W/ RETAINER GLANDS.
18. 6" D.I. SLEEVE (MJxMJ) W/ RETAINER GLANDS. INSTALL 2' FROM FOOTING (TYP OF 3).



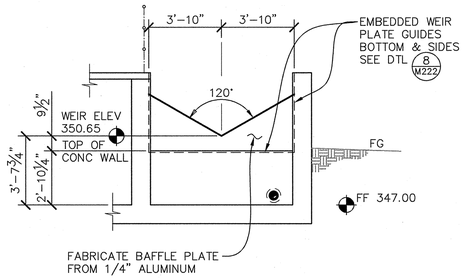
EQ BASIN SUMP SECTION — 1/4" = 1'-0" — 1 M222



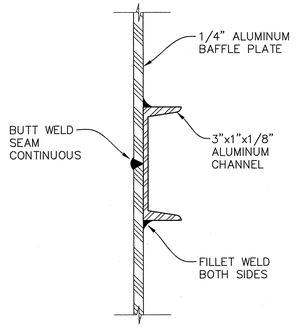
BAFFLE PLATE 'A' DETAIL — 1/4" = 1'-0" — 2 M222



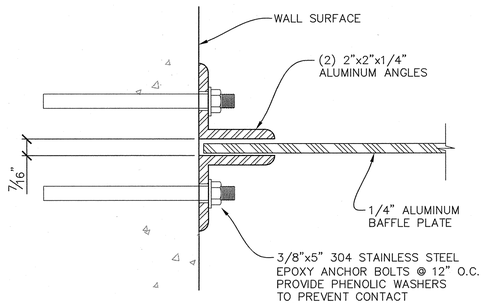
BAFFLE PLATE 'B' DETAIL — 1/4" = 1'-0" — 3 M222



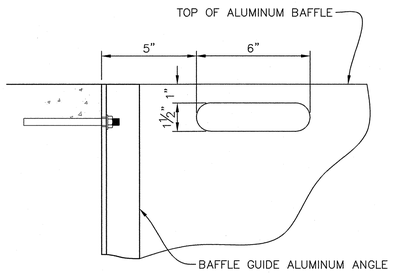
V-NOTCH WEIR PLATE DETAIL — 1/4" = 1'-0" — 4 M222



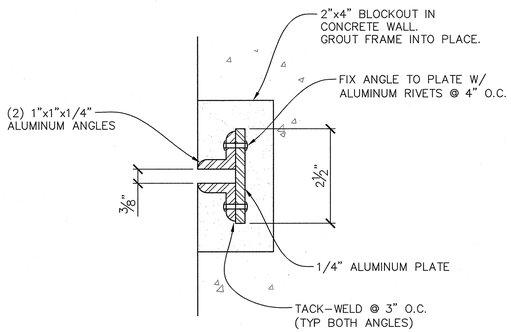
BAFFLE PLATE SEAM — 1:2 — 5 M222



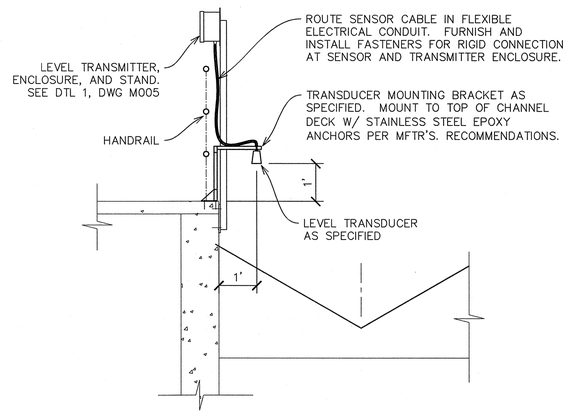
BAFFLE GUIDE DETAIL — 1:2 — 6 M222



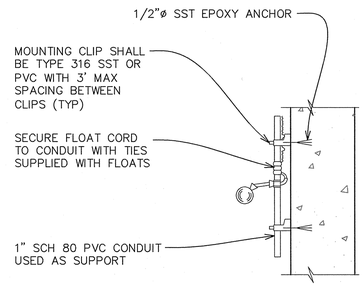
TYP BAFFLE HANDLE — 1:4 — 7 M222



EMBEDDED WEIR PLATE GUIDES — 1:2 — 8 M222



EFFLUENT FLOW METER & E.Q. BASIN LEVEL TRANSDUCER DETAIL — 1/2" = 1'-0" — 9 M222



NOTES:
1. PROVIDE WIRING METHODS AND ENCLOSURE SUITABLE FOR AREA CLASSIFICATION.

FLOAT SWITCH MOUNTING DETAIL — N.T.S. — 10 M222

NO.	DATE	DESCRIPTION	BY
1		REVISIONS	

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0 1"
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CITY OF AUMSVILLE, OREGON

WASTEWATER TREATMENT PLANT IMPROVEMENTS

EQ BASIN FLOW CONTROL CHANNEL MECHANICAL SECTIONS & DETAILS

DRAWING M222
115 OF 223

JOB NUMBER 2599.3220.0

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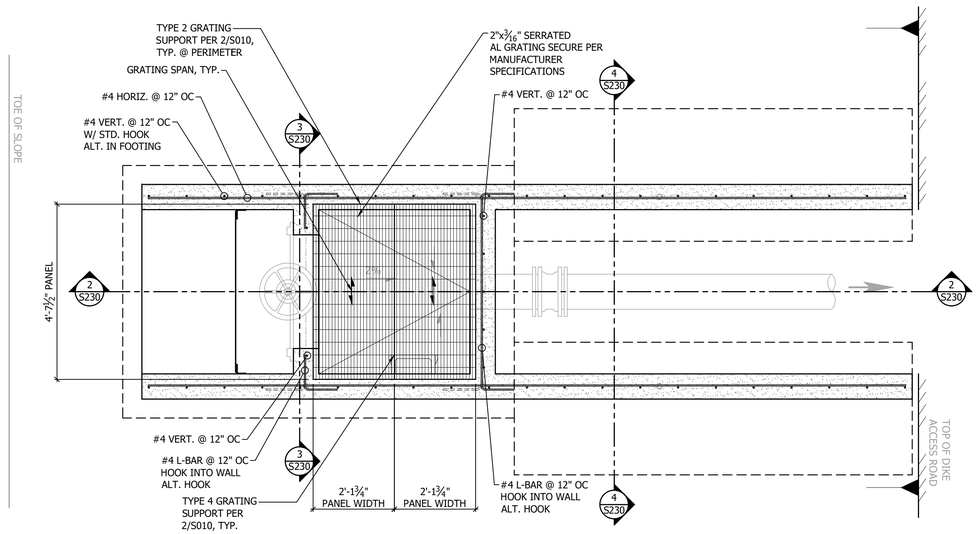
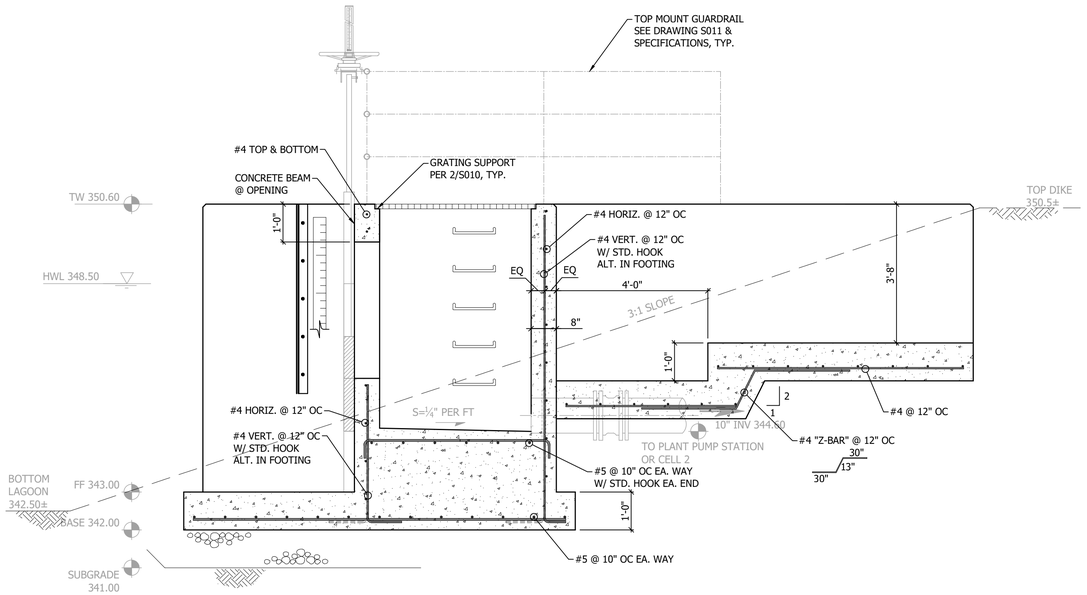


LONGITUDINAL SECTION - CELL 1 OUTLET STRUCTURE

1/2" = 1'-0"

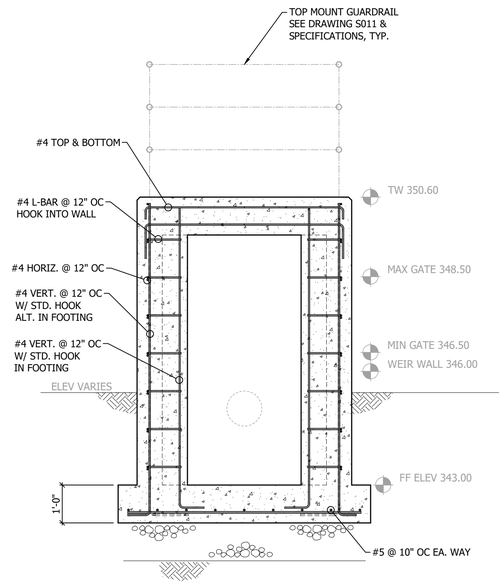
1 S230



LONGITUDINAL SECTION - CELL 1 OUTLET STRUCTURE

1/2" = 1'-0"

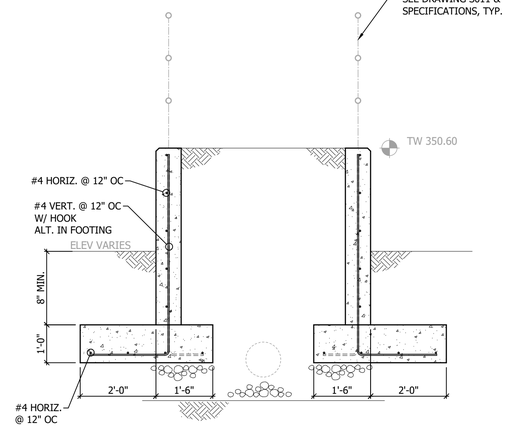
2 S230



TRANSVERSE SECTION - CELL 1 OUTLET STRUCTURE

1/2" = 1'-0"

3 S230



TRANSVERSE SECTION - CELL 1 WING WALLS

1/2" = 1'-0"

4 S230

MSC CONSULTING STRUCTURAL ENGINEERS
SINCE 1925
3470 Ryan Road NE, Suite 201, Salem, OR 97301
503.585.2474
mscengineers.com

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DRN. SMC
CKD. CBS
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REGISTERED PROFESSIONAL ENGINEER
63202
DIGITALLY SIGNED
OREGON
CAMERON B. WEAVER
2026
EXPIRES: JUNE 30, 2028

WESTECH ENGINEERING, INC.
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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

CELL 1 OUTLET STRUCTURE PLAN AND SECTIONS

DRAWING
S230
116 OF 223

JOB NUMBER
231048

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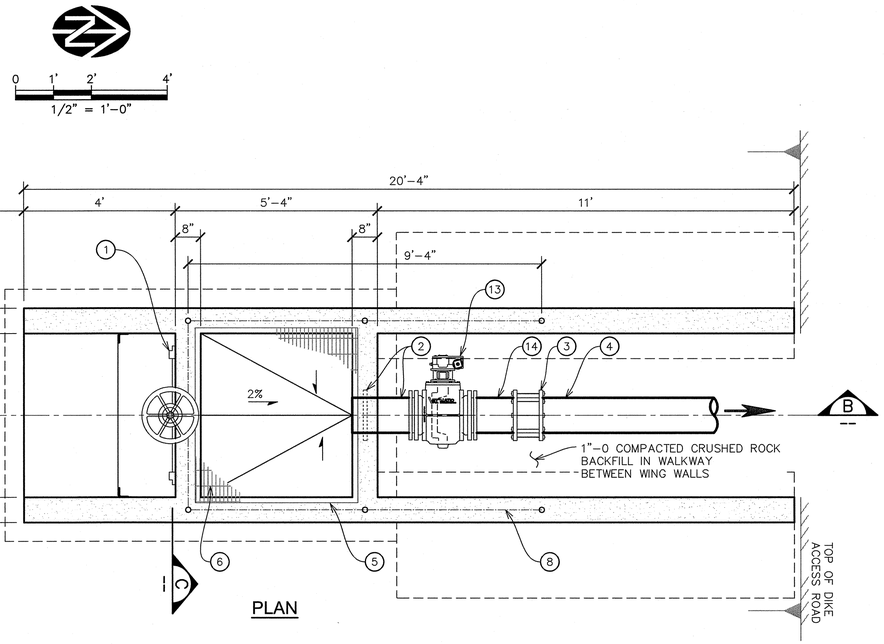
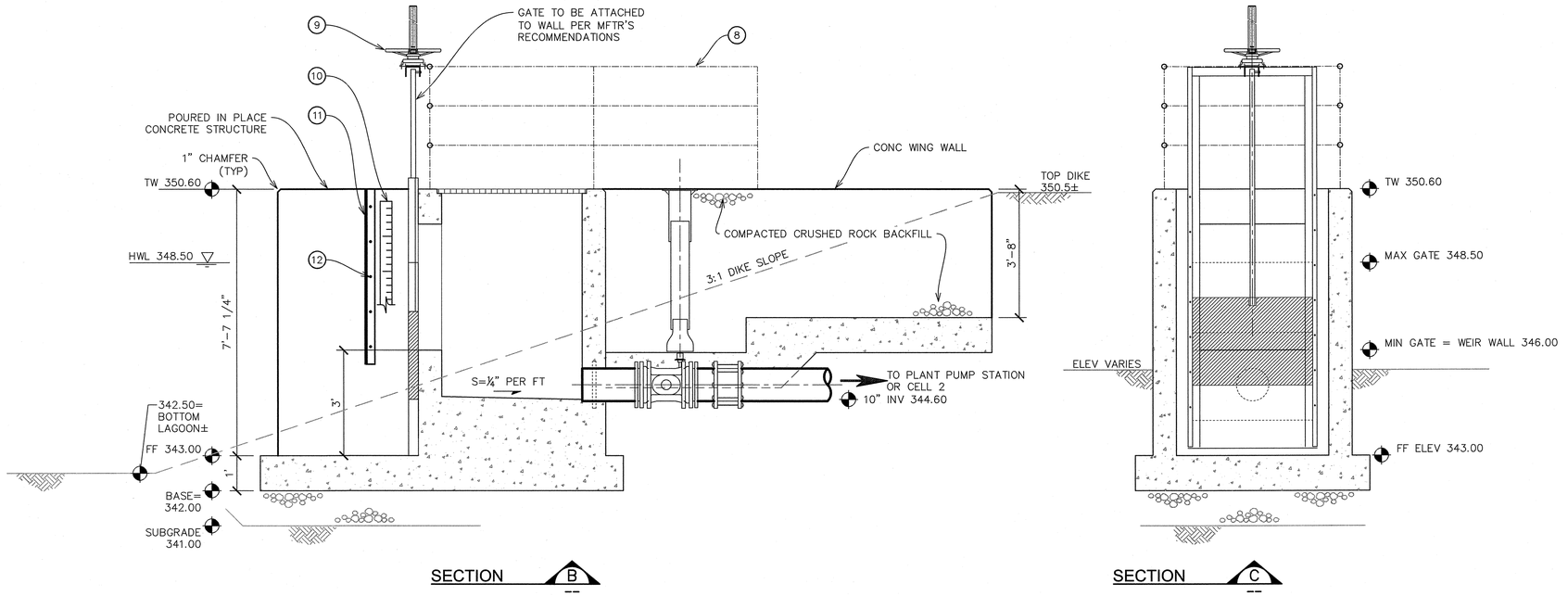


KEY CALLOUTS - OUTLET STRUCTURE

1. GATES #211 & #212 DOWNWARD OPENING SST WEIR GATE AS SPECIFIED. WEIR OPERATING RANGE 3.0 FT. TO 5.5 FT. AFF
2. 10" CL 50 D.I. WALL PIPE W/ SEEP RING, 24"L. SET PIPE FLUSH WITH WALL FACE. SEE TYPE K PENETRATION DTL 5, DWG M002.
3. 10" TRANSITION COUPLING.
4. 10" ASTM 3034 PVC PIPE TO PLANT PUMP STATION, OR 10" CL 50 D.I. PIPE TO LAGOON CELL 2.
5. EMBEDDED ANGLE GRATE SUPPORT. SEE STRUCTURAL DWGS.
6. GRATING AS SPECIFIED.
7. – NOT USED –
8. RAILING. SEE STRUCTURAL DWGS.
9. OPERATING WHEEL. SET 48" ABOVE TOP OF WALL
10. STAFF GAUGE. RANGE FROM ELEV 345.25 TO 350.25, CALIBRATE TO READ DEPTH OF POND IN FEET.
11. 1/4" ALUMINUM BAFFLE PLATE 5'H x 4'-3"W ATTACHED TO WALLS W/ SST L3x3x1/4. ATTACH PLATE TO ANGLE W/ 3/8" DIA SST BOLTS @ 6"OC.
12. 5-1/2"ø SST ANCHOR BOLTS W/ 6" MIN EMBED INTO CONC, @12" OC.
13. 10" PLUG VALVE (MJxMJ) W/ VALVE BOX, PER DTL 501, DWG C008.
14. 10" CL 50 D.I. SPOOL (PExPE).



CELL 1 SUPERNATANT CONTROL STRUCTURE TO PLANT PUMP STATION & CELL 2 (2 REQUIRED)

1/2" = 1'-0"

NO.	DATE	DESCRIPTION	BY
1		REVISIONS	

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REGISTERED PROFESSIONAL ENGINEER
OREGON
JAN. 14, 2020
CHRISTOPHER J. BRUCKTO
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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

CELL 1 OUTLET STRUCTURE MECHANICAL PLAN

DRAWING
M230
117 OF 223

JOB NUMBER
2599.3220.0

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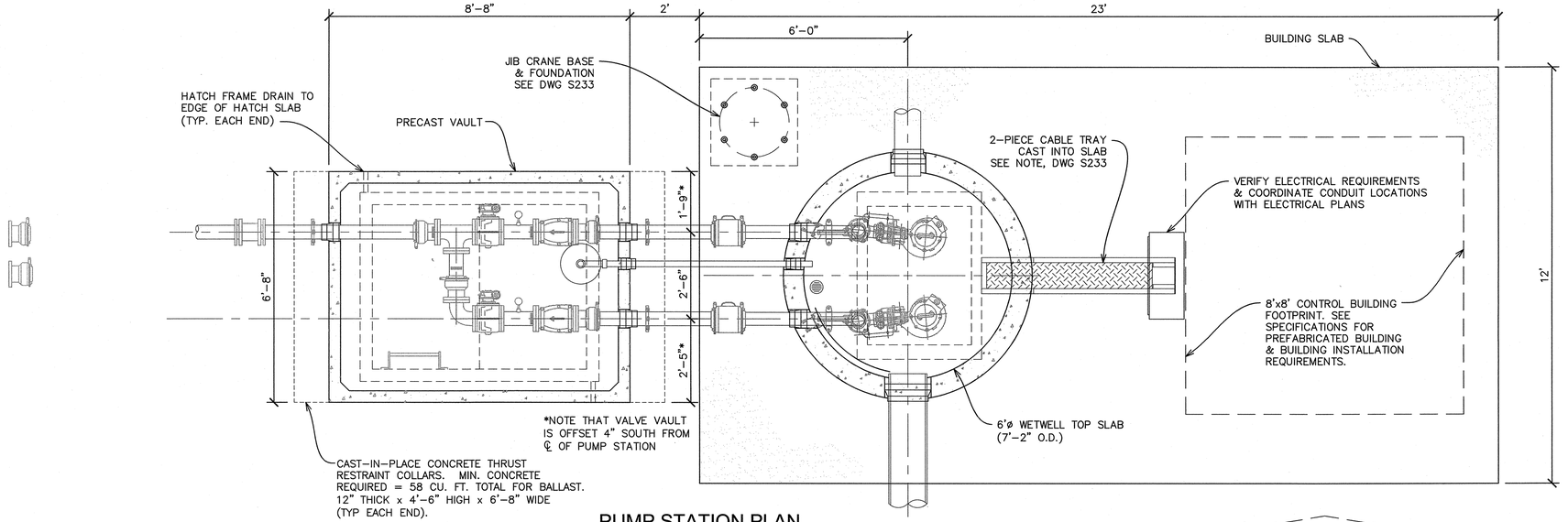
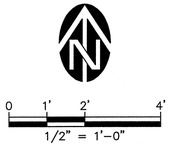
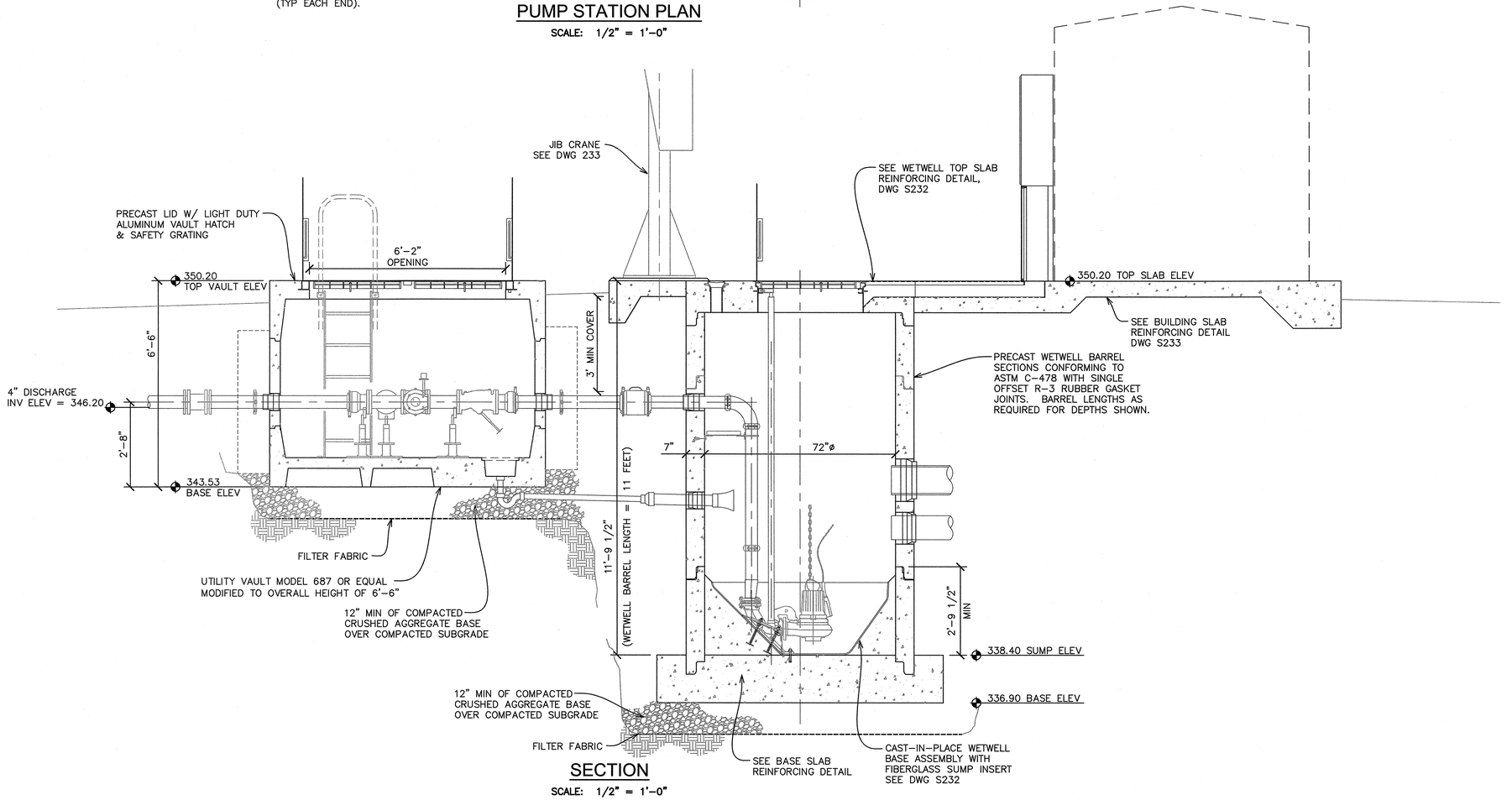


PUMP STATION PLAN

SCALE: 1/2" = 1'-0"





SECTION

SCALE: 1/2" = 1'-0"

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REGISTERED PROFESSIONAL ENGINEER
CHRISTOPHER L. BRUCATO
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JANUARY 14, 2005
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CITY OF AUMSVILLE, OREGON

WASTEWATER TREATMENT PLANT IMPROVEMENTS

PLANT PUMP STATION STRUCTURAL PLAN & SECTION

DRAWING
S231
118 OF 223

JOB NUMBER
2599.3220.0

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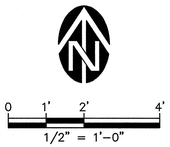
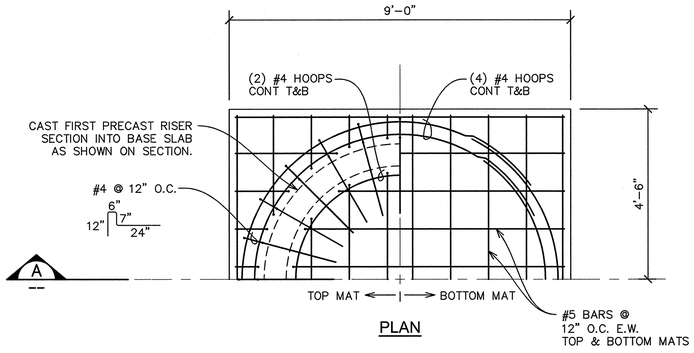
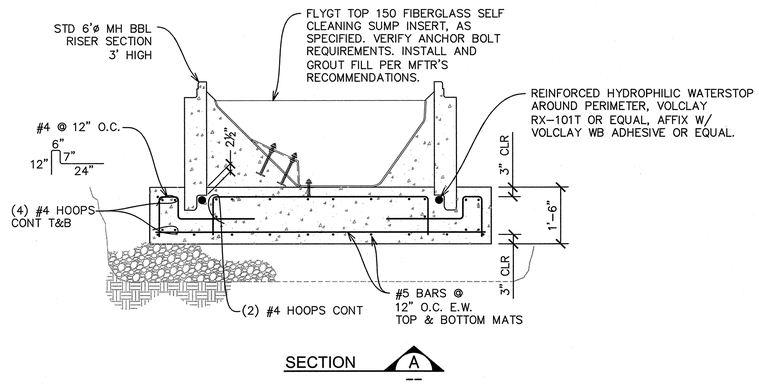




PLAN

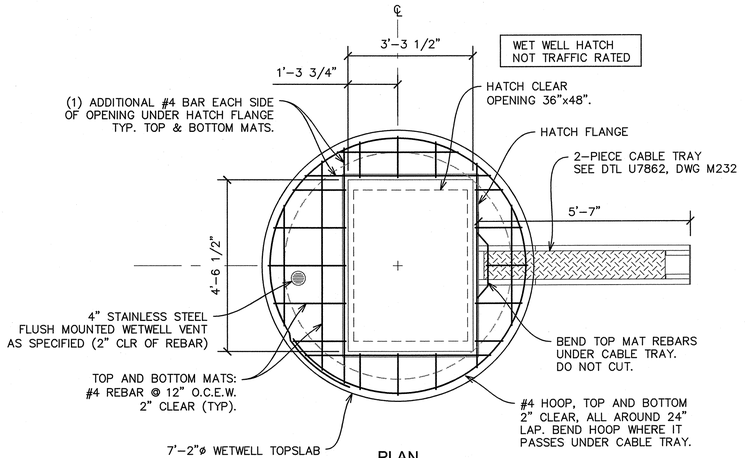
NOTE: FIRST RISER SECTION TO BE SUPPORTED INDEPENDENT OF REINFORCING STEEL (I.E. RISER SHALL BE SET WITH 1" MINIMUM CLEARANCE TO REINFORCING STEEL).



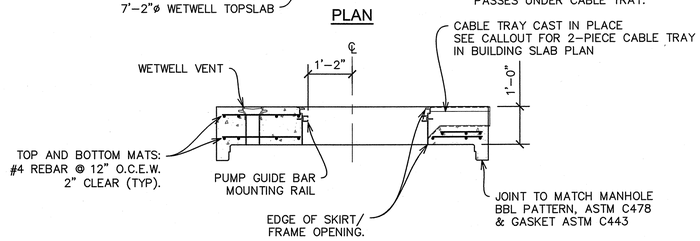
SECTION A

BASE SLAB REINFORCING

SCALE: 1/2" = 1'-0" (FULL SIZE DRAWING)



PLAN



SECTION

WETWELL TOP SLAB REINFORCING

1/2" = 1'-0"

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REGISTERED PROFESSIONAL ENGINEER
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CHRISTOPHER J. BUCKLO
86473PE
RENEWS: 12/31/2027

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CITY OF AUMSVILLE, OREGON

WASTEWATER TREATMENT PLANT IMPROVEMENTS

PLANT PUMP STATION WETWELL TOP SLAB & BASE SLAB REINFORCING

DRAWING
S232
119 OF 223

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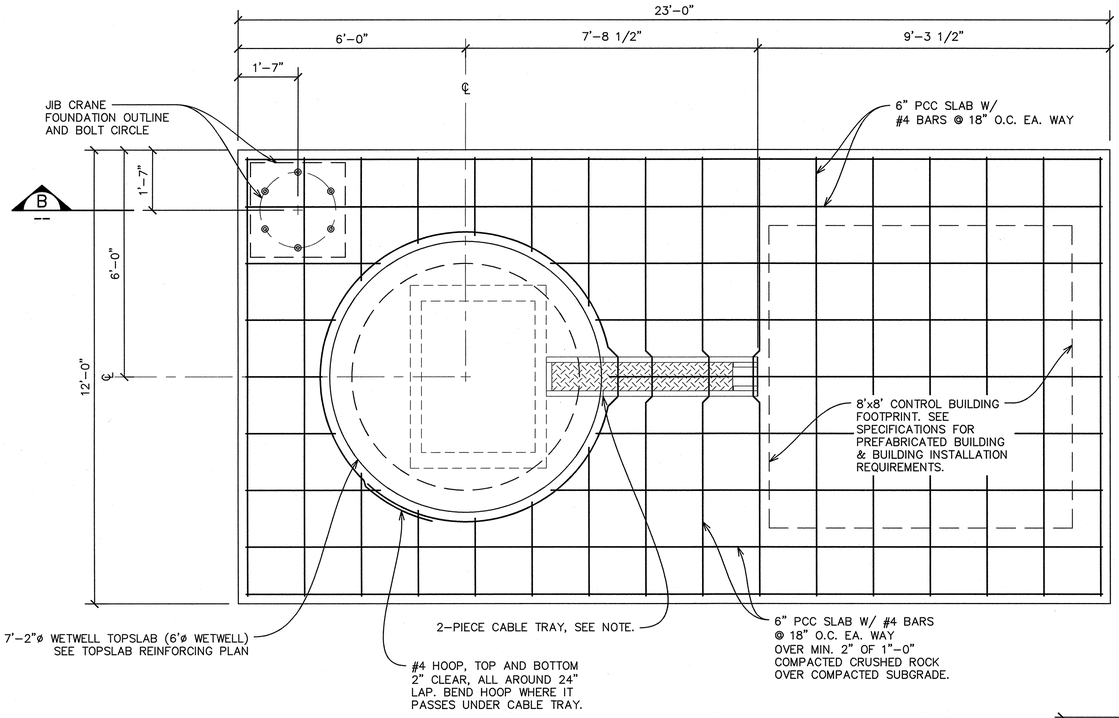
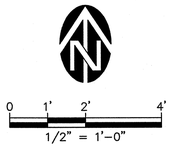


BUILDING SLAB PLAN



B

CABLE TRAY NOTE:
2-PIECE CABLE TRAY TO BE FABRICATED IN TWO PARTS. ONE PART SHALL BE CAST INTO THE WETWELL TOP SLAB. THE SECOND PART SHALL RIGIDLY ATTACH TO THE FIRST PART PRIOR TO BEING CAST INTO THE BUILDING SLAB. THE CABLE TRAY COVER PLATE SHALL BE A SINGLE PIECE COVERING THE FULL LENTGH AS SHOWN. THICKEN BUILDING SLAB TO 12" UNDER CABLE TRAY AND FOR 1 FT OUTSIDE THE CABLE TRAY ON EACH SIDE AND 1 FT BEYOND AT THE BUILDING END. TAPER THICKNESS TRANSITION AT 1:1 MAX. BEND TOP MAT REBAR UNDER CABLE TRAY. DO NOT CUT.

DESIGN REQUIREMENTS (CHAIN HOIST):
PUMP WEIGHT = 235 POUNDS

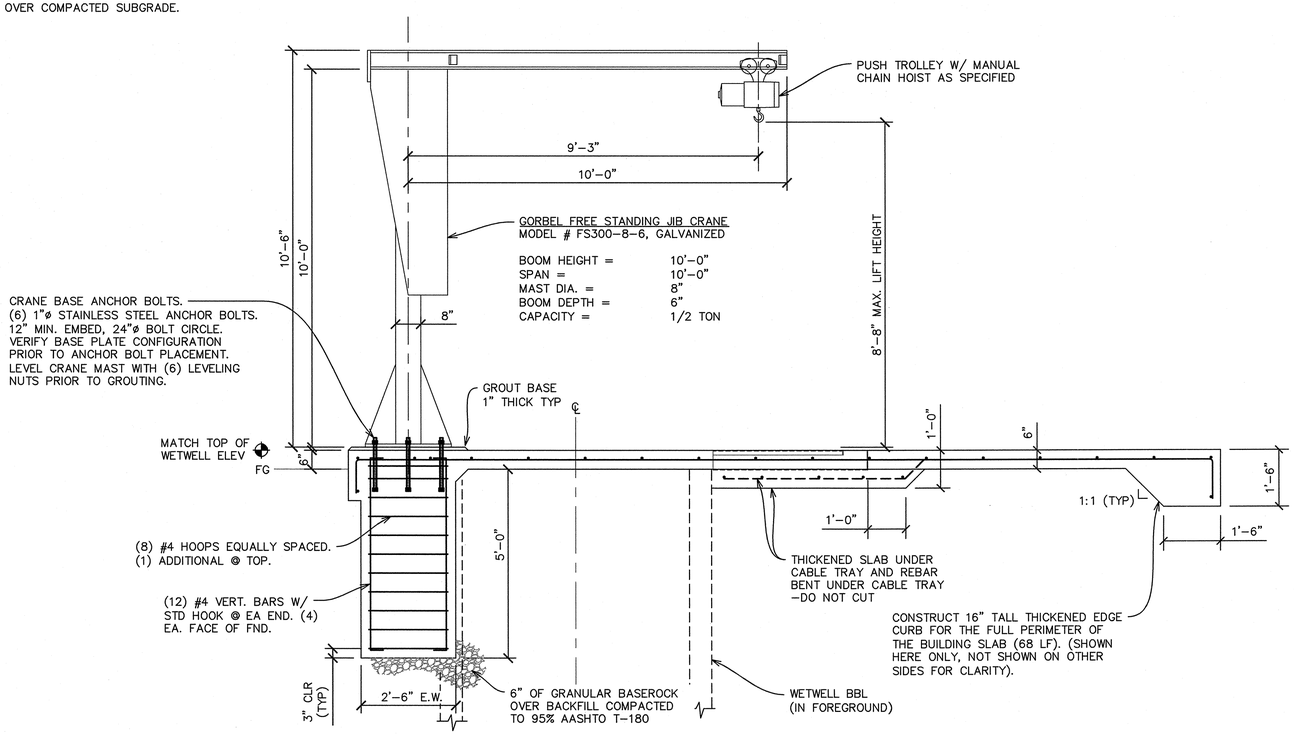
PUMP HEIGHT TO TOP OF BAIL=	26"
ASSUMED GRIP-EYE CHAIN LENGTH =	30"
HOIST/TROLLEY HT. TO HOOK EYE =	16"
REMOVAL CLEARANCE =	30"
MIN. REQUIRED UNDERBOOM HEIGHT =	102" (8'-6")
PROVIDED UNDERBOOM HEIGHT =	120" (10')
BOOM DEPTH =	6"
AVAILABLE TRUCK LOADING HEIGHT = (ASSUMING HOIST HOOK RECONNECTED TO PUMP BAIL)	78" ABOVE TOP SLAB

MANUAL CHAIN HOIST
PUSH TROLLY TYPE
CAPACITY = 1/2 TON

HOIST WEIGHT = ±90 LBS W/OUT CHAIN

WORKING CHAIN LENGTH

WETWELL DEPTH	=	+11'-0"
HEIGHT TO HOOK	=	+9'-6"
PUMP HEIGHT	=	-2'-2"
NET MIN. CHAIN REQ'D =		18'-4"



SECTION B

BUILDING SLAB & JIB CRANE FOUNDATION

1/2" = 1'-0"

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OREGON
JAN. 14, 2005
CHRISTOPHER J. BRUCKNER
RENEWS: 12/31/2027

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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

PLANT PUMP STATION BUILDING SLAB STRUCTURAL PLAN & SECTION

DRAWING
S233
120 OF 223

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2599.3220.0

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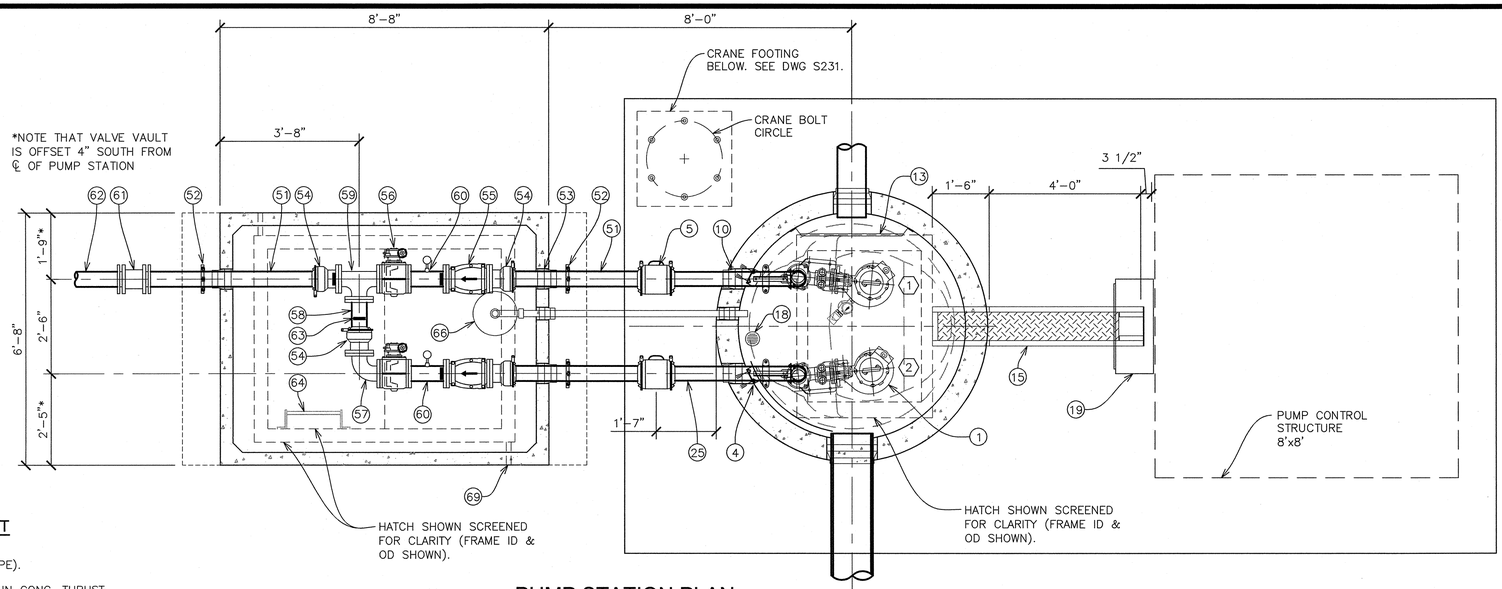
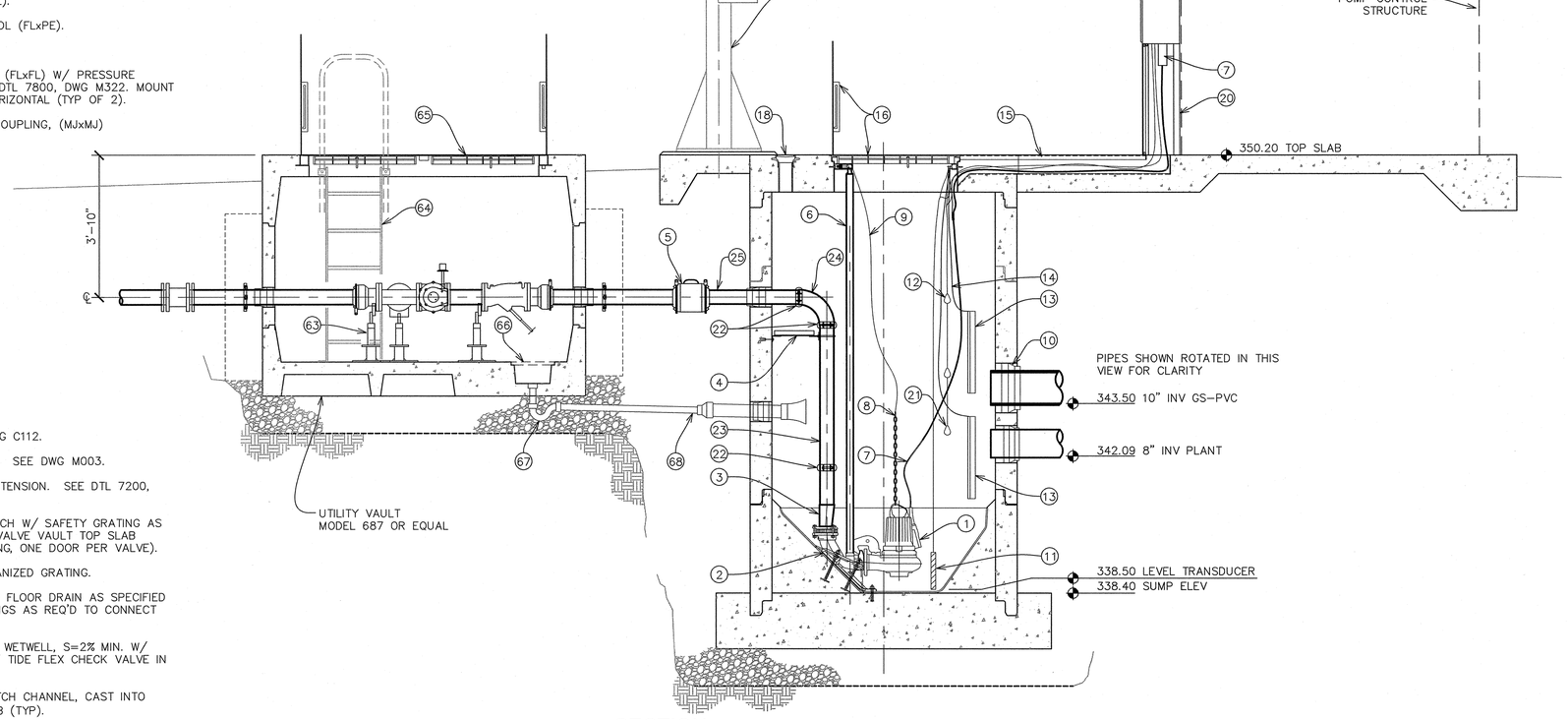


PUMP STATION PLAN

SCALE: 1/2" = 1'-0"



SECTION

SCALE: 1/2" = 1'-0"

KEY CALLOUTS - VALVE VAULT

(51) 4" CL 53 DI PIPE SPOOL (PExPE).

(52) 4" RETAINER GLAND CENTERED IN CONC. THRUST COLLAR. MEGALUG OR EQUAL (TYP).

(53) PIPE BOOT, KOR-N-SEAL OR EQUIVALENT. TYP. ALL PIPE PENETRATIONS.

(54) 4" ROMAC ALPHA FLANGE ADAPTER, OR EQUAL (TYP).

(55) 4" FLANGED SWING CHECK VALVE.

(56) 4" FLANGED ECCENTRIC PLUG VALVE, ORIENTED AS SHOWN. INSTALL WITH SHAFT HORIZONTAL AND PLUG UP WHEN OPEN.

(57) 4" D.I. 90° BEND (FLxFL).

(58) 4" CL 53 DI PIPE SPOOL (FLxPE).

(59) 4" D.I. TEE (FLxFLxFL).

(60) 4" SCH 40 SST SPOOL (FLxFL) W/ PRESSURE GAUGE ASSEMBLY PER DTL 7800, DWG M322. MOUNT GAUGE 30° UP FOR HORIZONTAL (TYP OF 2).

(61) 4" D.I. SOLID SLEEVE COUPLING, (MJxMJ) W/ RETAINER GLANDS.

(62) 4" FORCEMAIN, SEE DWG C112.

(63) TYPE A PIPE SUPPORT. SEE DWG M003.

(64) ACCESS LADDER W/ EXTENSION. SEE DTL 7200, DWG M232.

(65) ALUMINUM ACCESS HATCH W/ SAFETY GRATING AS SPECIFIED, CAST INTO VALVE VAULT TOP SLAB (57"x74" CLEAR OPENING, ONE DOOR PER VALVE).

(66) VAULT SUMP W/ GALVANIZED GRATING.

(67) 2" ABS INTEGRAL TRAP FLOOR DRAIN AS SPECIFIED W/ P-TRAP AND FITTINGS AS REQ'D TO CONNECT TO VAULT SUMP.

(68) 2" ABS DRAIN PIPE TO WETWELL, S=2% MIN. W/ 2"x4" REDUCER AND 4" TIDE FLEX CHECK VALVE IN WETWELL.

(69) PIPED DRAIN FROM HATCH CHANNEL, CAST INTO VALVE VAULT TOP SLAB (TYP).

0 1' 2' 4'

1/2" = 1'-0"

LEGEND

(1) = PUMP NUMBER

PIPE SUPPORT (IN PLAN VIEW)

KEY CALLOUTS - PUMP STATION

NOTE: ALL GROOVED PIPE JOINTS SHALL BE FLEXIBLE JOINT STYLE GROOVE AND COUPLERS.

(1) SUBMERSIBLE NON-CLOG SEWAGE PUMPS AS SPECIFIED. PROVIDE ONE PUMP WITH MIX/FLUSH VALVE.

(2) 3-INCH PUMP DISCHARGE ELBOW AS SPECIFIED.

(3) 4" SCH 40 STAINLESS STEEL DISCHARGE PIPE SPOOL WITH SCH 40 SST 4"x3" ECCENTRIC REDUCER AND GROOVED UPPER END. COORDINATE DISCHARGE CONNECTION TYPE WITH PUMP SUPPLIER.

(4) TYPE C PIPE SUPPORT. SEE DWG M003. (TYP OF 2).

(5) 4" ROMAC ALPHA COUPLING.

(6) TWO 2-INCH SCHEDULE 40 STAINLESS STEEL GUIDE BARS FOR EACH PUMP (FULL HEIGHT). ATTACH TO HATCH UNI-STRUT WITH UPPER GUIDE BAR BRACKET.

(7) PUMP POWER CABLE. PROVIDE EACH CABLE WITH A STAINLESS STEEL BASKET CABLE GRIP ATTACHED TO HOOK ON UPPER GUIDE BAR BRACKET.

(8) STAINLESS STEEL CHAIN SLING FOR PUMP RETRIEVAL USING FLYGT GRIP-EYE. ATTACH TO PUMP LIFTING HANDLE.

(9) PUMP REMOVAL LANYARD. SEE DTL U7900, DWG M232.

(10) PIPE BOOT, KOR-N-SEAL OR EQUIVALENT. TYP. ALL PIPE PENETRATIONS.

(11) PRIMARY PUMP LIQUID LEVEL CONTROL PRESSURE TRANSDUCER AS SPECIFIED. PROVIDE MOUNTING BRACKET MOUNTED TO HATCH UNI-STRUT.

(12) FLOAT SWITCH OVERFLOW ALARM. SUSPEND FROM HATCH UNI-STRUT. ALARM SET POINT ELEV=348.50

(13) STAINLESS STEEL INFLUENT DEFLECTOR WITH FULL SIZE INSPECTION HOLE AND GUILLOTINE COVER. SEE DTL U7761 DWG M232.

(14) 1/8" STAINLESS STEEL LIFTING CABLES FOR INFLUENT DEFLECTOR INSPECTION HOLE COVER. PERMANENTLY ATTACH UPPER END OF CABLE TO HATCH UNI-STRUT. (TYP 2)

(15) ALUMINUM CABLE TRAY, 2-PIECE, CAST INTO TOP SLAB & BUILDING SLAB. SEE DTL U7862, DWG M232.

(16) ALUMINUM WETWELL ACCESS HATCH CAST INTO WETWELL TOP SLAB W/ SAFETY GRATING AS SPECIFIED.

(17) JIB CRANE AS SPECIFIED. SEE STRUCTURAL DWGS.

(18) CONSTRUCT 4" STAINLESS STEEL FLUSH MOUNTED WETWELL VENT. SEE DTL 7751, DWG M232.

(19) PUMP DISCONNECT PANEL, SEE ELECTRICAL PLANS.

(20) PUMP DISCONNECT PANEL STAND TO PROVIDE ATMOSPHERIC SPERATION PER NEC REQUIREMENTS. SEE DTL 7851, DWG M232.

(21) REDUNDANT PUMP LIQUID LEVEL CONTROL FLOATS. PROVIDE MOUNTING BRACKET MOUNTED TO HATCH UNI-STRUT.
- REDUNDANT LEAD PUMP ON/REDUNDANT HIGH LEVEL ALARM ELEV = 344.22
- REDUNDANT PUMP OFF ELEV = 342.30

(22) 4" STAINLESS STEEL GROOVED COUPLING AS SPECIFIED.

(23) 4" SCH 40 SST PIPE SPOOL (GRxGR).

(24) 4" SCH 40 SST 90° ELBOW (GRxGR).

(25) 4" SCH 40 SST PIPE SPOOL (PExGR).

NO.	DATE	DESCRIPTION	BY
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DSN. CB
DRN. TMT
CKD. CB
DATE: MAY 2026

REGISTERED PROFESSIONAL ENGINEER
OREGON
JAN. 14, 2005
CHRISTOPHER J. BRUCKNER
86473PE
RENEWS: 12/31/2027

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CITY OF AUMSVILLE, OREGON

WASTEWATER TREATMENT PLANT IMPROVEMENTS

PLANT PUMP STATION MECHANICAL PLAN & SECTION

DRAWING
M231
121 OF 223

JOB NUMBER
2599.3220.0

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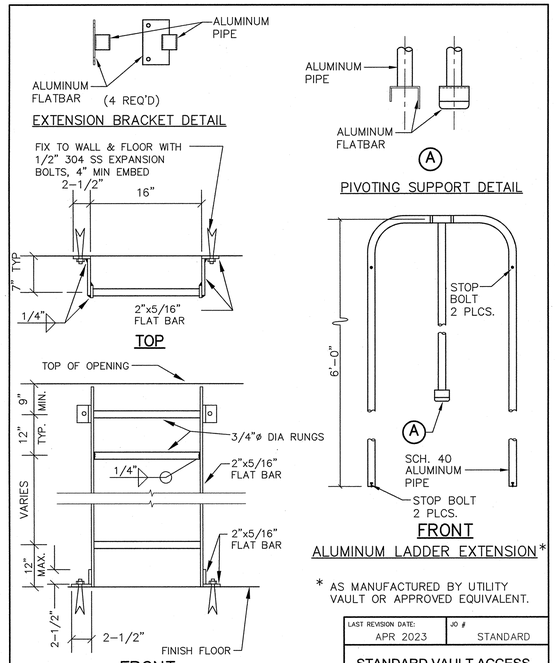
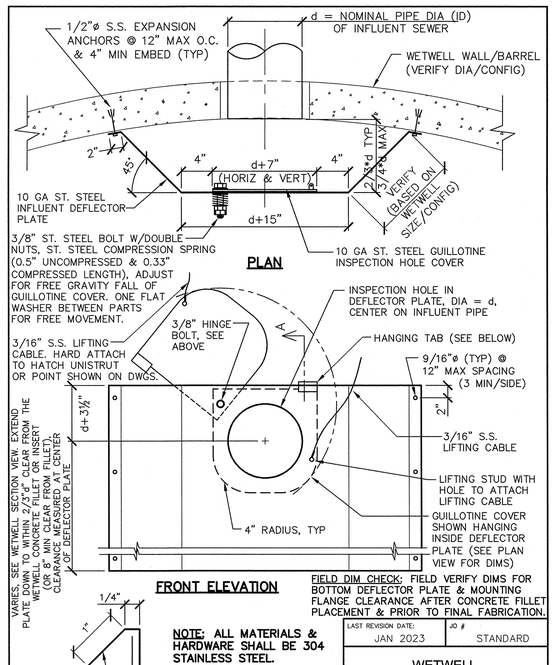
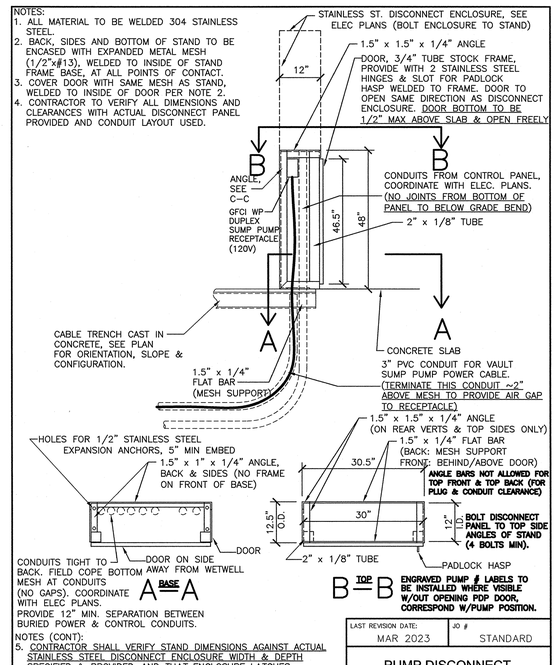


LAST REVISION DATE:	JO #
APR 2023	STANDARD
STANDARD VAULT ACCESS LADDER AND LADDER EXTENSION (NTS)	
WESTECH ENG.	DETAIL NO. 7200

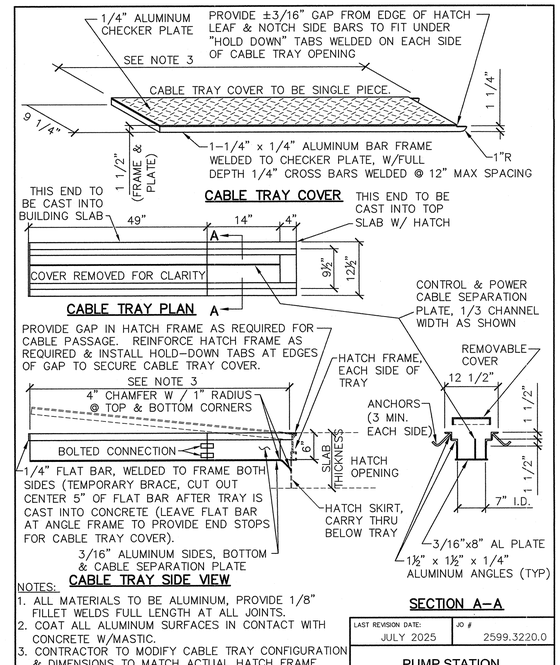


NOTE: ALL MATERIALS & HARDWARE SHALL BE 304 STAINLESS STEEL.

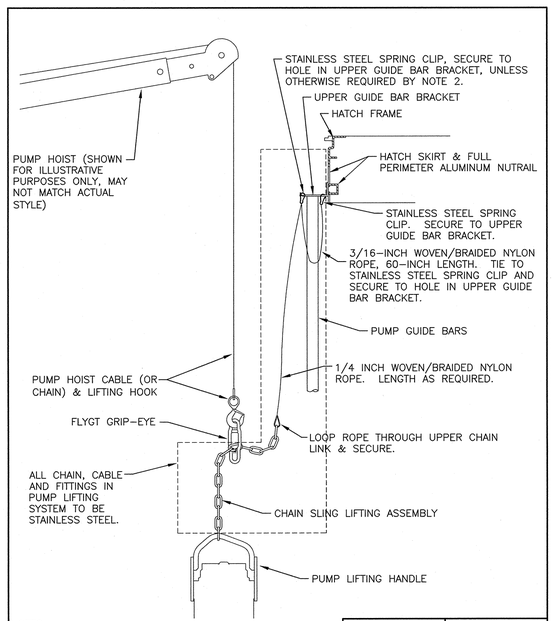
LAST REVISION DATE:	JO #
JAN 2023	STANDARD
WETWELL INFLUENT DEFLECTOR (NTS)	
WESTECH ENG.	DETAIL NO. 7761



LAST REVISION DATE:	JO #
MAR 2023	STANDARD
PUMP DISCONNECT PANEL STAND (DUPLEX, TOP OF SLAB) (NTS)	
WESTECH ENG.	DETAIL NO. 7851

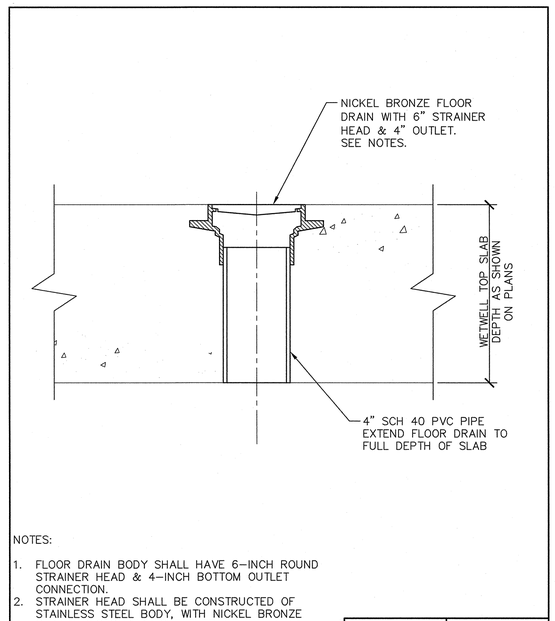


LAST REVISION DATE:	JO #
JULY 2025	2599.3220.0
PUMP STATION 2-PART CABLE TRAY (NTS)	
WESTECH ENG.	DETAIL NO. U7862



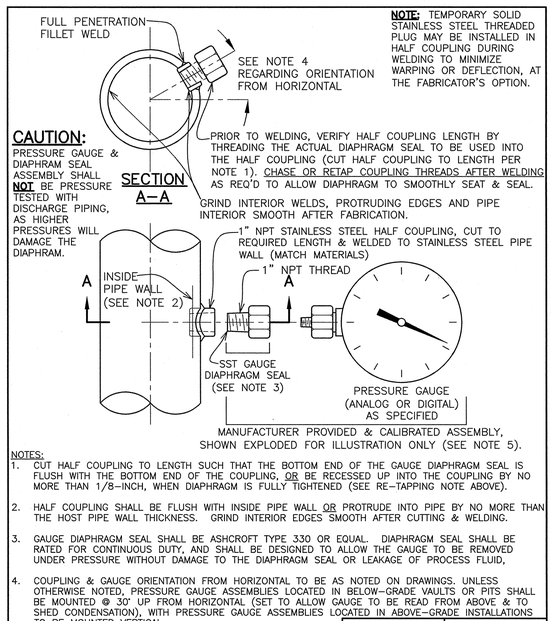
NOTES:
1. PRIMARY PUMP REMOVAL WILL BE BY GRAPPLE HOOK ON JIB CRANE. THE GRIP-EYE ASSEMBLY IS INTENDED FOR USE WHEN THE WETWELL CANNOT BE EMPTIED AND THE PUMP LIFT HANDLE IS NOT VISIBLE FOR PUMP REMOVAL WITH THE GRAPPLE HOOK.
2. IF UPPER GUIDE BAR BRACKET IS MORE THAN 12" BELOW THE TOP OF HATCH, AN ADDITIONAL CLOSED LOOP HOOK SHALL BE INSTALLED IN UPPER 12" OF HATCH SKIRT (ATTACH TO CONCRETE WITH ½-INCH STAINLESS STEEL EXPANSION ANCHORS, 4" MIN EMBED).

LAST REVISION DATE:	JO #
DEC 2022	STANDARD
PUMP REMOVAL ASSEMBLY (WITH JIB CRANE) (NTS)	
WESTECH ENG.	DETAIL NO. 7900



NOTES:
1. FLOOR DRAIN BODY SHALL HAVE 6-INCH ROUND STRAINER HEAD & 4-INCH BOTTOM OUTLET CONNECTION.
2. STRAINER HEAD SHALL BE CONSTRUCTED OF STAINLESS STEEL BODY, WITH NICKEL BRONZE STRAINER SECURED TO THE FRAME WITH VANDAL-PROOF SCREWS.
3. FLOOR DRAIN SHALL BE JAY R SMITH FIGURE 2005Y, 6" ROUND TOP, NICKEL BRONZE STRAINER, 4" OUTLET, VANDAL PROOF SCREWS, OR APPROVED EQUAL.

LAST REVISION DATE:	JO #
SEPT 2025	2599.3220.0
WETWELL VENT (NTS)	
WESTECH ENG.	DETAIL NO. 7751



NOTES:
1. CUT HALF COUPLING TO LENGTH SUCH THAT THE BOTTOM END OF THE GAUGE DIAPHRAGM SEAL IS FLUSH WITH THE BOTTOM END OF THE COUPLING, OR BE RECESSED UP INTO THE COUPLING BY NO MORE THAN 1/8-INCH, WHEN DIAPHRAGM IS FULLY TIGHTENED (SEE RE-TAPPING NOTE ABOVE).
2. HALF COUPLING SHALL BE FLUSH WITH INSIDE PIPE WALL OR PROTRUDE INTO PIPE BY NO MORE THAN THE HOST PIPE WALL THICKNESS. GRIND INTERIOR EDGES SMOOTH AFTER CUTTING & WELDING.
3. GAUGE DIAPHRAGM SEAL SHALL BE ASHCROFT TYPE 330 OR EQUAL. DIAPHRAGM SEAL SHALL BE RATED FOR CONTINUOUS DUTY, AND SHALL BE DESIGNED TO ALLOW THE GAUGE TO BE REMOVED UNDER PRESSURE WITHOUT DAMAGE TO THE DIAPHRAGM SEAL OR LEAKAGE OF PROCESS FLUID,
4. COUPLING & GAUGE ORIENTATION FROM HORIZONTAL TO BE AS NOTED ON DRAWINGS. UNLESS OTHERWISE NOTED, PRESSURE GAUGE ASSEMBLIES LOCATED IN BELOW-GRADE VAULTS OR PITS SHALL BE MOUNTED @ 30° UP FROM HORIZONTAL (SET TO ALLOW GAUGE TO BE READ FROM ABOVE & TO SHED CONDENSATION), WITH PRESSURE GAUGE ASSEMBLIES LOCATED IN ABOVE-GRADE INSTALLATIONS TO BE MOUNTED VERTICAL.
5. DIAPHRAGM & GAUGE ASSEMBLY SHALL BE SUPPLIED BY THE MANUFACTURER AS A CALIBRATED GLYCERIN FILLED SYSTEM (IE. LIQUID FILLED INTERNAL COMPONENTS TO EXCLUDE AIR POCKETS, WHICH WILL COMPROMISE PRESSURE READING ACCURACY). NOTE: LIQUID FILLED GAUGE FACE NOT REQUIRED.
6. FINISHED SPOOL (W/HALF COUPLING INSTALLED) SHALL BE INSPECTED BY THE ENGINEER AFTER WELDING BUT PRIOR TO FIELD INSTALLATION (OR BE REMOVED FOR SUCH INSPECTION & REINSTALLED AT NO COST TO OWNER).

LAST REVISION DATE:	JO #
OCT 2024	STANDARD
PRESSURE GAUGE ASSY. WITH SCREW-IN STAINLESS STEEL DIAPHRAGM (NTS)	
WESTECH ENG.	DETAIL NO. 7800

NO.	DATE	DESCRIPTION REVISIONS	BY
1			

VERIFY SCALE
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DSN. CB
DRN. TMT
CKD. CB
DATE: MAY 2026

REGISTERED PROFESSIONAL ENGINEER
OREGON
JAN. 14, 2005
CHRISTOPHER J. BUCKLEY
RENEWS: 12/31/2027

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
3841 Fairview Industrial Dr. S.E., Suite 100, Salem, OR 97302
Phone: (503) 585-2474 Fax: (503) 585-3986
E-mail: westech@westech-eng.com

CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

PUMP STATION MECHANICAL DETAILS

DRAWING
M232
122 OF 223

JOB NUMBER
2599.3220.0

5/26/2026 12:21:17 PM
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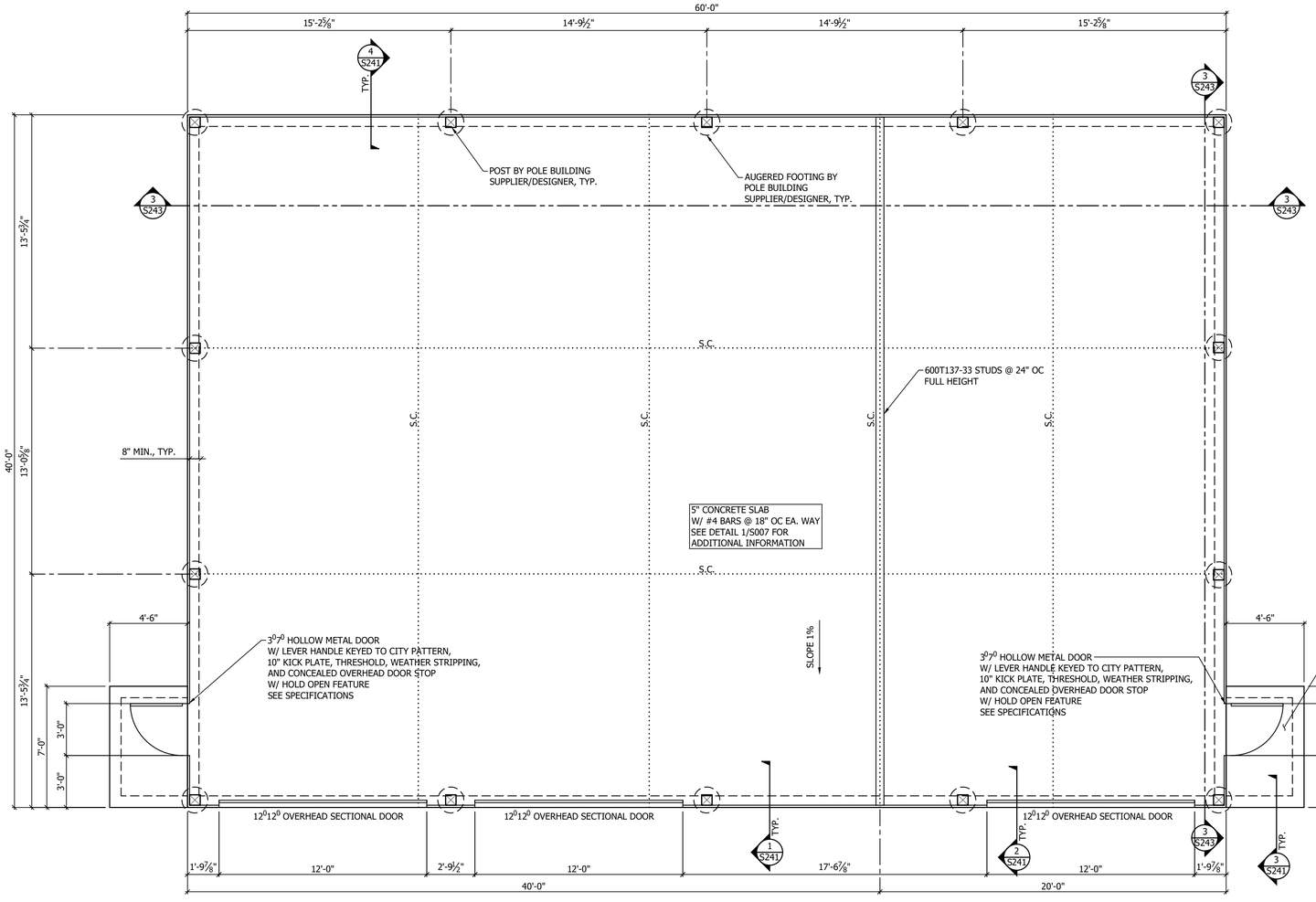
POLE BUILDING TO BE A BIDDER DESIGN, DEFERRED SUBMITTAL PRODUCT.



STORAGE BUILDING - FLOOR PLAN

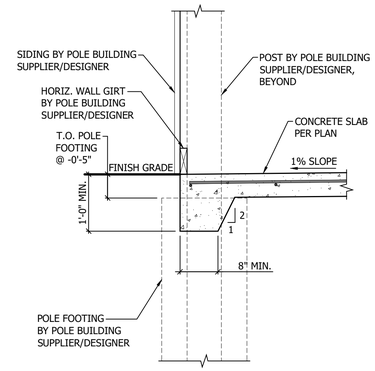
1/4" = 1'-0"

LEGEND

S.C.	SAW CUT PER DETAIL 1/S007

GENERAL SHEET NOTES

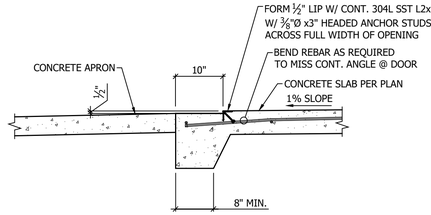
A. SAWCUTS AND CONSTRUCTION JOINTS ARE PER SUGGESTED. CONTRACTOR SHALL SUBMIT CONSTRUCTION JOINT AND SAWCUT PLAN TO ENGINEER OF RECORD FOR APPROVAL.



TYPICAL SLAB EDGE

3/4" = 1'-0"

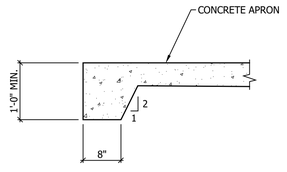
1 S241



SLAB EDGE @ ROLLING DOOR

3/4" = 1'-0"

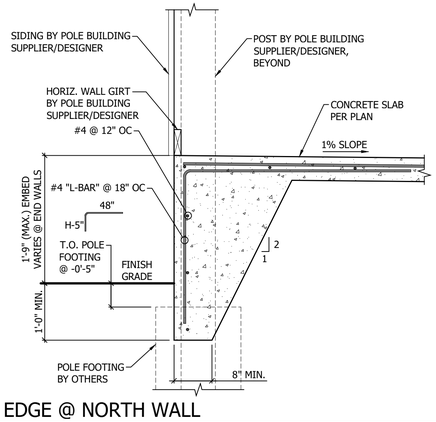
2 S241



APRON SLAB EDGE

3/4" = 1'-0"

3 S241



SLAB EDGE @ NORTH WALL

3/4" = 1'-0"

4 S241

MSC ENGINEERS
CONSULTING STRUCTURAL ENGINEERS
SINCE 1925
3470 Ogden Place NE, Suite 100
Salem, OR 97301
503.585.2474
msceng@msceng.com

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		REVISIONS	

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING
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DSN. CBS
DRN. SMC
CKD. CBS
DATE: MAY 26

REGISTERED PROFESSIONAL ENGINEER
63202
DIGITALLY SIGNED
OREGON
CAMERON B. SWEARINGIN
EXPIRES: JUNE 30, 2028

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
3841 Fairview Industrial Dr. S.E., Suite 100, Salem, OR 97302
Phone: (503) 585-2474 Fax: (503) 585-3986
E-mail: westech@westech-eng.com

CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

STORAGE BUILDING
FLOOR PLAN & SLAB DETAILS

DRAWING
S241
123 OF 223

JOB NUMBER
231048

5/19/2026 7:26:36 AM
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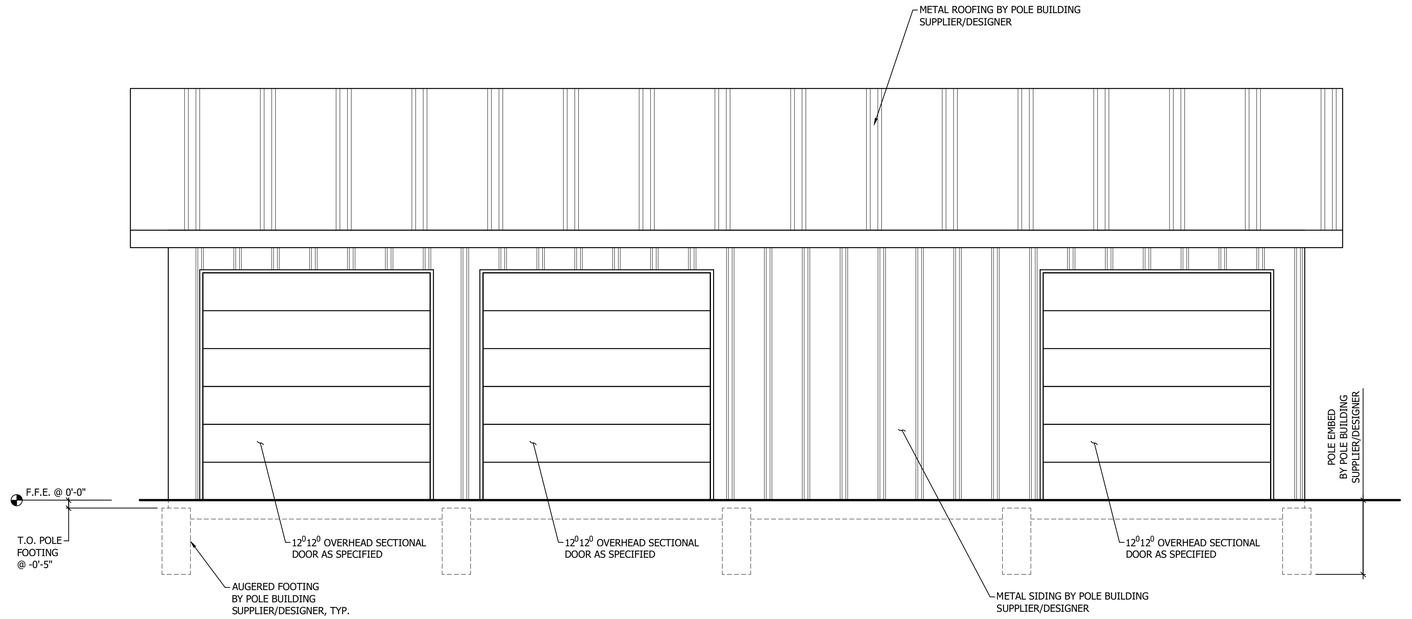
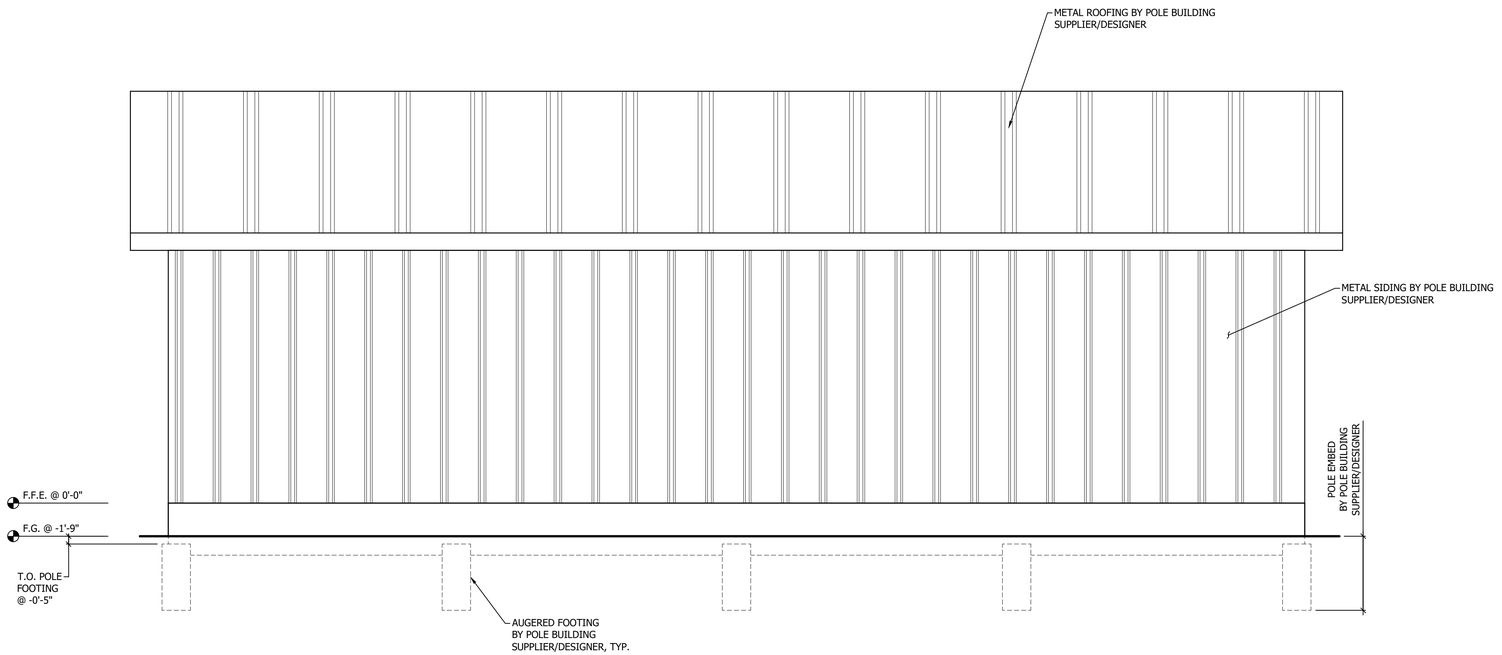


STORAGE BUILDING - SOUTH ELEVATION

1/4" = 1'-0"

1 S242



STORAGE BUILDING - NORTH ELEVATION

1/4" = 1'-0"

2 S242

MSC ENGINEERS
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SINCE 1925

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		REVISIONS	

VERIFY SCALE
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DRN. SMC
CKD. CBS
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REGISTERED PROFESSIONAL ENGINEER
63202
DIGITALLY SIGNED
OREGON
STEWART B. CAMERON
RENEWAL: JUNE 30, 2028

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
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E-mail: westech@westech-eng.com

CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

STORAGE BUILDING ELEVATIONS

DRAWING
S242
124 OF 223

JOB NUMBER
231048

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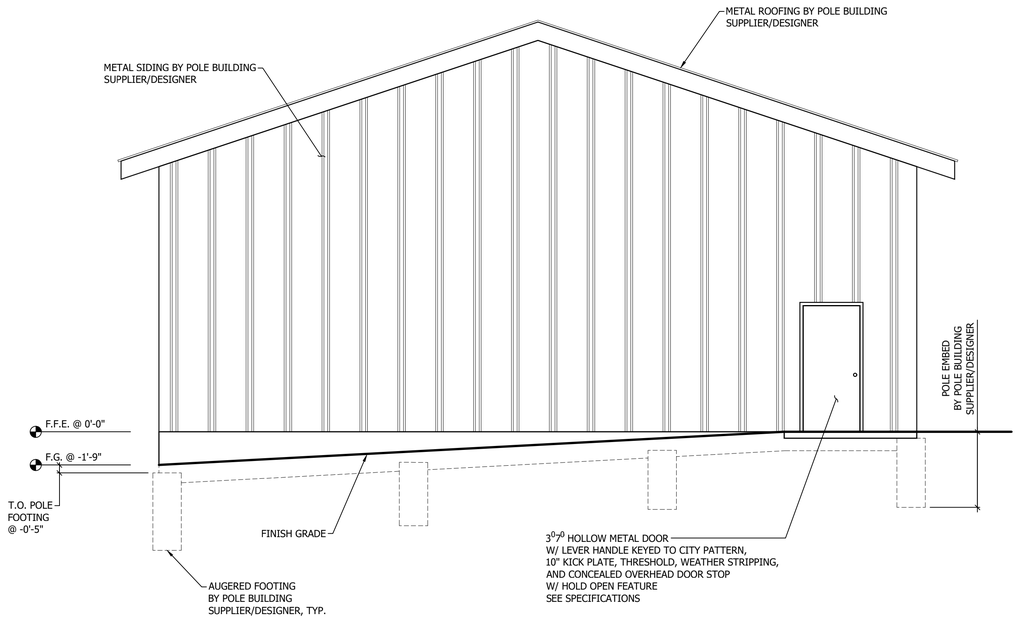
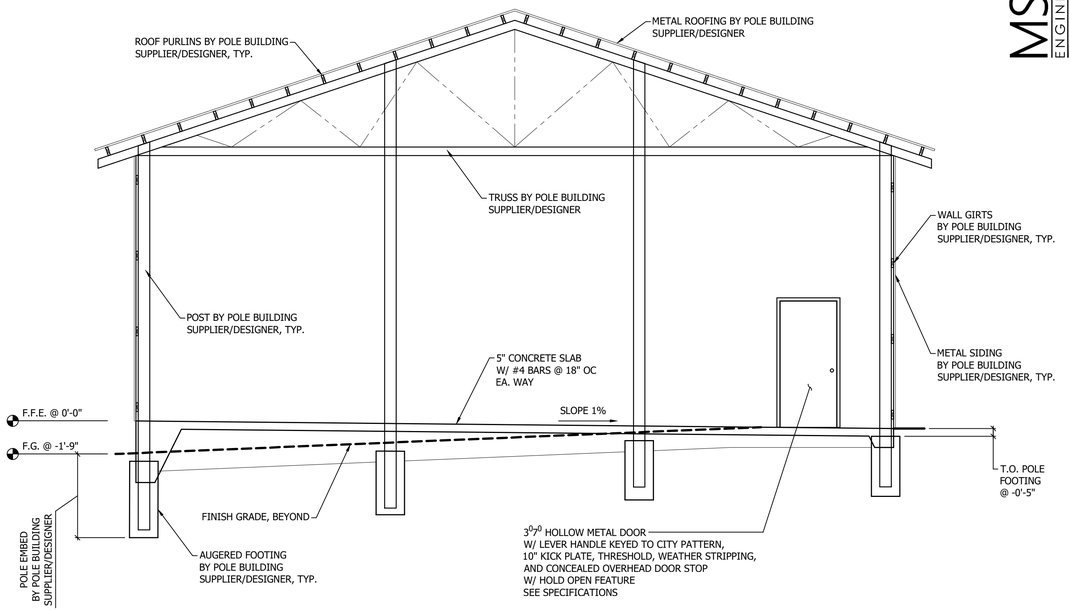


STORAGE BUILDING - WEST ELEVATION (EAST ELEVATION OPP.)

1/4" = 1'-0"

NOTE: EAST ELEVATION OPPOSITE

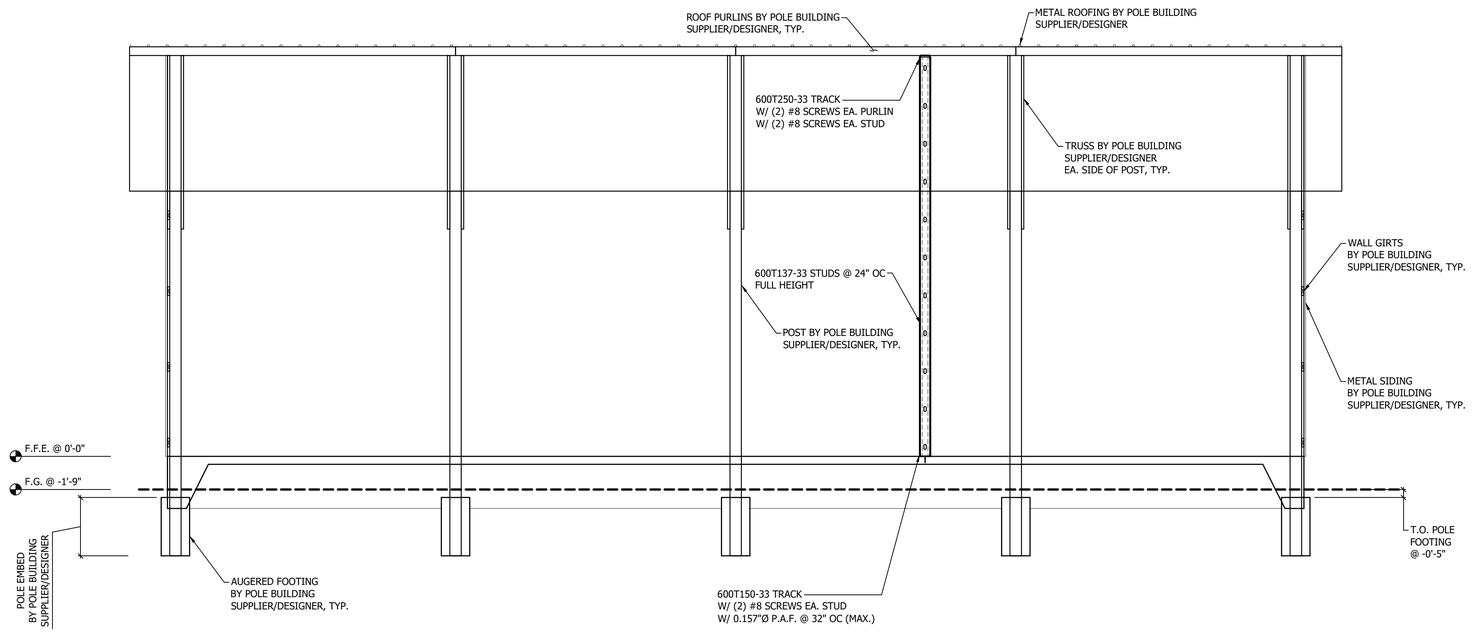
1 / S243



STORAGE BUILDING - TRANSVERSE SECTION

1/4" = 1'-0"

2 / S243



STORAGE BUILDING - LONGITUDINAL SECTION

1/4" = 1'-0"

3 / S243

MSC ENGINEERS
CONSULTING STRUCTURAL ENGINEERS
SINCE 1925
3430 Ridgeview Place NE
Salem, OR 97301
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mscengineers.com

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CKD. CBS
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63202
DIGITALLY SIGNED
OREGON
CAMERON B. SWEARINGIN
EXPIRES: JUNE 30, 2028

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
3841 Fairview Industrial Dr. S.E., Suite 100, Salem, OR 97302
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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

STORAGE BUILDING ELEVATIONS & SECTIONS

DRAWING
S243
125 OF 223

JOB NUMBER
231048

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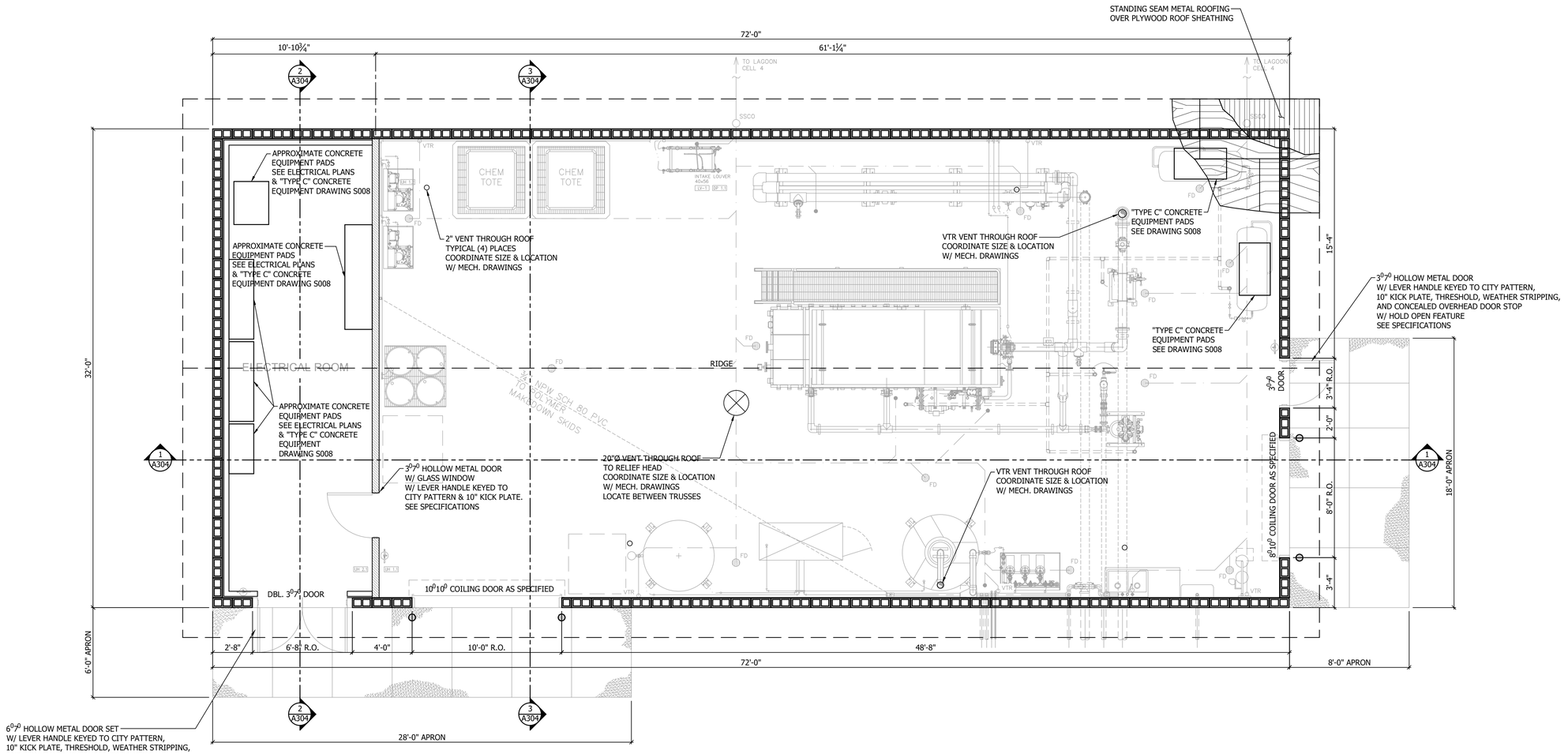

DAF BUILDING - FLOOR PLAN

1/4" = 1'-0"

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DRN. SMC
CKD. CBS
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DIGITALLY SIGNED
OREGON
CAMERON B. SWARTWOUT
EXPIRES: JUNE 30, 2028

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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

DAF BUILDING FLOOR PLAN

DRAWING
A301
126 OF 223

JOB NUMBER
231048

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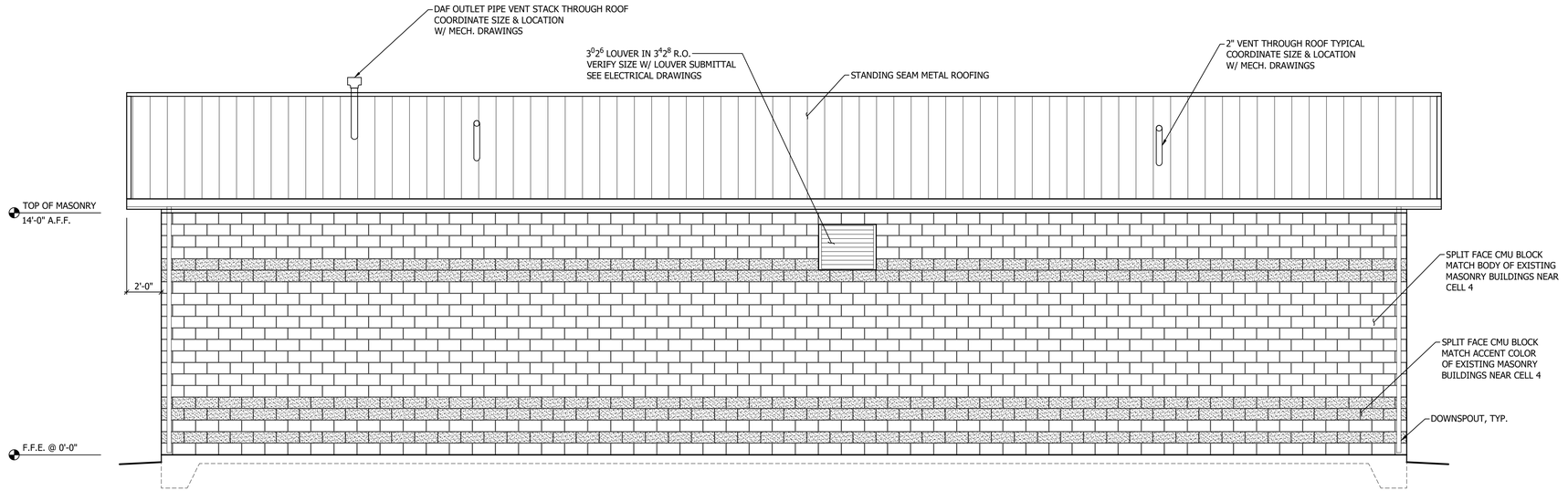
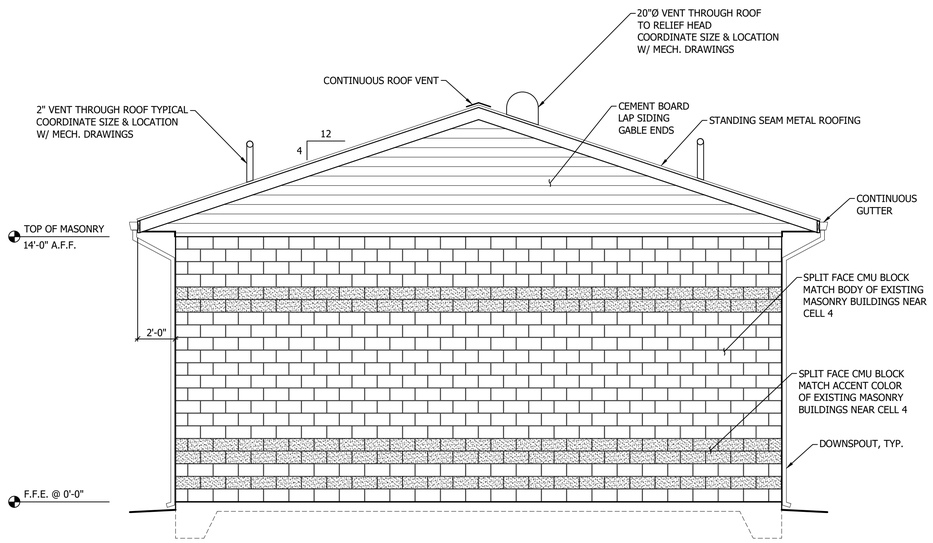


DAF BUILDING - NORTH ELEVATION

1/4" = 1'-0"

1 / A302



DAF BUILDING - EAST ELEVATION

1/4" = 1'-0"

2 / A302

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CKD. CBS
DATE: MAY '26

REGISTERED PROFESSIONAL ENGINEER
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DIGITALLY SIGNED
OREGON
CAMERON B. SWARTWOUT
EXPIRES: JUNE 30, 2028

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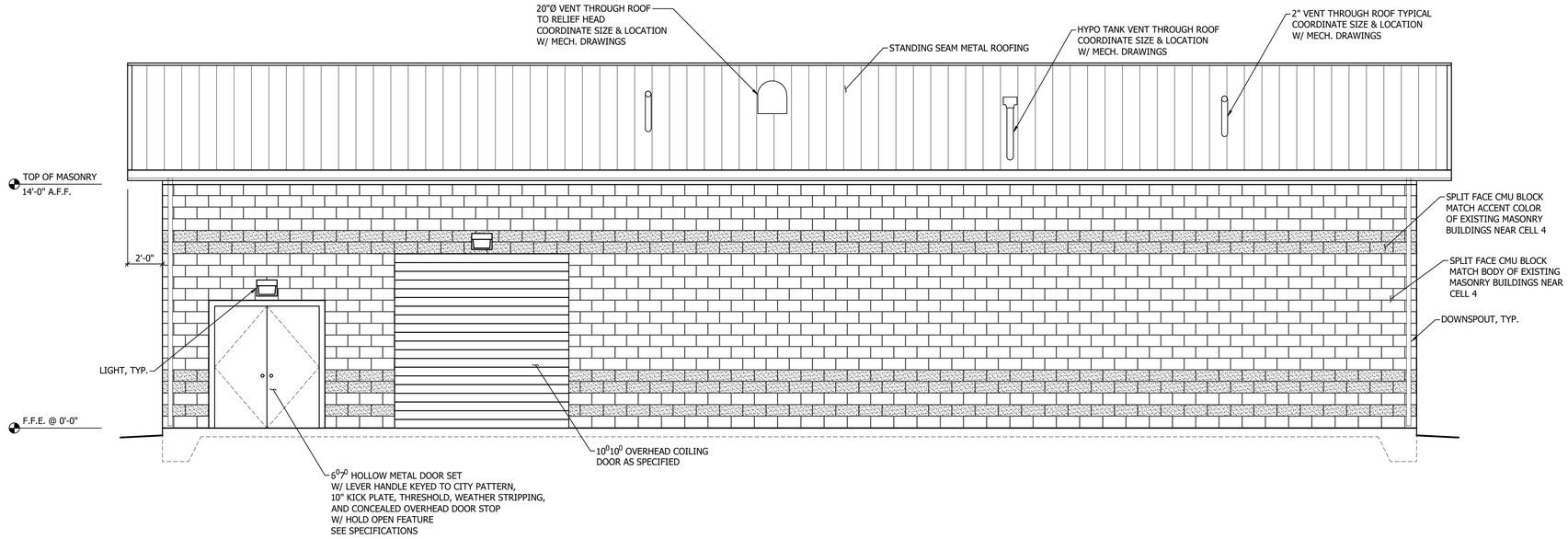
E-mail: westech@westech-eng.com

CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

DAF BUILDING ELEVATIONS

DRAWING
A302
127 OF 223

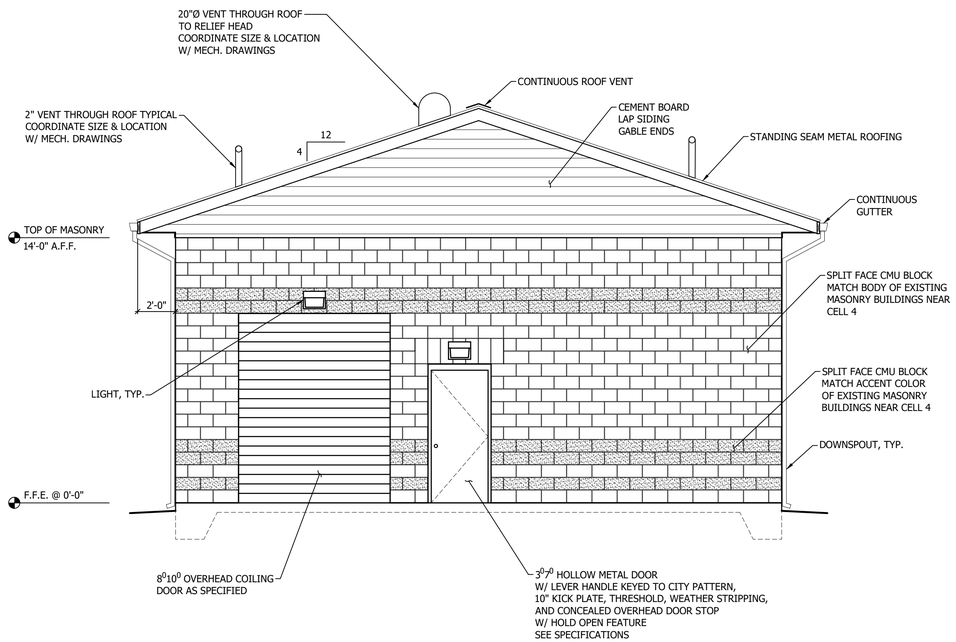
JOB NUMBER
231048



DAF BUILDING - SOUTH ELEVATION

1/4" = 1'-0"

1 A303



DAF BUILDING - WEST ELEVATION

1/4" = 1'-0"

2 A303

MSC ENGINEERS
CONSULTING STRUCTURAL ENGINEERS
SINCE 1925

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

VERIFY SCALE
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DSN. CBS
DRN. SMC
CKD. CBS
DATE: MAY '26

REGISTERED PROFESSIONAL ENGINEER
63202
DIGITALLY SIGNED
OREGON
CAMERON B. SWEARINGEN
EXPIRES: JUNE 30, 2028

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
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Phone: (503) 585-2474 Fax: (503) 585-3986
E-mail: westech@westech-eng.com

CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

DAF BUILDING ELEVATIONS

DRAWING
A303
128 OF 223

JOB NUMBER
231048

5/19/2026 7:26:43 AM
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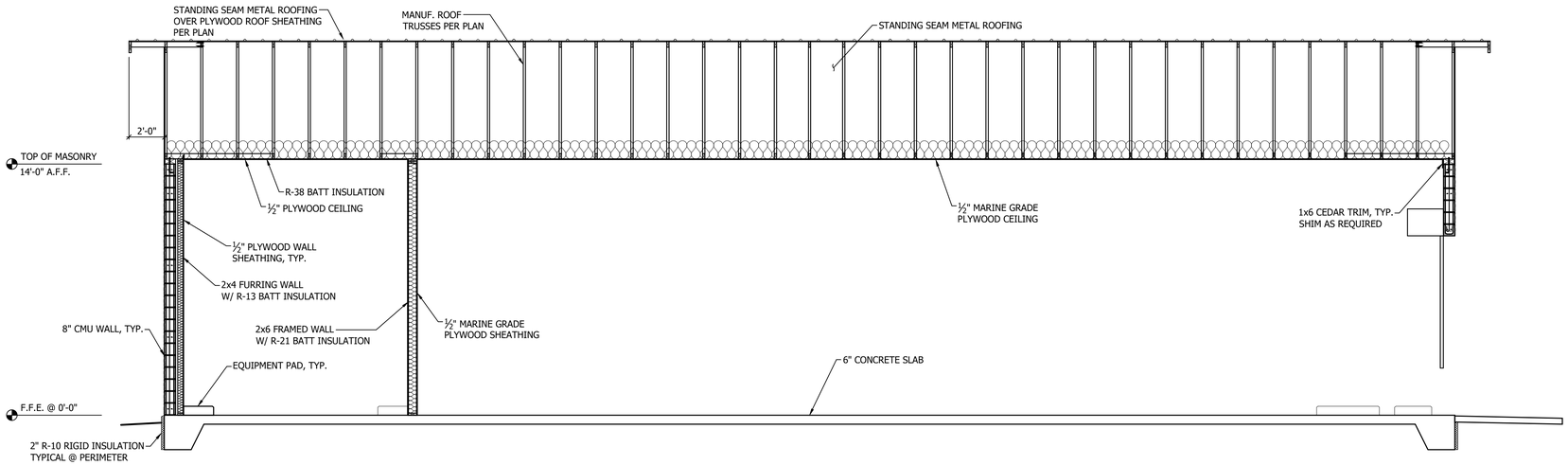
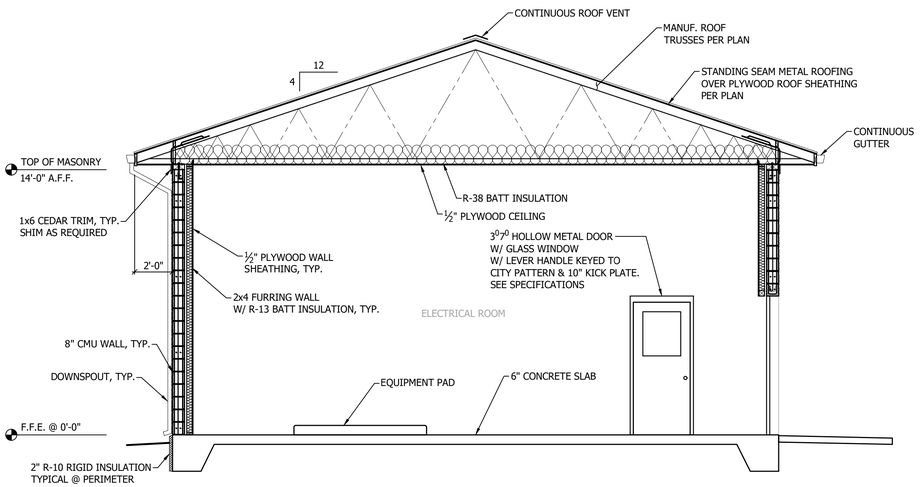


DAF BUILDING - LONGITUDINAL SECTION

1/4" = 1'-0"

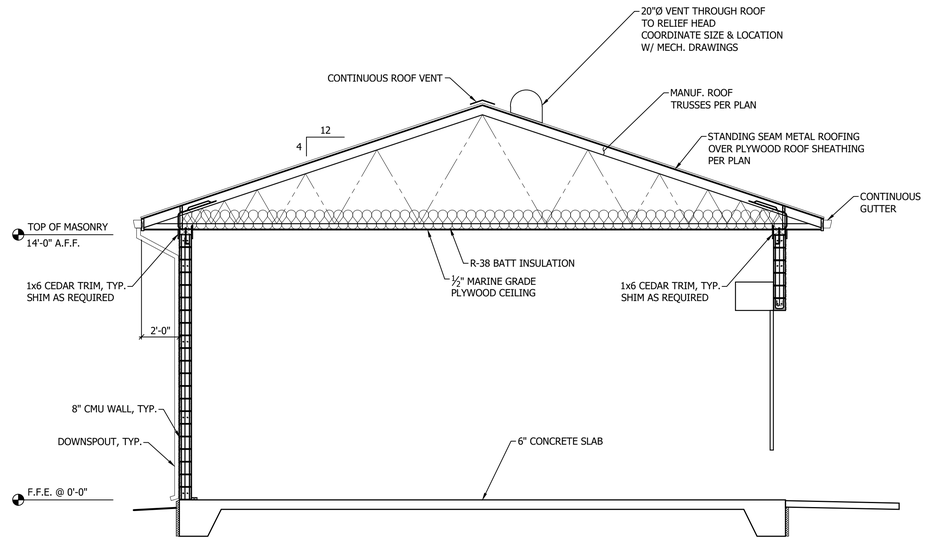
1 A304



DAF BUILDING - TRANSVERSE SECTION @ ELECTRICAL ROOM

1/4" = 1'-0"

2 A304



DAF BUILDING - TRANSVERSE SECTION

1/4" = 1'-0"

3 A304

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CONSULTING STRUCTURAL ENGINEERS
SINCE 1925
3457 Ryan Place N.E.
Salem, OR 97301
503.585.0787
mscengineers.com

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CKD. CBS
DATE: MAY 26

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63202
DIGITALLY SIGNED
OREGON
CAMERON B. SWARTWEIN
2026
EXPIRES: JUNE 30, 2028

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
3841 Fairview Industrial Dr. S.E., Suite 100, Salem, OR 97302
Phone: (503) 585-2474 Fax: (503) 585-3986
E-mail: westech@westech-eng.com

CITY OF AUMSVILLE, OREGON

WASTEWATER TREATMENT PLANT IMPROVEMENTS

DAF BUILDING SECTIONS

DRAWING
A304
129 OF 223

JOB NUMBER
231048

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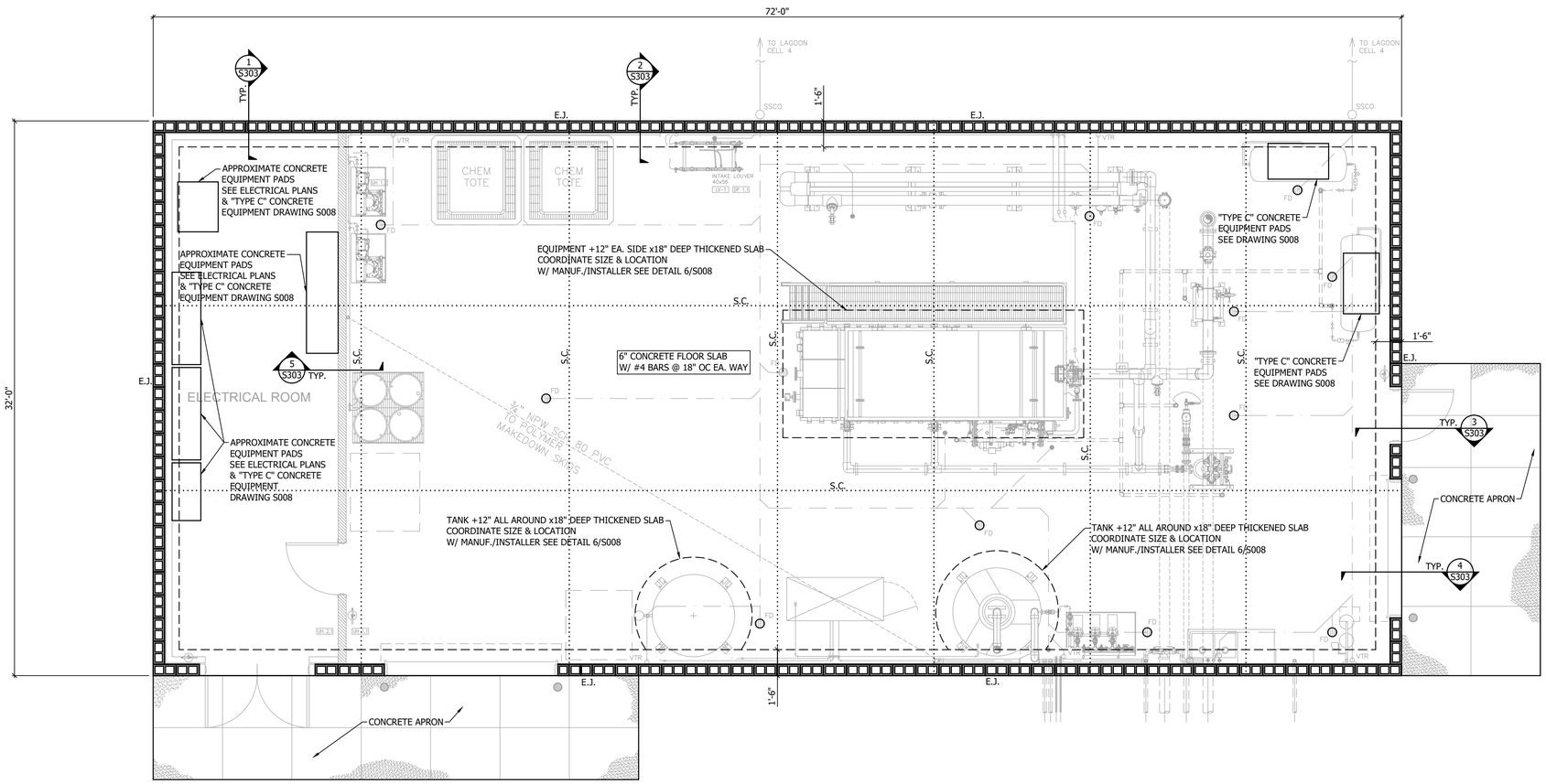

DAF BUILDING - FOUNDATION PLAN

1/4" = 1'-0"

LEGEND

	8" SPLIT FACE MASONRY WALL
FD	FLOOR DRAIN
S.C.	SAW CUT
C.J.	CONSTRUCTION JOINT
E.J.	MASONRY EXPANSION JOINT SEE DETAIL 4/S009

TRUSS MANUFACTURER TO REFER TO STRUCTURAL PLANS FOR LAYOUT AND BEARING LOCATIONS.

GENERAL SHEET NOTES

A. SLOPE SLAB 1% TO DRAIN IN AREAS SHOWN.
B. SAWCUTS AND CONSTRUCTION JOINTS ARE PER SUGGESTED. CONTRACTOR SHALL SUBMIT CONSTRUCTION JOINT AND SAWCUT PLAN TO ENGINEER OF RECORD FOR APPROVAL.

MSC ENGINEERS
CONSULTING STRUCTURAL ENGINEERS
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CITY OF AUMSVILLE, OREGON

WASTEWATER TREATMENT PLANT IMPROVEMENTS

DAF BUILDING
FOUNDATION PLAN

DRAWING
S301
130 OF 223

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231048

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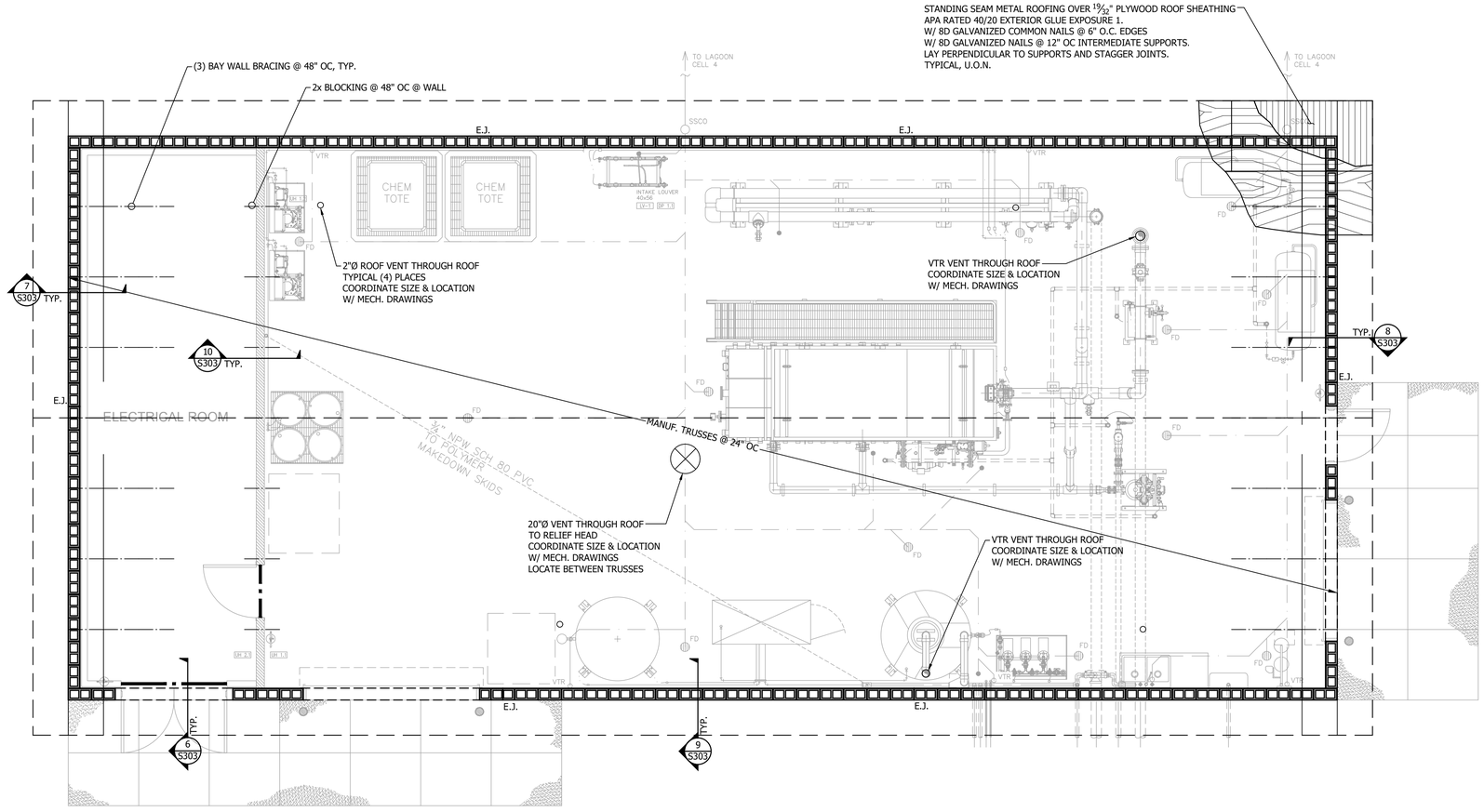

DAF BUILDING - ROOF FRAMING PLAN

1/4" = 1'-0"

LEGEND

	8" SPLIT FACE MASONRY WALL
FD	FLOOR DRAIN
S.C.	SAW CUT
C.J.	CONSTRUCTION JOINT
E.J.	MASONRY EXPANSION JOINT SEE DETAIL 4/S009

TRUSS MANUFACTURER TO REFER TO STRUCTURAL PLANS FOR LAYOUT AND BEARING LOCATIONS.

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SINCE 1925
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OREGON
CAMERON B. SWARTWELIN
EXPIRES: JUNE 30, 2028

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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

DAF BUILDING
ROOF FRAMING PLAN

DRAWING
S302
131 OF 223

JOB NUMBER
231048

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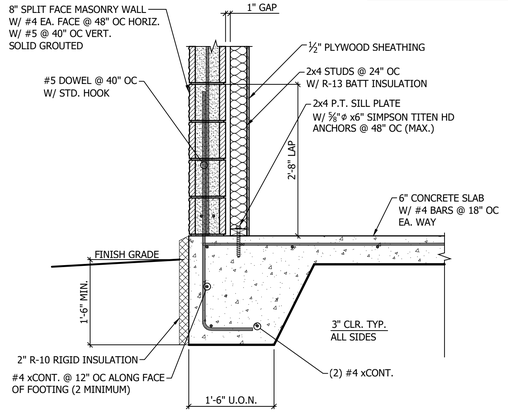
NOTE: REFER TO DETAIL 1/S007 FOR UNDER SLAB INFORMATION

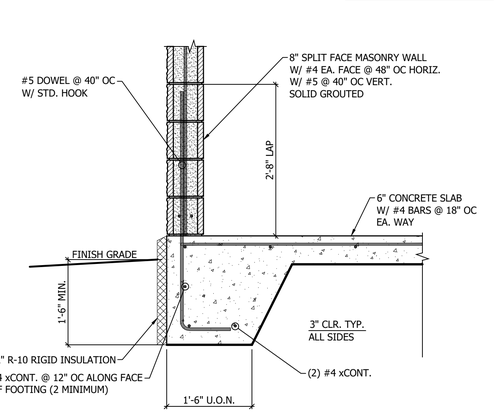


TYPICAL SLAB EDGE @ ELECTRICAL ROOM

3/4" = 1'-0"

1 S303

NOTE: REFER TO DETAIL 1/S007 FOR UNDER SLAB INFORMATION

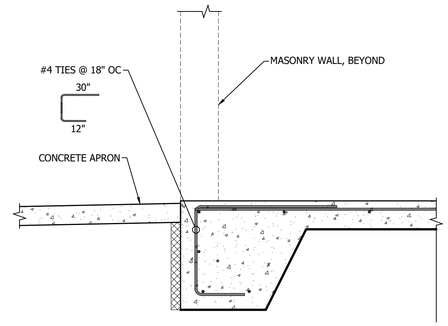


TYPICAL SLAB EDGE @ DAF

3/4" = 1'-0"

2 S303

NOTE: REFER TO DETAIL 1/S202 & 2/S202 FOR ADDITIONAL INFORMATION

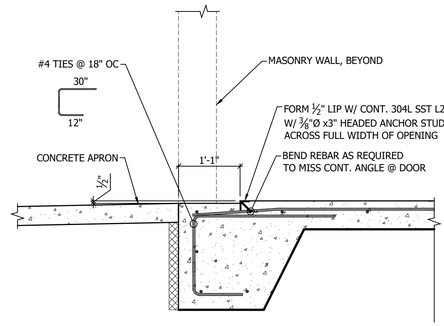


TYPICAL SLAB EDGE @ MANDOOR

3/4" = 1'-0"

3 S303

NOTE: REFER TO DETAIL 1/S202 & 2/S202 FOR ADDITIONAL INFORMATION



TYPICAL SLAB EDGE @ ROLLING DOOR

3/4" = 1'-0"

4 S303

NOTE: REFER TO DETAIL 1/S007 FOR UNDER SLAB INFORMATION

INTERIOR WALL CONNECTION

3/4" = 1'-0"

5 S303

ROOF TRUSS CONNECTION @ ELECTRICAL ROOM

3/4" = 1'-0"

6 S303

ROOF TRUSS CONNECTION @ ELECTRICAL ROOM

3/4" = 1'-0"

7 S303

ROOF TRUSS CONNECTION @ DAF

3/4" = 1'-0"

8 S303

ROOF TRUSS CONNECTION @ DAF

3/4" = 1'-0"

9 S303

ROOF TRUSS CONNECTION @ INTERIOR WALL

3/4" = 1'-0"

10 S303

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DRN. SMC
CKD. CBS
DATE: MAY '26

REGISTERED PROFESSIONAL ENGINEER
63202
DIGITALLY SIGNED
OREGON
CAMERON B. SWEARINGIN
EXPIRES: JUNE 30, 2028

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
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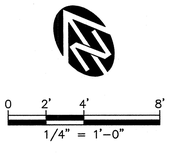
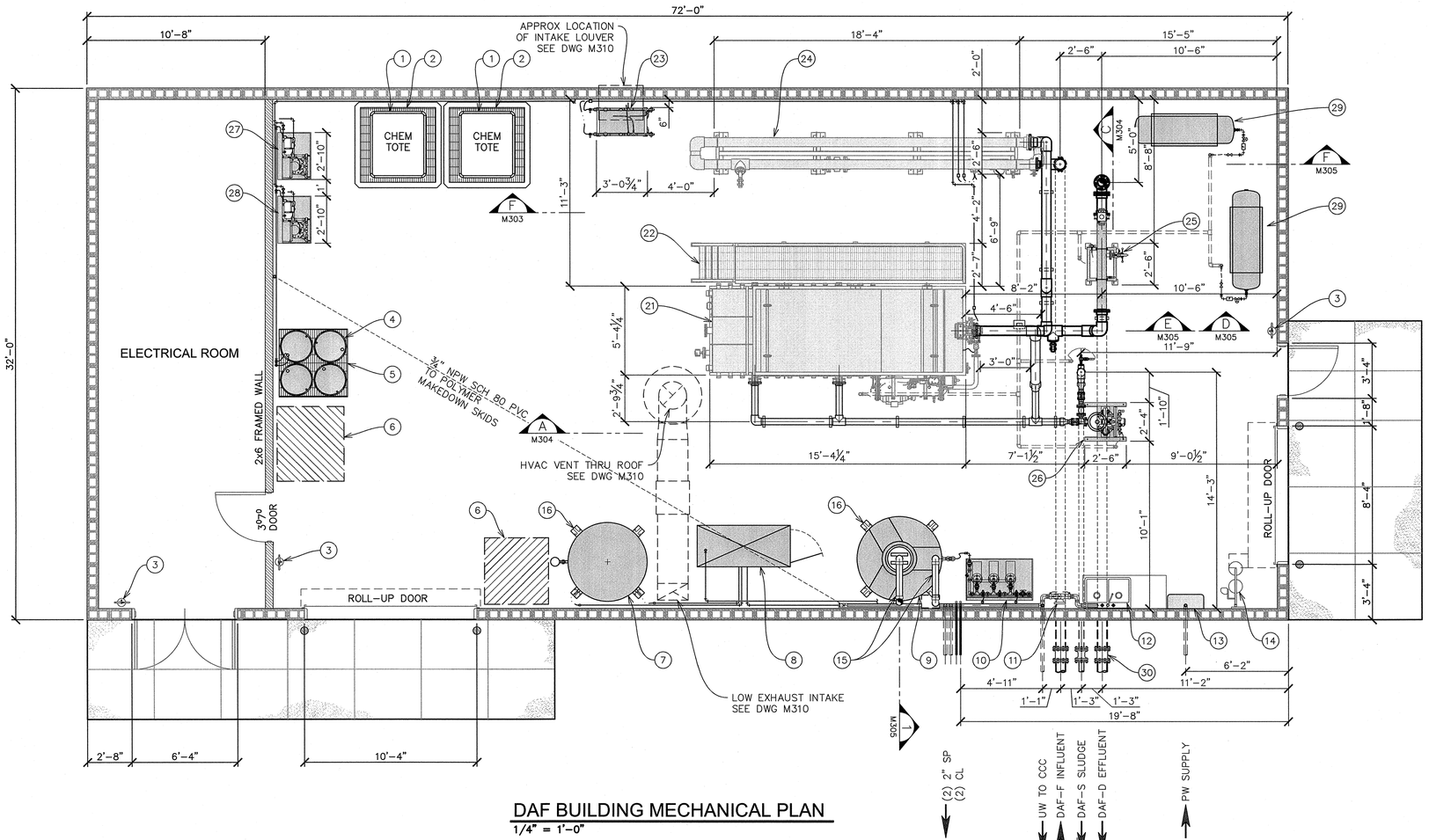
CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

DAF BUILDING FOUNDATION DETAILS & ROOF FRAMING DETAILS

DRAWING
S303
132 OF 223

JOB NUMBER
231048





DAF BUILDING MECHANICAL PLAN
1/4" = 1'-0"

KEY CALLOUTS - CHEMICAL EQUIPMENT

1. ALUM STORAGE TOTE.
2. TOTE SPILL CONTAINMENT PALLET AS SPECIFIED.
3. FIRE EXTINGUISHER AS SPECIFIED
4. POLYMER STORAGE DRUM.
5. POLYMER DRUM SPILL CONTAINMENT PALLET AS SPECIFIED.
6. SALT STORAGE AREA.
7. SALT BRINE TANK WITH LEVEL CONTROL VALVE AS SPECIFIED.
8. CHLORINE GENERATOR AS SPECIFIED.
9. CHLORINE SOLUTION TANK AND BLOWER ASS'Y AS SPECIFIED
10. CHLORINE SOLUTION METERING PUMP SKID AS SPECIFIED. SEE DTL 4, DWG M308.
11. 2" FEBCO 825Y RP DEVICE.
12. UTILITY SINK AND 60" VANITY CABINET.
13. INSTANT HOT WATER HEATER W/ TEMPERING, AS SPECIFIED.
14. FURNISH & INSTALL EYEWASH AND SAFETY SHOWER AS SPECIFIED.
15. 4" SCH 40 PVC VENTILATION PIPING & FITTINGS.
16. SEISMIC RESTRAINT CLIPS BY TANK MANUFACTURER. CONTRACTOR TO INSTALL PER MFTR'S RECOMMENDATIONS.

KEY CALLOUTS - DAF EQUIPMENT

21. *DAF CLARIFIER TANK, KROFTA MFH-500.
22. *DAF ACCESS PLATFORM.
23. *DUPLEX COAGULANT METERING SKID.
24. *FLOCTUBE ASSEMBLY.
25. *EFFLUENT TURBIDITY SENSOR & LEVEL CONTROL VALVE SKID.
26. *SLUDGE TRANSFER PUMP SKID.
27. *POLYMER MAKE-DOWN SKID #1.
28. *POLYMER MAKE-DOWN SKID #2.
29. *AIR COMPRESSOR. SEE DWG M306.
30. INSTALL MJ SLEEVES ON DAF-F, DAF-S, AND DAF-D PIPING 2' FROM FOOTING.

* INCLUDED IN THE KROFTA DAF EQUIPMENT PACKAGE, TO BE INSTALLED BY CONTRACTOR PER MANUFACTURER'S RECOMMENDATIONS.

NO.	DATE	DESCRIPTION	BY
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REGISTERED PROFESSIONAL ENGINEER
OREGON
JAN. 14, 2000
CHRISTOPHER BEHUNIAK
RENEWS: 12/31/2027

WESTECH ENGINEERING, INC.
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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

DAF BUILDING MECHANICAL PLAN

DRAWING
M301
133 OF 223

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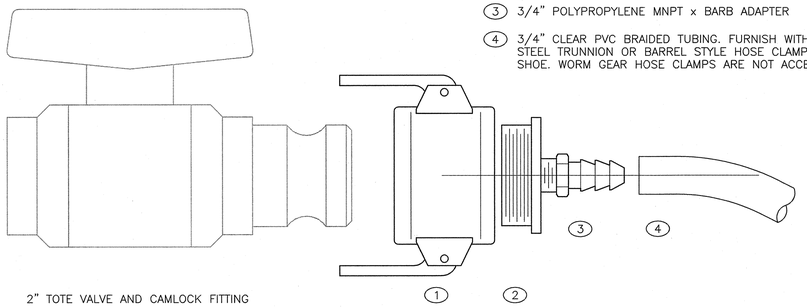
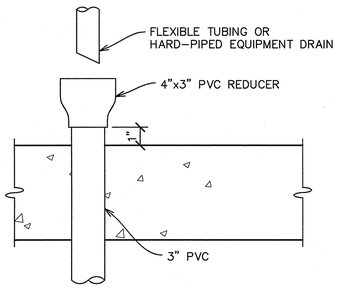
1. 2" POLYPROPYLENE CAMLOCK x FNPT (BANJO P/N 200D)
2. 2x3/4 SCH 40 PVC REDUCING BUSHING MPTxFPT
3. 3/4" POLYPROPYLENE MNPT x BARB ADAPTER
4. 3/4" CLEAR PVC BRAIDED TUBING. FURNISH WITH STAINLESS STEEL TRUNNION OR BARREL STYLE HOSE CLAMP WITH SHOE. WORM GEAR HOSE CLAMPS ARE NOT ACCEPTABLE.

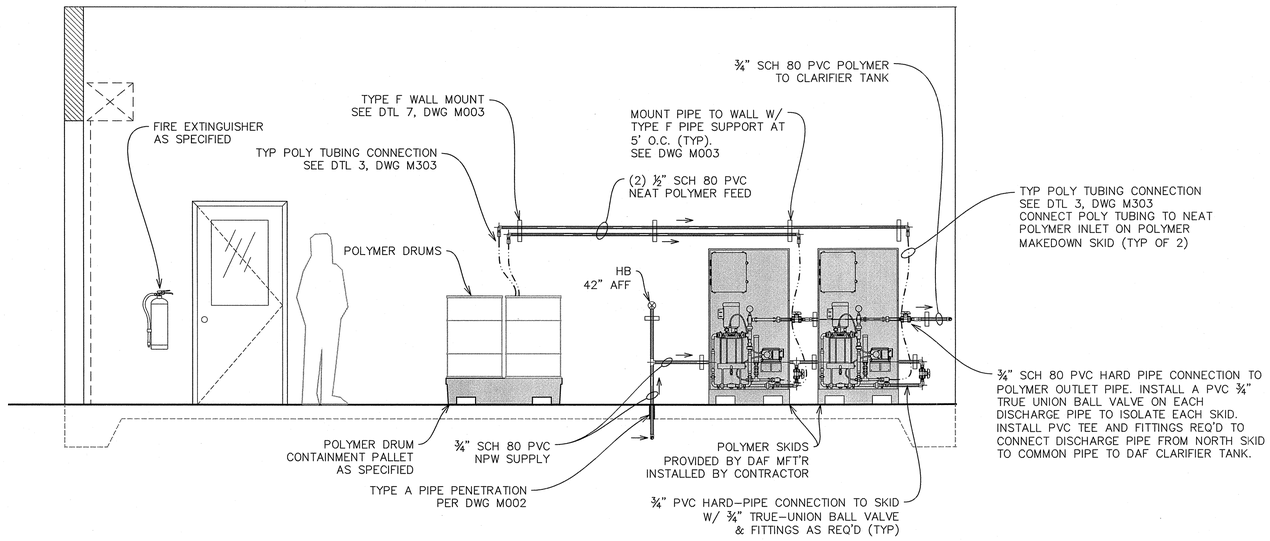


2" TOTE VALVE AND CAMLOCK FITTING

IBC TOTE CONNECTION (1)
N.T.S.

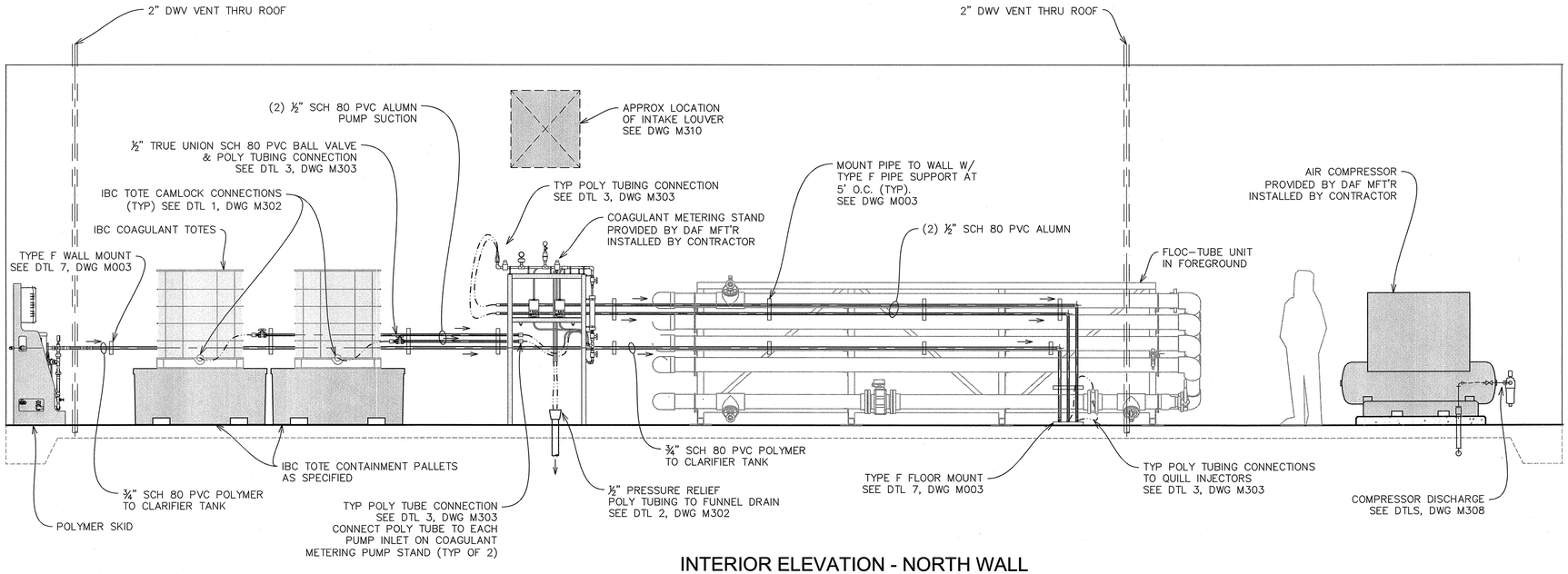


EQUIPMENT DRAIN DETAIL (2 / M302)
N.T.S.



INTERIOR ELEVATION - WEST WALL
3/8" = 1'-0"

0 1' 2' 4'
3/8" = 1'-0"



INTERIOR ELEVATION - NORTH WALL
3/8" = 1'-0"

NO.	DATE	DESCRIPTION REVISIONS	BY
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REGISTERED PROFESSIONAL ENGINEER
OREGON
JAN. 14, 2005
CHRISTOPHER J. BRADLEY
86473PE
RENEWS: 12/31/2027

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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

DAF BUILDING INTERIOR MECHANICAL ELEVATIONS

DRAWING
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134 OF 223

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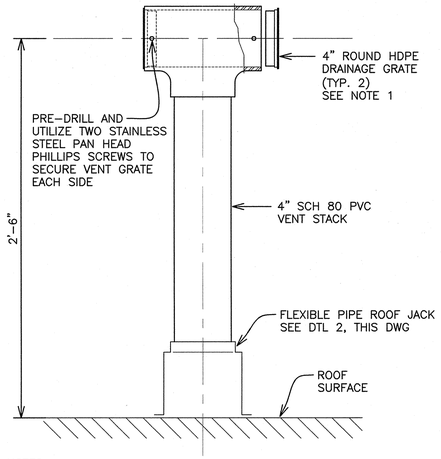
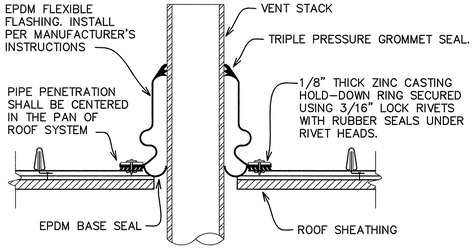


NOTES:

1. DRAINAGE GRATE SHALL BE BLACK UV STABILIZED HDPE AS MANUFACTURED BY POLYLOK, ADS, OR APPROVED EQUAL.

HYPO TANK & DAF OUTLET PIPE VENT STACK DETAIL — 1/–

2" = 1'-0"

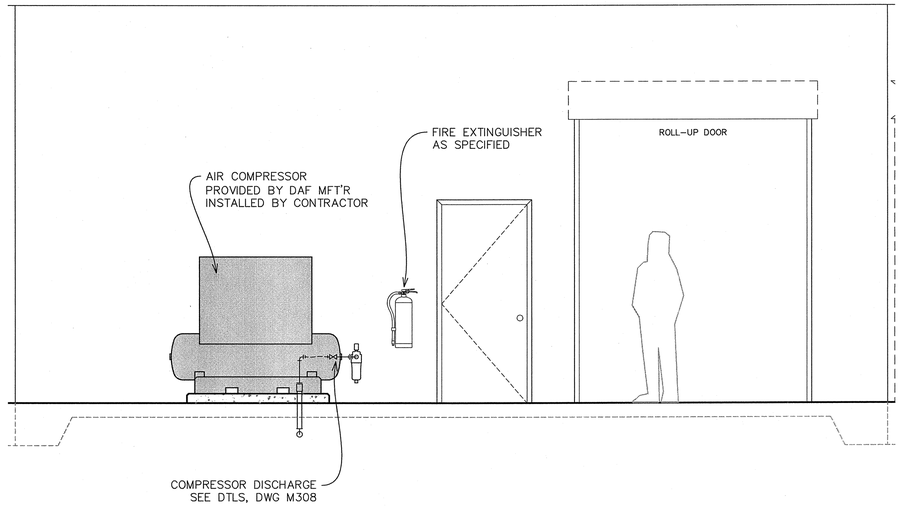


NOTES:

1. INSTALL FLASHING PLATES AT ROOF SHEATHING UNDER LOCK RIVETS TO FACILITATE THERMAL MOVEMENT.
2. PROVIDE WEEP HOLE FOR FIRST TWO FINS OF BASE SEAL ON THE DOWNSLOPE SIDE PER MANUFACTURER'S INSTRUCTIONS.
3. FLEXIBLE BASE PIPE SEALS SHALL BE AS SPECIFIED AND SHALL BE MANUFACTURED BY THALER METAL INDUSTRIES OR EQUAL.

PLUMBING VENT THROUGH ROOF — 2/–

N.T.S.

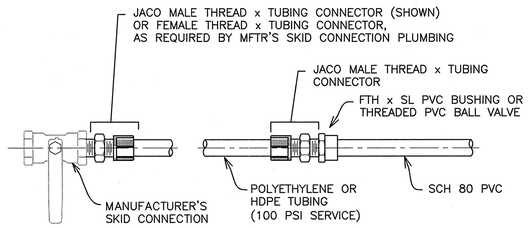


INTERIOR ELEVATION - EAST WALL

3/8" = 1'-0"

0 1' 2' 4

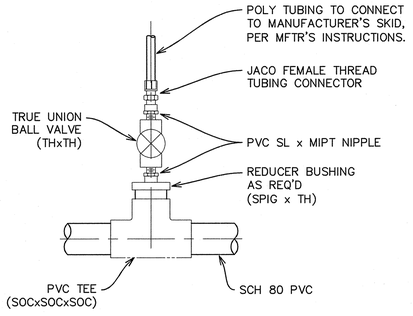
3/8" = 1'-0"



NOTE: SEE PLANS FOR PIPE SIZE AND TUBING MATERIAL.

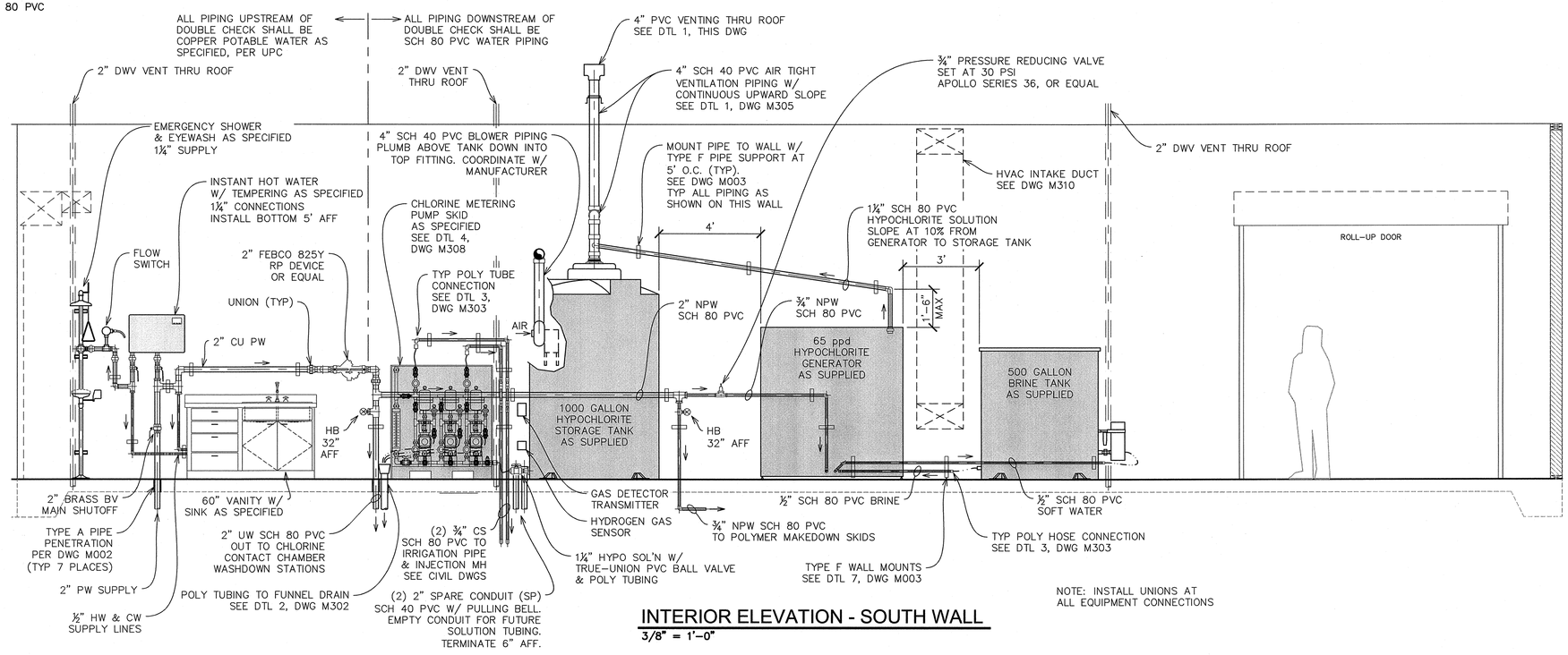
TYPE 1 PVC TO TUBING COUPLING — 3/–

N.T.S.



TYPICAL WATER SUPPLY CONNECTION TO CHEMICAL FEED SKID — 4/–

N.T.S.



NOTE: INSTALL UNIONS AT ALL EQUIPMENT CONNECTIONS

INTERIOR ELEVATION - SOUTH WALL

3/8" = 1'-0"

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DATE: MAY 2026

REGISTERED PROFESSIONAL ENGINEER — OREGON — JAN. 14, 2005 — CHRISTOPHER J. BRUCKO — RENEWS: 12/31/2027

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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

DAF BUILDING INTERIOR MECHANICAL ELEVATIONS

DRAWING
M303
135 OF 223

JOB NUMBER
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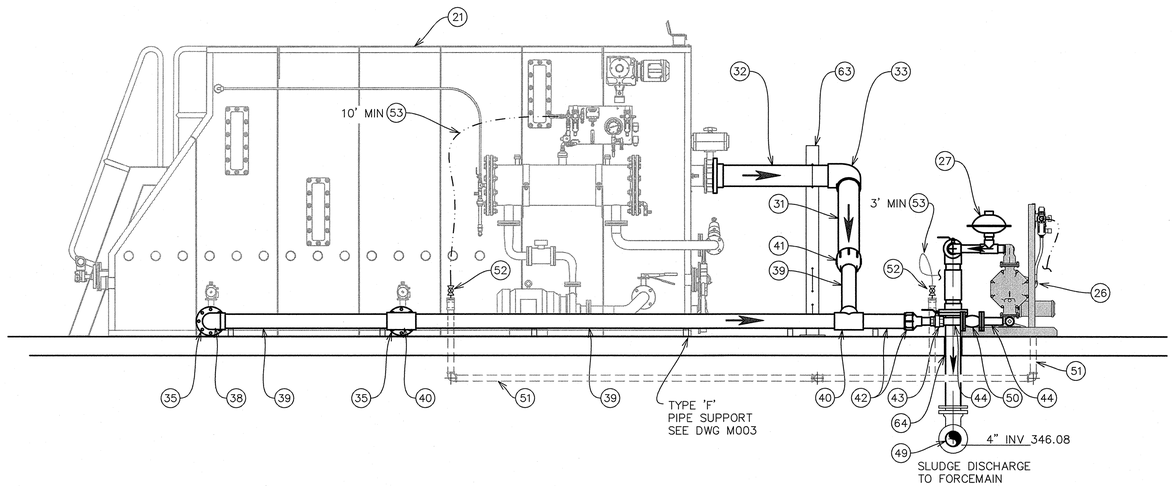


DAF SLUDGE PIPING SECTION (A)
1/2" = 1'-0"

KEY CALLOUTS - DAF EQUIPMENT

(21) *DAF CLARIFIER TANK, KROFTA MFH-500.

(22) *DAF ACCESS PLATFORM.

(23) *DUPLEX COAGULANT METERING SKID.

(24) *FLOCTUBE ASSEMBLY.

(25) *EFFLUENT TURBIDITY SKID, SENSOR & LEVEL CONTROL VALVE.

(26) *SLUDGE TRANSFER PUMP SKID.

(27) *PULSE DAMPENER.

* INCLUDED IN THE KROFTA DAF EQUIPMENT PACKAGE, TO BE INSTALLED BY CONTRACTOR PER MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR TO FURNISH AND INSTALL ALL MOUNTING HARDWARE.

(31) 6" SCH 80 PVC SPOOL (PExPE).

(32) 6" SCH 80 PVC SPOOL (FLxPE).

(33) 6" SCH 80 PVC 90° BEND (HxH).

(34) 6" SCH 80 PVC SPOOL (FLxFL).

(35) 4" SCH 80 PVC SPOOL (FLxPE).

(36) DRAIN ASSEMBLY: 6" SCH 80 PVC TEE (HxHxH) 6"x2" REDUCER BUSHING, 2" SCH 80 PVC NIPPLE & PVC BALL VALVE.

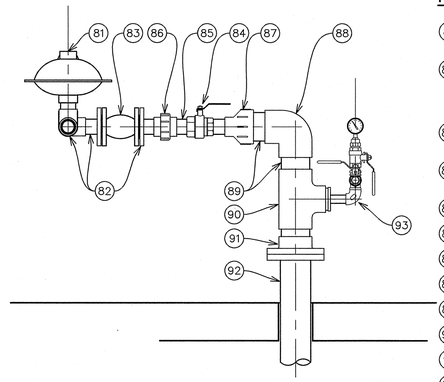
(37) 6" SCH 80 PVC 45° BEND (HxH).

(38) 4" SCH 80 PVC 90° BEND (HxH) SOLVENT WELD.

(39) 4" SCH 80 PVC SPOOL (PExPE).

(40) 4" SCH 80 PVC TEE (HxHxH).

(41) 6"x4" SCH 80 PVC REDUCER (HxH).



SLUDGE DISCHARGE DETAIL (1)
1" = 1'-0"
M304

KEY CALLOUTS - SLUDGE PUMP DISCHARGE

(81) 2" PULSATION DAMPENER FURNISHED BY KROFTA, INSTALLED BY CONTRACTOR.

(82) CONTRACTOR TO FURNISH AND INSTALL ALL INTERCONNECT PIPE, FITTINGS, BUSHINGS, FLANGES, AND ADAPTERS. ALL PIPING SHALL BE SCH 40 STAINLESS STEEL. ALL FITTINGS, BUSHINGS, FLANGES, AND ADAPTERS SHALL BE STAINLESS STEEL.

(83) 2" FLANGED FLEXIBLE RUBBER COUPLING AS SPECIFIED, FURNISHED AND INSTALLED BY CONTRACTOR. FURNISH W/ SST TIE RODS.

(84) 2" STAINLESS STEEL BALL VALVE (FPT x FPT) FURNISHED BY KROFTA, INSTALLED BY CONTRACTOR.

(85) 2" SCH 80 PVC SPOOL (MPT x PE).

(86) 2" SCH 80 PVC UNION (H x H) W/ SCH 80 PVC SPOOL.

(87) 2"x4" SCH 80 PVC REDUCER (H x H).

(88) 4" SCH 80 PVC 90° BEND (H x H).

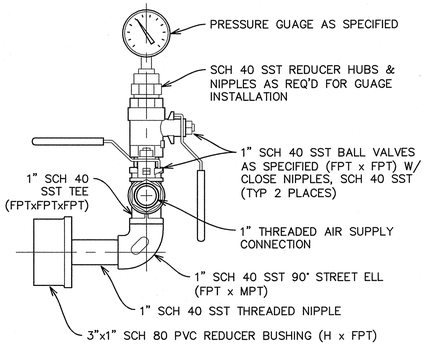
(89) 4" SCH 80 PVC SPOOL.

(90) 4"x3" SCH 80 PVC TEE (H x H x H).

(91) 4" SCH 80 PVC SPOOL (FL x PE).

(92) 4" CL 53 D.I. SPOOL (FL x PE).

(93) AIR CONNECTION FOR SLUDGE PIPE FLUSHING. SEE DTL 2, DWG M304.



AIR CONNECTION DETAIL (2)
1" = 4"
M304

(42) 4"x2" STAINLESS STEEL REDUCER (FPTxFPT) W/ 4" SCH 80 PVC SPOOL (PExMPT).

(43) 2" STAINLESS STEEL BALL VALVE FURNISHED BY KROFTA, CONTRACTOR INSTALLED. FURNISH & INSTALL SCH 40 STAINLESS STEEL THREADED NIPPLES.

(44) 2" STAINLESS STEEL SCH 40 SPOOL (MPTxFL).

(45) 6" D.I. 90° BEND (MJxMJ) W/ RETAINER GLANDS & TB.

(46) 6" CL 53 D.I. SPOOL (PExGR).

(47) 6"x4" D.I. TEE (GRxGRxGR) W/ VICTAULIC CAP & COUPLERS.

(48) 4" CL 53 D.I. SPOOL (FLxGR).

(49) 4" D.I. 90° BEND (MJxMJ) W/ RETAINER GLANDS & TB.

(50) 2" FLANGED FLEXIBLE RUBBER COUPLING AS SPECIFIED. FURNISH W/ SST TIE RODS.

(51) 1½" SCH 40 SST COMPRESSED AIR PIPING. SEE DWG M307. INSTALL PIPING W/ 6" COVER UNDER SLAB.

(52) STAINLESS STEEL VALVE PER DTL 1, DWG M307.

(53) FLEXIBLE PIPE FOR COMPRESSED AIR CONNECTION PER DTL 1, DWG M307. FIELD VERIFY SIZE & LENGTH PRIOR TO ORDERING. MINIMUM LENGTH AS NOTED.

(54) 8"x6" D.I. TEE (FLxFLxFL).

(55) 8"x4" D.I. REDUCER (FLxFL).

(56) 4" SCH 80 PVC VENT PIPE (FLxPE).

(57) EXTEND VENT STACK THROUGH ROOF. SEE DTL 1, DWG M303.

(58) 8" CL 53 D.I. SPOOL (FLxPE).

(59) 8" D.I. 90° BEND (MJxMJ) W/ RETAINER GLANDS & TB.

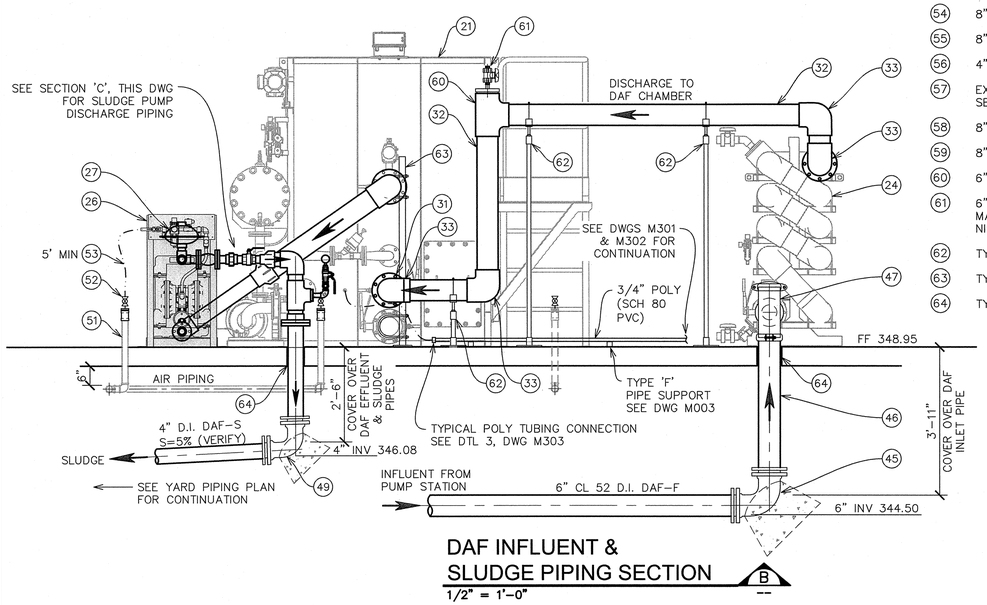
(60) 6" SCH 80 PVC TEE (HxHxH).

(61) 6" x ¾" SCH 80 PVC REDUCER BUSHING (HxFTH) W/ MANUAL AIR RELEASE, CONSISTING OF ¾" SCH 80 PVC NIPPLE AND ¾" FTH TRUE UNION BALL VALVE.

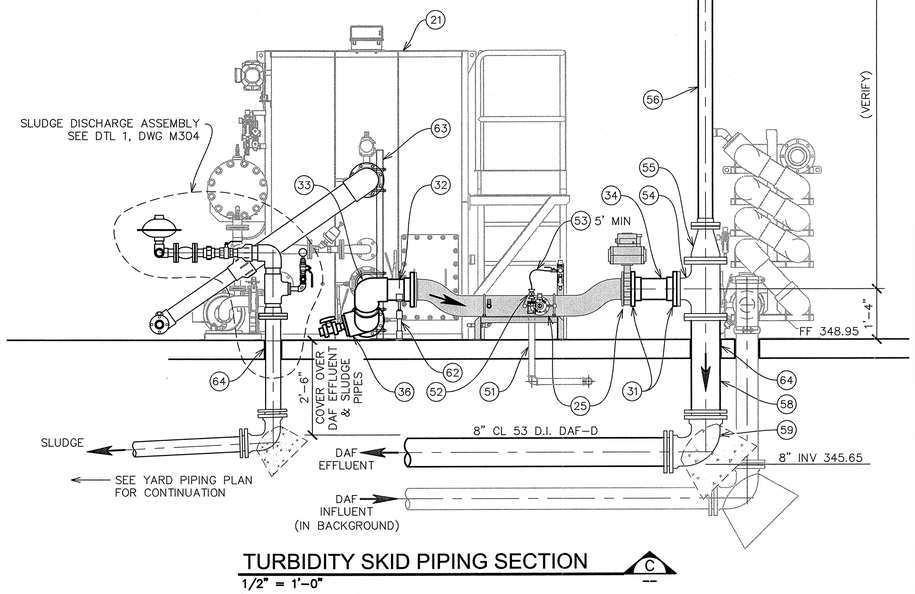
(62) TYPE A PIPE SUPPORT. SEE DWG M003.

(63) TYPE G PIPE SUPPORT. SEE DWG M003.

(64) TYPE A FLOOR PENETRATION PER DWG M002.



DAF INFLUENT & SLUDGE PIPING SECTION (B)
1/2" = 1'-0"



TURBIDITY SKID PIPING SECTION (C)
1/2" = 1'-0"

NO.	DATE	DESCRIPTION	BY
1		REVISIONS	

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET ADJUST SCALE AS NECESSARY

DSN.: CB
DRN.: TMT
CKD.: CB
DATE: MAY 2026

REGISTERED PROFESSIONAL ENGINEER
OREGON
JULY 14, 2006
CHRISTOPHER J. BRUCATO
RENEWS: 12/31/2027

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
3841 Fairview Industrial Dr. S.E., Suite 100, Salem, OR 97302
Phone: (503) 585-2474 Fax: (503) 585-3986
E-mail: westech@westech-eng.com

CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

DAF BUILDING MECHANICAL SECTIONS

DRAWING
M304
136 OF 223

JOB NUMBER
2599.3220.0

5/26/2026 12:21:46 PM
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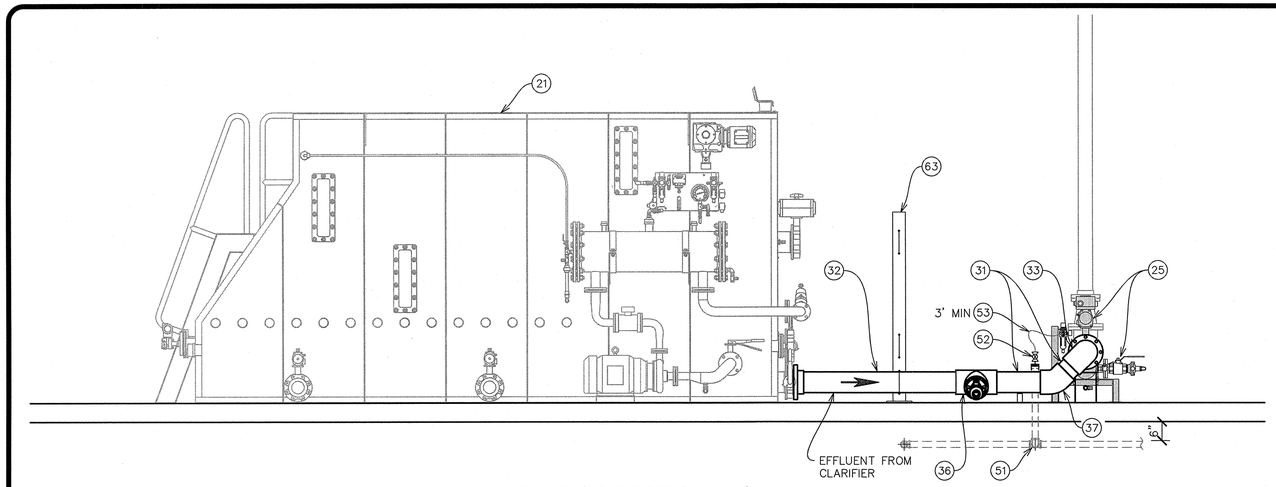
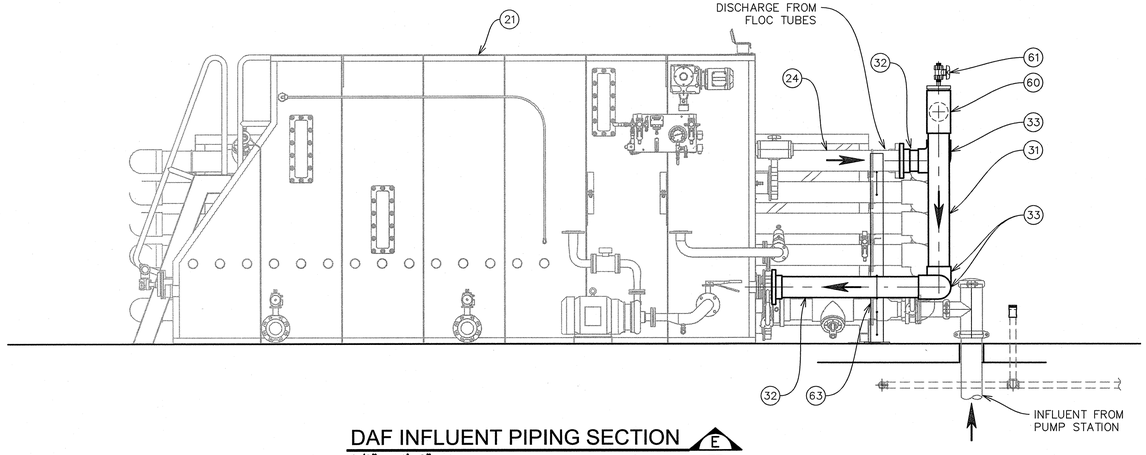
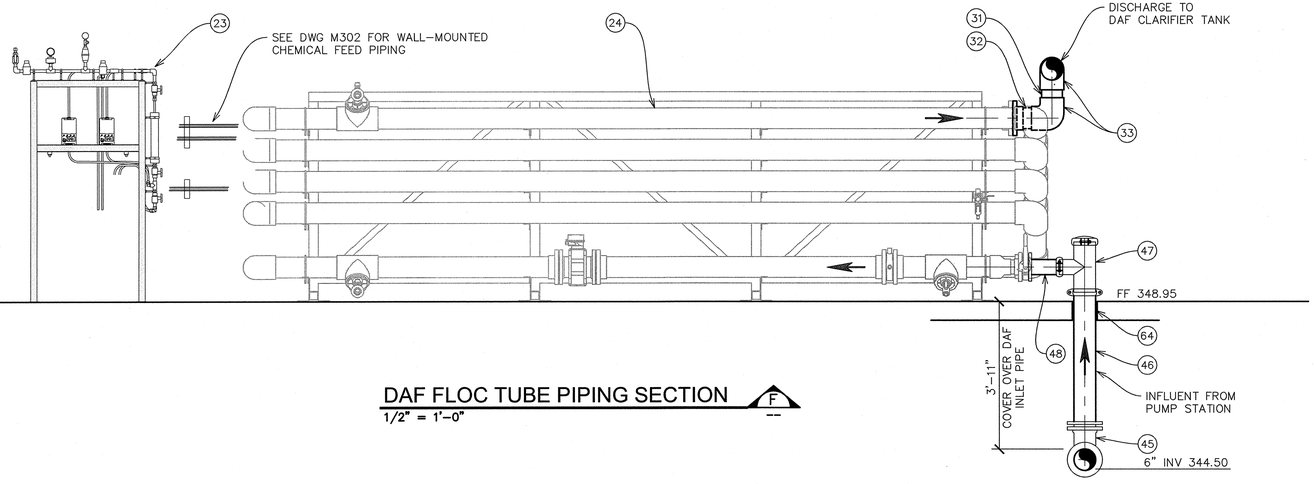


DAF EFFLUENT PIPING SECTION (D)
1/2" = 1'-0"



DAF INFLUENT PIPING SECTION (E)
1/2" = 1'-0"



DAF FLOC TUBE PIPING SECTION (F)
1/2" = 1'-0"

KEY CALLOUTS - DAF EQUIPMENT

(21) *DAF CLARIFIER TANK, KROFTA MFH-500.

(22) *DAF ACCESS PLATFORM.

(23) *DUPLEX COAGULANT METERING SKID.

(24) *FLOCTUBE ASSEMBLY.

(25) *EFFLUENT TURBIDITY SKID, SENSOR & LEVEL CONTROL VALVE.

(26) *SLUDGE TRANSFER PUMP SKID.

(27) *PULSE DAMPENER.

* INCLUDED IN THE KROFTA DAF EQUIPMENT PACKAGE, TO BE INSTALLED BY CONTRACTOR PER MANUFACTURER'S RECOMMENDATIONS. CONTRACTOR TO FURNISH AND INSTALL ALL MOUNTING HARDWARE.

(31) 6" SCH 80 PVC SPOOL (PExPE).

(32) 6" SCH 80 PVC SPOOL (FLxPE).

(33) 6" SCH 80 PVC 90° BEND (HxH).

(34) 6" SCH 80 PVC SPOOL (FLxFL).

(35) 4" SCH 80 PVC SPOOL (FLxPE).

(36) DRAIN ASSEMBLY: 6" SCH 80 PVC TEE (HxHxH) 6"x2" REDUCER BUSHING, 2" SCH 80 PVC NIPPLE & PVC BALL VALVE.

(37) 6" SCH 80 PVC 45° BEND (HxH).

(38) 4" SCH 80 PVC 90° BEND (HxH) SOLVENT WELD.

(39) 4" SCH 80 PVC SPOOL (PExPE).

(40) 4" SCH 80 PVC TEE (HxHxH).

(41) 6"x4" SCH 80 PVC REDUCER (HxH).

(42) 4"x2" STAINLESS STEEL REDUCER (FPTxFPT) W/ 4" SCH 80 PVC SPOOL (PExMPT).

(43) 2" STAINLESS STEEL BALL VALVE FURNISHED BY KROFTA, CONTRACTOR INSTALLED. FURNISH & INSTALL SCH 40 STAINLESS STEEL THREADED NIPPLES.

(44) 2" STAINLESS STEEL SCH 40 SPOOL (MPTxFL).

(45) 6" D.I. 90° BEND (MJxMJ) W/ RETAINER GLANDS & TB.

(46) 6" CL 53 D.I. SPOOL (PExGR).

(47) 6"x4" D.I. TEE (GRxGRxGR) W/ VICTAULIC CAP & COUPLERS.

(48) 4" CL 53 D.I. SPOOL (FLxGR).

(49) 4" D.I. 90° BEND (MJxMJ) W/ RETAINER GLANDS & TB.

(50) 2" FLANGED FLEXIBLE RUBBER COUPLING AS SPECIFIED. FURNISH W/ SST TIE RODS.

(51) 1½" SCH 40 SST COMPRESSED AIR PIPING. SEE DWG M307. INSTALL PIPING W/ 6" COVER UNDER SLAB.

(52) STAINLESS STEEL VALVE PER DTL 1, DWG M307.

(53) FLEXIBLE PIPE FOR COMPRESSED AIR CONNECTION PER DTL 1, DWG M307. FIELD VERIFY SIZE & LENGTH PRIOR TO ORDERING. MINIMUM LENGTH AS NOTED.

(54) 8"x6" D.I. TEE (FLxFLxFL).

(55) 8"x4" D.I. REDUCER (FLxFL).

(56) 4" SCH 80 PVC VENT PIPE (FLxPE).

(57) EXTEND VENT STACK THROUGH ROOF. SEE DTL 1, DWG M303.

(58) 8" CL 53 D.I. SPOOL (FLxPE).

(59) 8" D.I. 90° BEND (MJxMJ) W/ RETAINER GLANDS & TB.

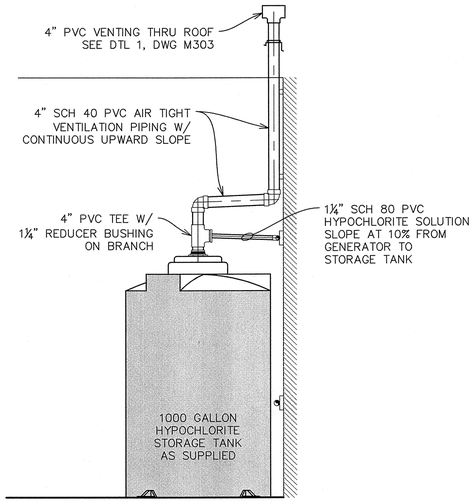
(60) 6" SCH 80 PVC TEE (HxHxH).

(61) 6" x ¾" SCH 80 PVC REDUCER BUSHING (HxFTH) W/ MANUAL AIR RELEASE, CONSISTING OF ¾" SCH 80 PVC NIPPLE AND ¾" FTH TRUE UNION BALL VALVE.

(62) TYPE A PIPE SUPPORT. SEE DWG M003.

(63) TYPE G PIPE SUPPORT. SEE DWG M003.

(64) TYPE A FLOOR PENETRATION PER DWG M002.



HYPOCHLORITE TANK VENT PIPING (1 / M305)
3/8" = 1'-0"

NO.	DATE	DESCRIPTION	BY
1		REVISIONS	

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

DSN.: CB
DRN.: TMT
CKD.: CB
DATE: MAY 2026

REGISTERED PROFESSIONAL ENGINEER
OREGON
JAN. 14, 1994
CHRISTOPHER J. BROCKTO
RENEWS: 12/31/2027

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
3841 Fairview Industrial Dr. S.E., Suite 100, Salem, OR 97302
Phone: (503) 585-2474 Fax: (503) 585-3986
E-mail: westech@westech-eng.com

CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

DAF BUILDING MECHANICAL SECTIONS

DRAWING
M305
137 OF 223

JOB NUMBER
2599.3220.0

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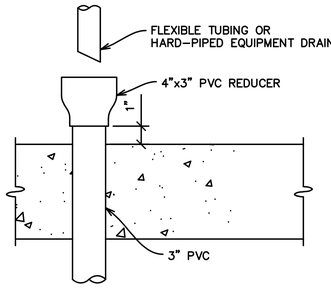
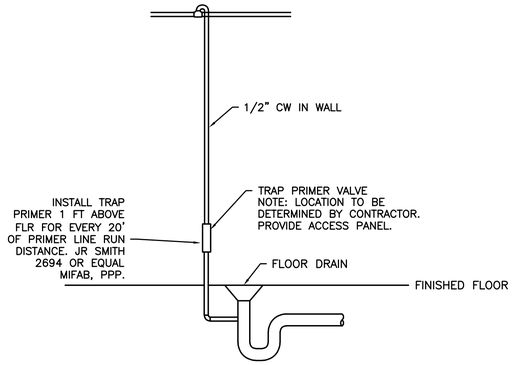


EQUIPMENT DRAIN DETAIL — 1 / M306

N.T.S.



TRAP PRIMER DETAIL — 1 / M306

N.T.S.

DWV LEGEND

- EQUIPMENT DRAIN. SEE DTL 1, THIS DWG.
- FLOOR DRAIN
- SINK DRAIN
- SANITARY SEWER CLEANOUT PER UPC.
- VENT (UNDERSLAB)
- VENT
- WASTE (UNDERSLAB)

PLUMBING CONNECTION SCHEDULE

MARK	FIXTURE	W	V	CW	HW115	REMARKS
FD-1	FLOOR DRAIN	3"	V.L.	–	–	J.R. SMITH 2005
FD-2	FLOOR DRAIN	4"	V.L.	–	–	JR SMITH 2005
S-1	SINK	2"	1-1/2"	1/2"	1/2"	
HD-1	HUB DRAIN	3"	V.L.	–	–	FOR EQUIPMENT DRAIN

V.L. – VENTED LINE

PLUMBING SYSTEM MATERIALS AND METHODS

PIPE SYSTEM	SYSTEM ABBREV.	MATERIAL	JOINING METHODS
SANITARY WASTE&VENT(BELOW GRADE)	W & V	DWV SOLID CORE PVC/ABS	SOLVENT WELD
SANITARY WASTE & VENT(ABOVEGRADE)	W &V	CAST IRON	NO HUB COUPLING

PLUMBING GENERAL NOTES:

A. THE DRAWINGS ARE DIAGRAMMATIC. PROVIDE ALL MATERIAL (NEW AND UNDAMAGED) AND LABOR FOR A COMPLETE AND OPERABLE SYSTEM. VERIFY ALL BUILDING MEASUREMENTS DIMENSIONS AND EQUIPMENT LOCATIONS BEFORE PROCEEDING WITH ANY OF THE WORK.

B. ALL INSTALLATIONS SHALL COMPLY WITH APPLICABLE FEDERAL AND STATE CODES INCLUDING 2025 OREGON STRUCTURAL SPECIALTY CODE (OSSC) INCLUDING APPENDIX N FOR OREGON FIRE CODE REGULATIONS, 2023 OREGON PLUMBING SPECIALTY CODE (OPSC), 2025 OREGON MECHANICAL SPECIALTY CODE (OMSC), 2025 OREGON ENERGY EFFICIENCY SPECIALTY CODE (OEESC), ASHRAE STANDARD 170 – 2021, AND NATIONAL FIRE PROTECTION ASSOCIATION (NFPA). WHERE TWO CODES DIFFER THE MORE STRICT OF THE TWO SHALL BE FOLLOWED.

C. ALL NON-PRESSURIZED DRAIN LINES (SANITARY WASTE) ARE TO HAVE A MINIMUM SLOPE OF 1/4" PER FOOT UNLESS OTHERWISE NOTED.

D. ALL PIPING INVERTS OR ELEVATIONS ARE MEASURED TO BOTTOM OF PIPE (BOP), UNLESS OTHERWISE IDENTIFIED.

E. VENT PER CODE AND AS SHOWN ON DRAWINGS.

F. PROVIDE CLEANOUTS WHERE INDICATED AND PER CODE.

G. PRIME FLOOR DRAINS, FLOOR SINKS, AIR GAP DEVICES PER CODE.

H. CONTRACTOR TO FLASH AND COUNTER-FLASH NEW VENT THRU ROOF WATER TIGHT.

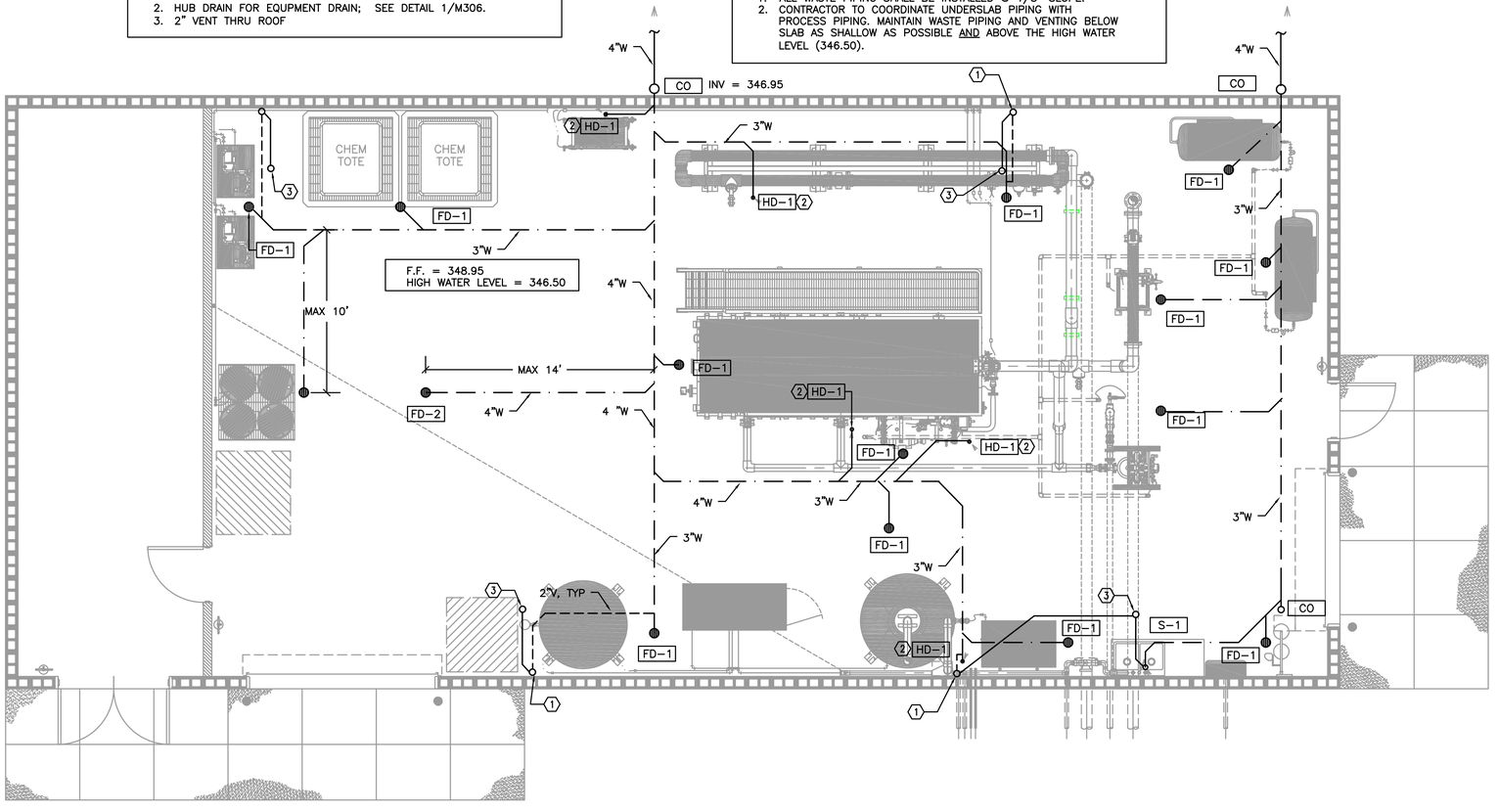
I. HEAT TRACE (FREEZE PROTECTION) ALL PIPING SUBJECTED TO FREEZING CONDITIONS. ALL HEAT TRACED PIPE TO BE INSULATED.

J. ROUTE VENTS FROM FLOOR DRAINS/SINKS BELOW SLAB AND UP ON/IN A WALL TO VENT STACKS ABOVE. (ROUTE INDIVIDUAL VENTS UNTIL ABOVE FLOOD LINE OF FIXTURE).

K. SEE MECHANICAL PLAN FOR CONDENSATE DRAIN.

KEYED NOTES:
1. 2"V UP ON WALL
2. HUB DRAIN FOR EQUPMENT DRAIN; SEE DETAIL 1/M306.
3. 2" VENT THRU ROOF

GENERAL NOTE:
1. ALL WASTE PIPING SHALL BE INSTALLED @ 1/8" SLOPE.
2. CONTRACTOR TO COORDINATE UNDERSLAB PIPING WITH PROCESS PIPING. MAINTAIN WASTE PIPING AND VENTING BELOW SLAB AS SHALLOW AS POSSIBLE AND ABOVE THE HIGH WATER LEVEL (346.50).



DAF BUILDING MECHANICAL PLAN

1/4" = 1'-0"

MFIA INC. Consulting Engineers
2007 S.E. Ash St.
Portland, OR 97214
PHN: (503) 234-0548
FAX: (503) 234-0677
WWW.MFIA-ENG.COM
CONTACT: TAKAKO BAKER

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

DSN. TB
DRN. TB
CKD. TB
DATE: MAY 2026

REGISTERED PROFESSIONAL ENGINEER — OREGON — JULY 9, 2002 — TAKAKO BAKER — 70946PE
EXPIRES: 12/31/27

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
3841 Fairview Industrial Dr. S.E., Suite 100, Salem, OR 97302
Phone: (503) 585-2474 Fax: (503) 585-3986
E-mail: westech@westech-eng.com

CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

DAF BUILDING
DWV PLAN

DRAWING
M306
138 OF 223

JOB NUMBER
2599.3220.0

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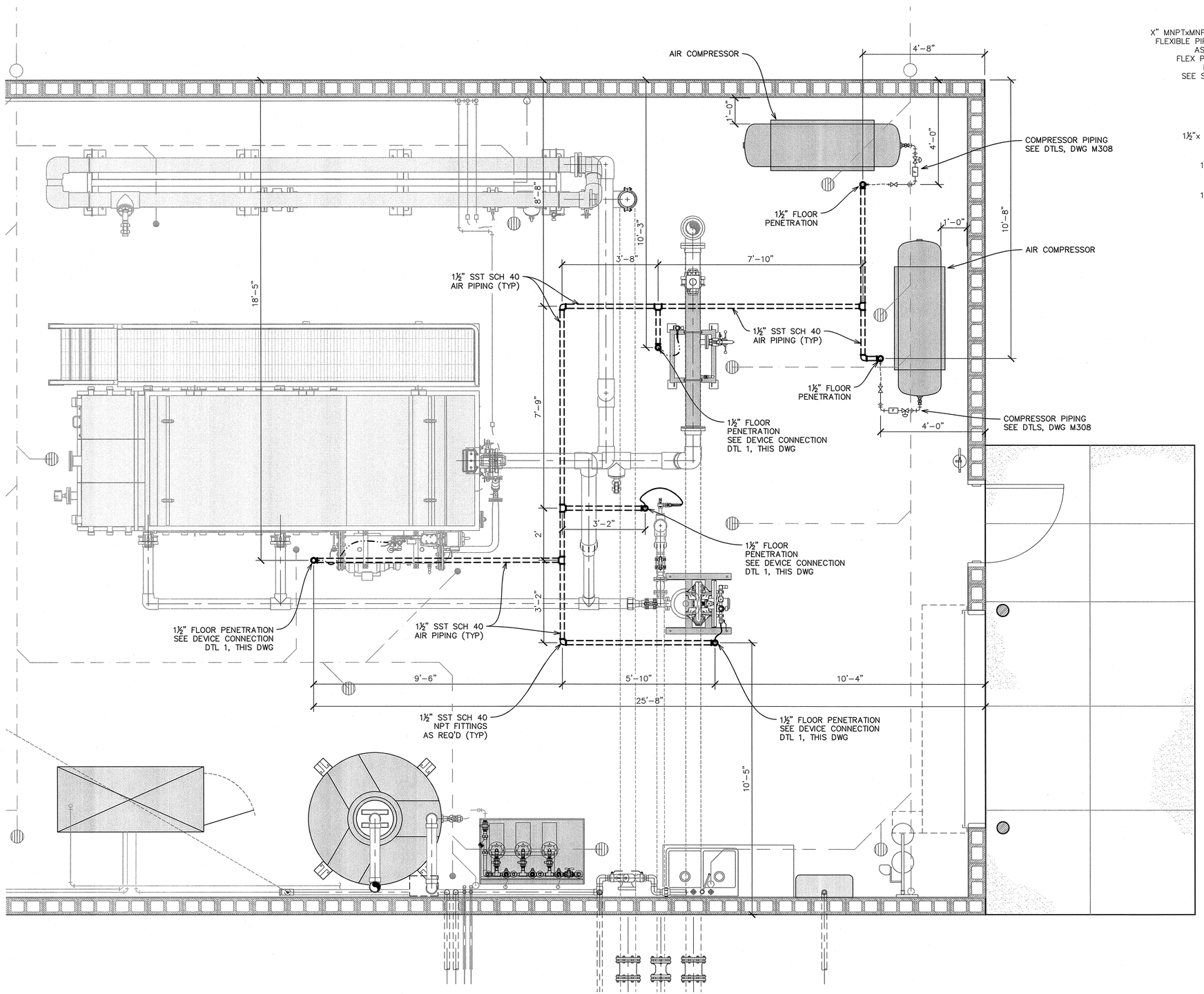

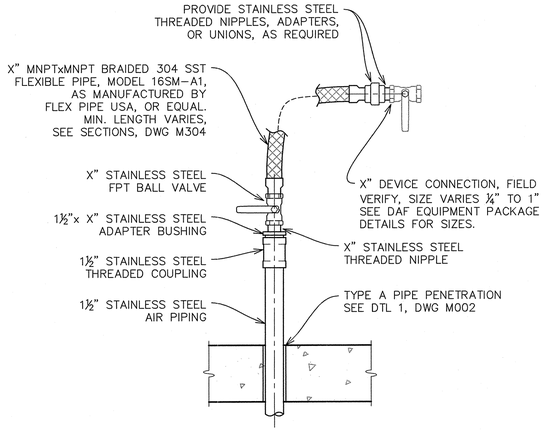

TYPICAL COMPRESSED AIR DEVICE CONNECTION DETAIL

1-1/2" = 1'-0"

1 / M307

0 1' 2' 4'

1/2" = 1'-0"

NO.	DATE	DESCRIPTION	BY
		REVISIONS	
1			

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY

DSN. CB
DRN. TMT
CKD. CB
DATE: MAY 2026

REGISTERED PROFESSIONAL ENGINEER
OREGON
JAN. 14, 2005
CHRISTOPHER BUCKATO
86473PE
RENEWS: 12/31/2027

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
3841 Fairview Industrial Dr. S.E., Suite 100, Salem, OR 97302
Phone: (503) 585-2474 Fax: (503) 585-3986
E-mail: westech@westech-eng.com

CITY OF AUMSVILLE, OREGON

WASTEWATER TREATMENT PLANT IMPROVEMENTS

DAF BUILDING AIR PIPING PLAN

DRAWING
M307
139 OF 223

JOB NUMBER
2599.3220.0

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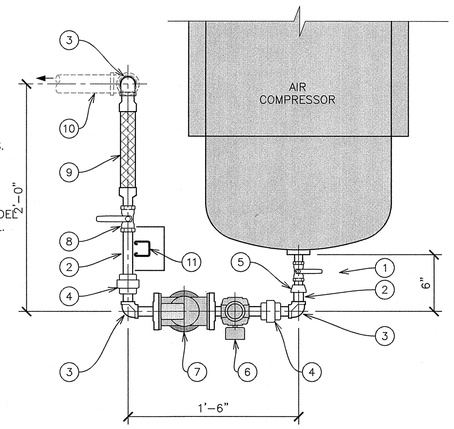
1. 1/2" NPT VALVE FURNISHED W/ COMPRESSOR.
2. 3/4" SCH 40 SST NIPPLE (TYP).
3. 3/4" SCH 40 SST 90° BEND.
4. 3/4" SST UNION W/ NIPPLE.
5. 1/2"x3/4" SST ADAPTER BUSHING.
6. PRESSURE REGULATOR VALVE W/ GAUGE & 3/4" SCH 40 SST NIPPLES.
7. FILTER W/ 3/4" SST FLANGES & 3/4" SCH 40 SST NIPPLES.
8. 3/4" FPT SST BALL VALVE AS SPECIFIED.
9. 12-INCH LONG 3/4" MNPTxMNPT BRAIDED 304 SST FLEXIBLE PIPE. MODEL 16SM-A1 AS MANUFACTURED BY FLEX PIPE USA, OR APPROVED EQUAL.
10. 1½" SCH 40 SST AIR MANIFOLD.
11. FURNISH AND INSTALL STAINLESS STEEL PIPE SUPPORT PER DTL 3, THIS DWG.

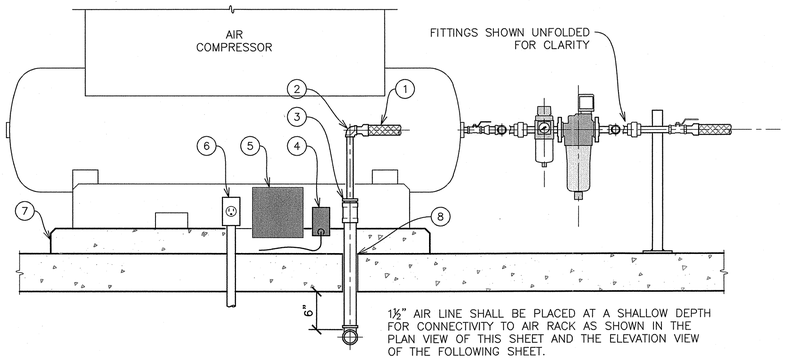


GENERAL NOTES:

1. THE AIR COMPRESSOR, PRESSURE REGULATOR VALVE AND FILTER SHOWN IN THIS DETAIL ARE PART OF THE DAF EQUIPMENT PACKAGE AND SHALL BE INSTALLED BY THE CONTRACTOR. ALL OTHER ELEMENTS SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR.

PARTIAL PLAN COMPRESSOR DISCHARGE

1-1/2" = 1'-0" — 1 / M308

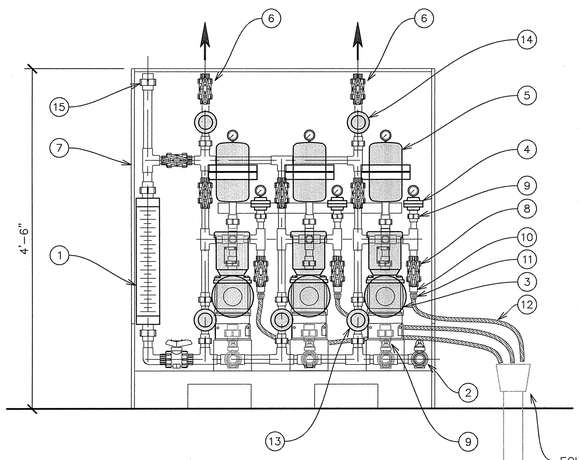


1. 12-INCH LONG 3/4" MNPTxMNPT BRAIDED 304 SST FLEXIBLE PIPE. MODEL 16SM-A1 AS MANUFACTURED BY FLEX PIPE USA OR APPROVED EQUAL.
2. 3/4" SCH 40 SST 90° BEND W/ NIPPLE.
3. TRANSITION TO 1½" SCH 40 SST WITH BUSHING AND COUPLING.
4. ELECTRICAL SUBCONTRACTOR SHALL INSTALL NEW ELECTRICAL JUNCTION BOX FOR POWER AND CONTROL CIRCUITS FOR COMPRESSOR UNIT. SEE ELECTRICAL FOR REQUIREMENTS.
5. AUTOMATIC DRAIN FOR COMPRESSOR RECEIVER TANK (TYP. FOR EACH COMPRESSOR). ATLAS-COPCO IWD-105. THIS DEVICE SHALL BE FURNISHED BY THE DAF SUPPLIER AND SHALL BE INSTALLED BY THE CONTRACTOR. FURNISH 1/2" NPT SST FITTINGS AND NIPPLES TO CONNECT AUTO-DRAIN DEVICE TO THE PREPARED DRAIN PORT AND VALVE ON RECEIVER TANK. DIRECT DRAIN FROM BARBED FITTING DISCHARGE OF AUTO-DRAIN TO FLOOR WITH 1/2" POLY TUBING.
6. ELECTRICAL SUBCONTRACTOR SHALL INSTALL NEW ELECTRICAL RECEPTACLE TO POWER AUTOMATIC DRAIN UNIT. SEE ELECTRICAL FOR REQUIREMENTS.
7. 4" THICK CONC HOUSEKEEPING PAD. MOUNT COMPRESSOR PER MFT'R RECOMMENDATIONS.
8. TYPE A PIPE PENETRATION. SEE DTL 1, DWG M002.

ELEVATION COMPRESSOR DISCHARGE

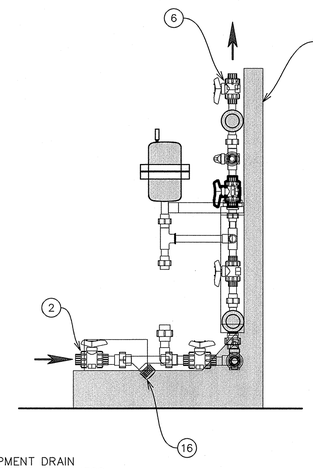
1" = 1'-0" — 2 / M308

PLAN



NOTES: ALL PVC PIPE AND FITTINGS SHALL BE ¾" SCH 80 UNLESS OTHERWISE NOTED.

FRONT



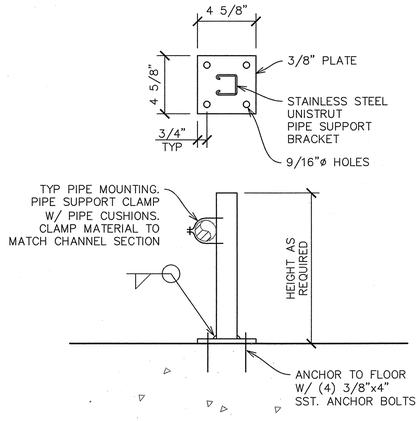
SIDE

CHLORINE METERING PUMP SKID

1" = 1'-0" — 4 / M308

KEY CALLOUTS

1. 2000 ml CALIBRATION COLUMN.
2. 1" TRUE UNION BALL VALVE, SOLUTION "IN" FROM DAY TANK.
3. METERING PUMP AS SPECIFIED (TYP OF 3).
4. PRESSURE GAUGE W/ DIAPHRAGM SEAL AS SPECIFIED (TYP OF 3).
5. PULSATION DAMPENER AS SPECIFIED (TYP OF 3).
6. 3/4" TRUE UNION BALL VALVE, SOLUTION "OUT" TO CHEMICAL INJECTION SITES.
7. SKID BASE & FRAME AS SPECIFIED.
8. 3/4" TRUE UNION BALL VALVE, FLUSH/DRAIN (TYP OF 3).
9. UNION (TYP).
10. 3/4" PVC FIPT x SOCKET ADAPTER.
11. JACO MIPT x COMPRESSION ADAPTER.
12. POLYPROPYLENE TUBING.
13. 3/4" PRESSURE RELIEF VALVE AS SPECIFIED (TYP OF 3).
14. 3/4" BACK PRESSURE VALVE (TYP OF 2).
15. 1" VENT.
16. 1" WYE STRAINER AS SPECIFIED.



NOTES: ALL PIPE SUPPORT MATERIALS SHALL BE STAINLESS STEEL. MAXIMUM SPACING OF SUPPORTS SHALL BE 5 FEET.

VERTICAL PIPE SUPPORT

2" = 1'-0" — 3 / M308

NO.	DATE	DESCRIPTION	BY
1		REVISIONS	

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0 1"
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DSN. CB
DRN. TMT
CKD. CB
DATE: MAY 2026

REGISTERED PROFESSIONAL ENGINEER — OREGON — 86473PE — CHRISTOPHER J. BRUCKNER — RENEWS: 12/31/2027

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
3841 Fairview Industrial Dr. S.E., Suite 100, Salem, OR 97302
Phone: (503) 585-2474 Fax: (503) 585-3986
E-mail: westech@westech-eng.com

CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

DAF BUILDING MECHANICAL DETAILS

DRAWING M308
140 OF 223

JOB NUMBER 2599.3220.0

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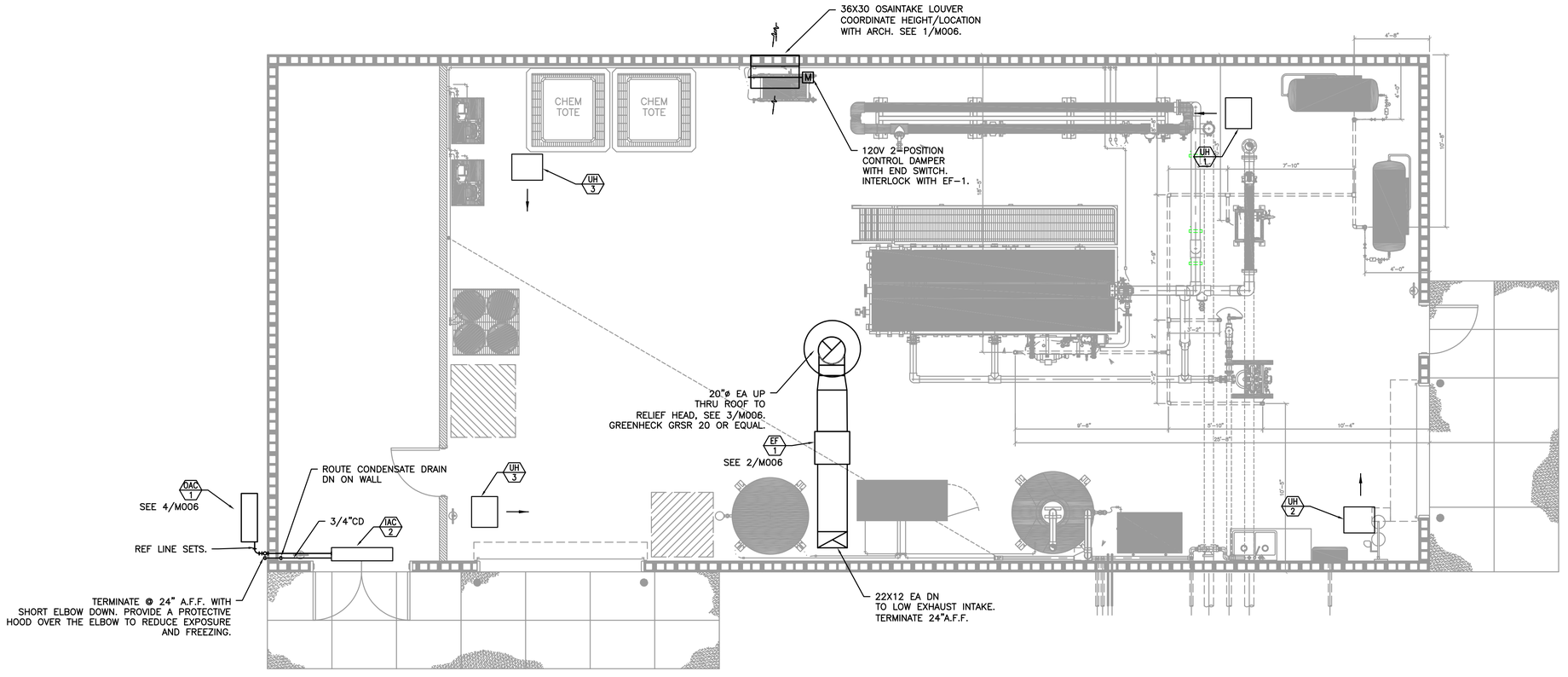
MFA INC. Consulting Engineers
2007 S.E. Ash St.
Portland, OR 97214
PHN: (503) 234-0548
FAX: (503) 234-0677
WWW.MFIA-ENG.COM
CONTACT: TAKAKO BAKER



DAF BUILDING MECHANICAL PLAN
1/4" = 1'-0"

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

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DSN. TB
DRN. TB
CKD. TB
DATE: MAY 2026

REGISTERED PROFESSIONAL ENGINEER
OREGON
JULY 9, 2009
TAKAKO BAKER
EXPIRES: 12/31/27

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

DAF BUILDING
HVAC PLAN

DRAWING
M310
141 OF 223

JOB NUMBER
2599.3220.0

5/18/2026 11:34:54 AM
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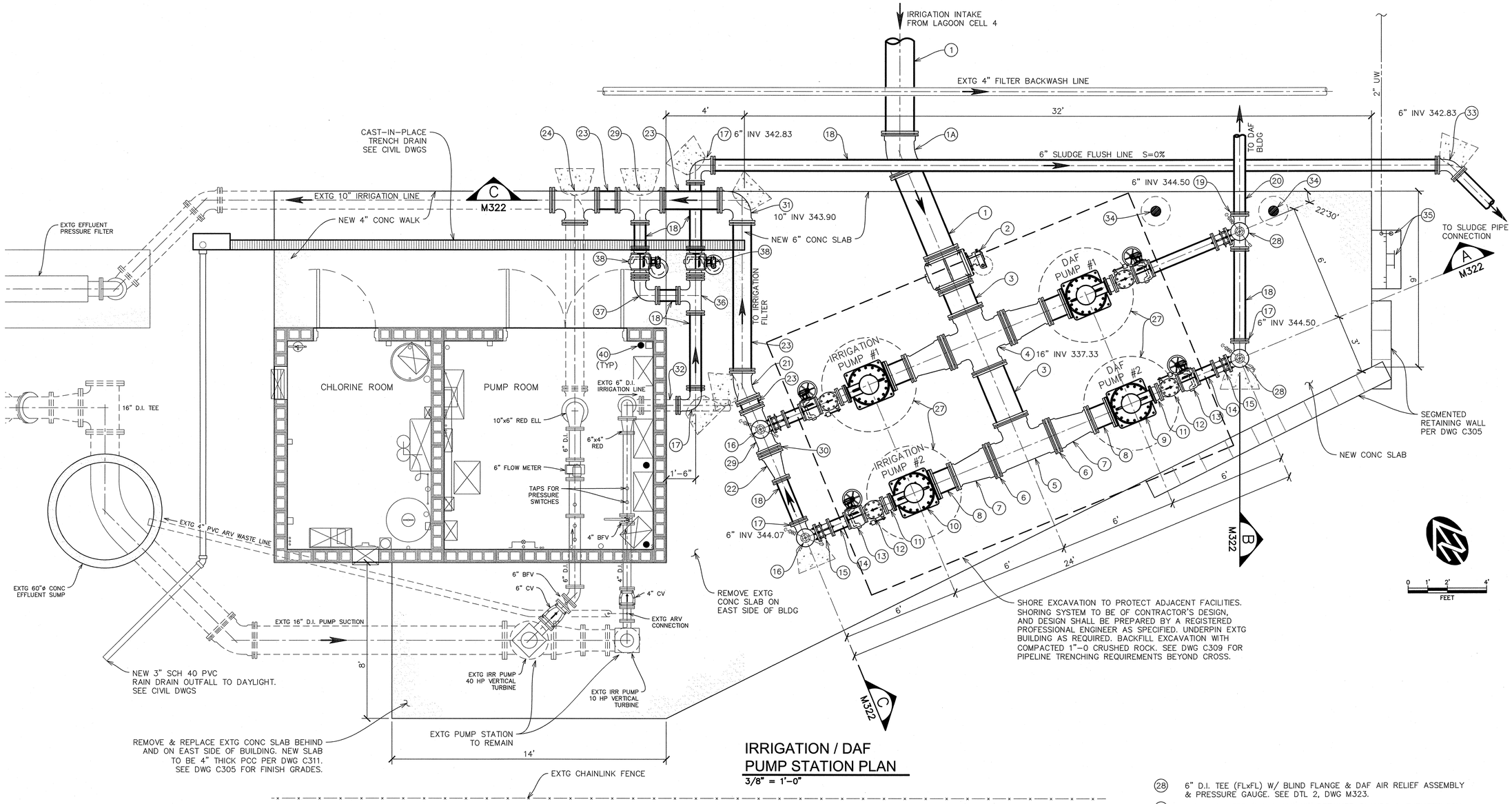

IRRIGATION / DAF PUMP STATION PLAN

3/8" = 1'-0"

KEY CALLOUTS - PUMP STATION

1. 16" D.I. LAGOON CELL 4 IRRIGATION INTAKE PIPE. SEE DWG C309.
1A. 16" D.I. 22.5° BEND (MJxMJ) W/ RETAINER GLANDS.
2. 16" PLUG VALVE (MJxMJ) W/ RETAINER GLANDS, BURIED GEAR OPERATOR, VALVE BOX, AND STEM RISER. SEE DWG C309 FOR ALTERNATE VALVE LOCATION OPTION.
3. 16" CL 52 D.I. SPOOL (PExPE).
4. 16" D.I. CROSS (MJxMJ) W/ RETAINER GLANDS.
5. 16" D.I. TEE (MJxMJ) W/ RETAINER GLANDS.
6. 16" FOSTER ADAPTER.
7. 16"x12" D.I. REDUCER (MJxMJ) W/ RETAINER GLANDS.
8. 12" CL 53 D.I. SPOOL (FLxPE).
9. VERTICAL TURBINE DAF PUMPS W/ 14"ø PUMP CAN, AS SPECIFIED.
10. VERTICAL TURBINE IRRIGATION PUMPS W/ 16"ø PUMP CAN, AS SPECIFIED.
11. 6" FLEXIBLE COUPLING (FLxFL).
12. 6" SWING CHECK VALVE (FLxFL) AS SPECIFIED.
13. 6" PLUG VALVE (FLxFL) W/ GEAR OPERATOR & HAND WHEEL, AS SPECIFIED.
14. 6" CL 53 D.I. SPOOL (FLxFL).
15. 6" DISMANTLING JOINT, ROMAC DJ400 W/ THRUST RESTRAINT RODS.
16. 6" D.I. TEE (FLxFL) W/ BLIND FLANGE & IRRIGATION AIR RELIEF ASSEMBLY, PRESSURE GAUGE, & TRANSDUCER. SEE DTL 1, DWG M323.
17. 6" D.I. 90° BEND (MJxMJ) W/ RETAINER GLANDS & THRUSTBLOCK.
18. 6" CL 52 D.I. SPOOL (PExPE).
19. 6" D.I. TEE (MJxMJ) W/ RETAINER GLANDS & VERT. THRUSTBLOCK.
20. 6" DAF-F PIPING TO DAF BUILDING.
21. 10" D.I. 22½° BEND (MJxMJ) W/ RETAINER GLANDS & THRUSTBLOCK.
22. 10"x6" D.I. REDUCER (MJxMJ) W/ RETAINER GLANDS.
23. 10" CL 52 D.I. SPOOL (PExPE).
24. REMOVE EXTG BEND, INSTALL 10" D.I. TEE (MJxMJ) W/ RETAINER GLANDS & THRUSTBLOCK. EXTG 10" INV=±343.9 SEE SEQUENCE OF OPERATIONS ON DWG G006 FOR ADDITIONAL INFORMATION.
25. 6" CL 53 D.I. SPOOL (FLxPE).
26. TYPE A PIPE SUPPORT PER DWG M003 (TYP OF 4).
27. PUMP CAN BASE, 48"ø MH RISER 24" HIGH. FILL W/ 18" OF CONC OVER 6" OF COMPACTED GRAVEL BASE. INSTALL STEEL CENTERING RING FOR CAN.
28. 6" D.I. TEE (FLxFL) W/ BLIND FLANGE & DAF AIR RELIEF ASSEMBLY & PRESSURE GAUGE. SEE DTL 2, DWG M323.
29. 10"x6" D.I. TEE (MJxMJxMJ) W/ RETAINER GLANDS & THRUSTBLOCK.
30. 6" FOSTER ADAPTER.
31. 10" D.I. 90° BEND (MJxMJ) W/ RETAINER GLANDS & THRUSTBLOCK.
32. CUT AND REMOVE EXTG 6" IRRIGATION PIPE AS REQUIRED FOR EXCAVATION. UPON COMPLETION OF PUMP CAN INSTALLATION, INSTALL NEW IRRIGATION/SLUDGE FLUSH LINE. SEE DWG C308. EXTG 6" INV=±344.23
33. 6" D.I. 45° BEND (MJxMJ) W/ RETAINER GLANDS & THRUSTBLOCK.
34. 6" BOLLARDS. SEE DTL 226 , DWG C005.
35. TYPE 'C' UTILITY STATION. SEE DTL 3, DWG M004.
36. 6" D.I. TEE (MJxMJ) W/ RETAINER GLANDS.
37. 6" D.I. 90° BEND (MJxMJ) W/ RETAINER GLANDS.
38. 6" PLUG VALVE (MJxMJ) W/ GEAR OPERATOR & 2" OPERATING NUT, AS SPECIFIED; RETAINER GLAND, FOSTER ADAPTER, AND VALVE BOX.
39. TYPE A PIPE PENETRATION PER DWG M002.
40. SETTLEMENT MONITORING POINTS. CONTRACTOR SHALL INSTALL 3 SETTLEMENT MONITORING POINTS ALONG THE EAST BUILDING WALL. SEE SPECIFICATION SECTION 01530 FOR SETTLEMENT MONITORING REQUIREMENTS.

NO.	DATE	DESCRIPTION	BY
1		REVISIONS	

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DSN. CB
DRN. TMT
CKD. CB
DATE: MAY 2026

REGISTERED PROFESSIONAL ENGINEER
OREGON
JAN. 14, 1994
CHRISTOPHER J. BRUCK
RENEWS: 12/31/2027

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
3841 Fairview Industrial Dr. S.E., Suite 100, Salem, OR 97302
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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

IRRIGATION/DAF PUMP STATION MECHANICAL PLAN

DRAWING M321
142 OF 223

JOB NUMBER 2599.3220.0

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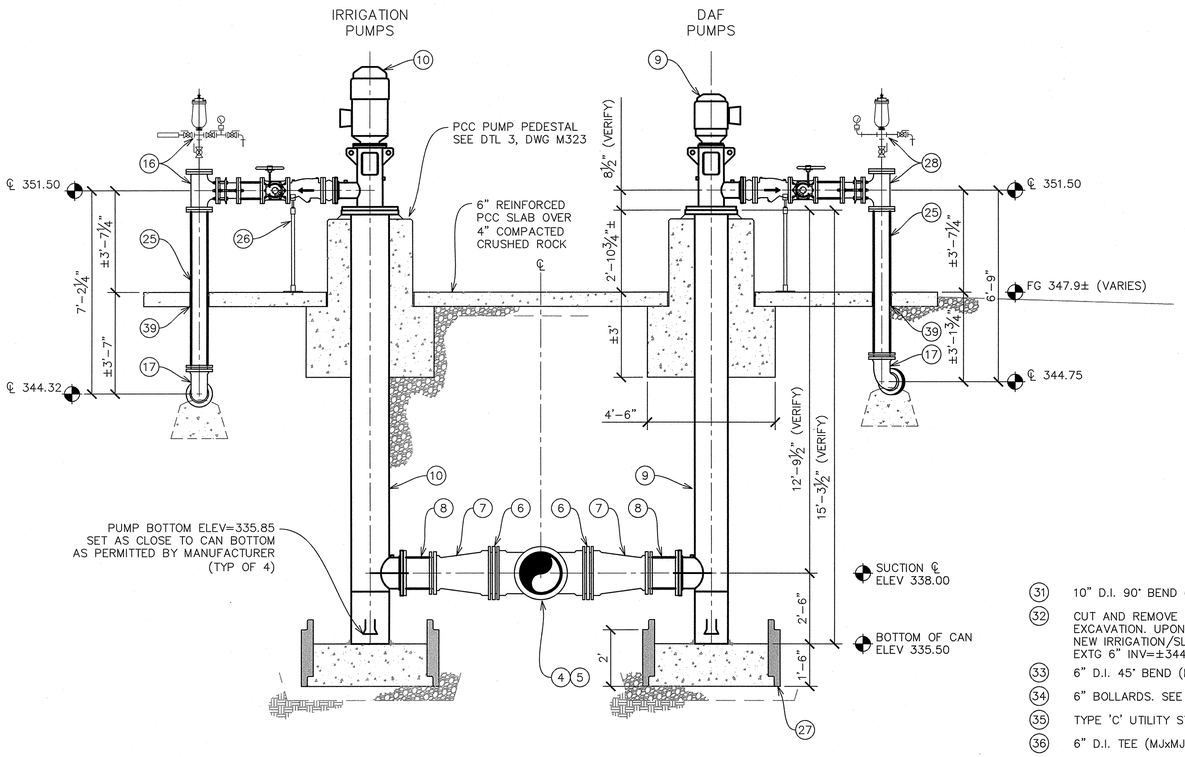
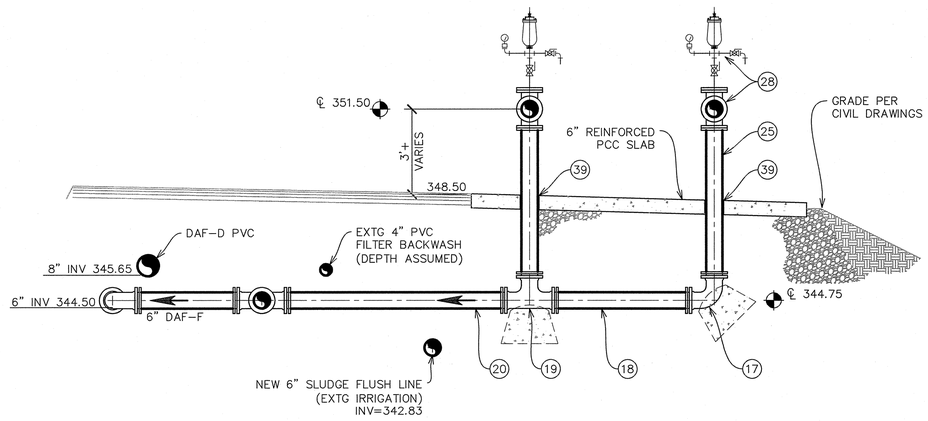


PUMP STATION SECTION A

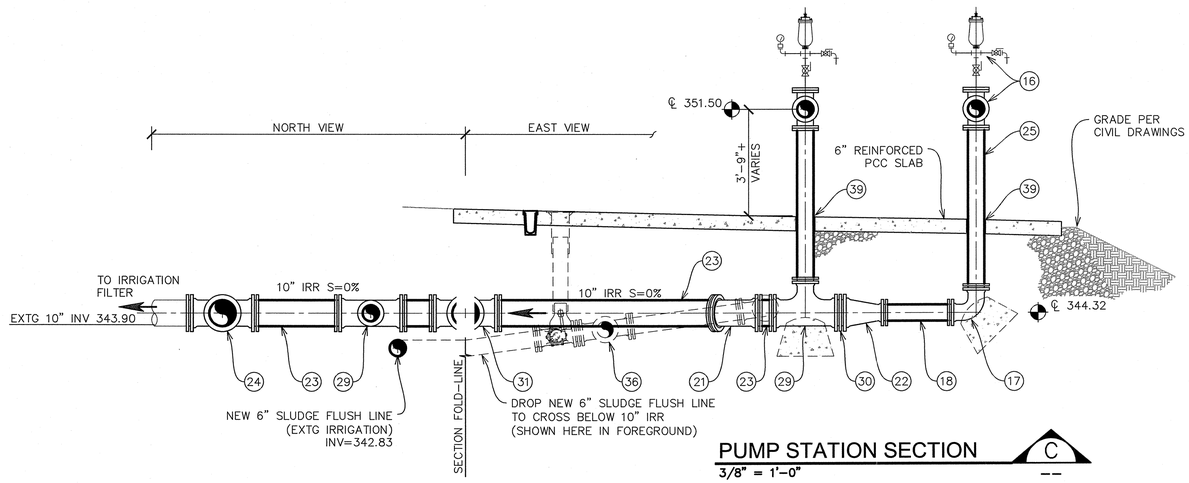
3/8" = 1'-0"

0 1' 2' 4'
FEET



PUMP STATION SECTION B

3/8" = 1'-0"



PUMP STATION SECTION C

3/8" = 1'-0"

KEY CALLOUTS - PUMP STATION

1. 16" D.I. LAGOON CELL 4 IRRIGATION INTAKE PIPE. SEE DWG C309.
1A. 16" D.I. 22.5° BEND (MJxMJ) W/ RETAINER GLANDS.
2. 16" PLUG VALVE (MJxMJ) W/ RETAINER GLANDS, BURIED GEAR OPERATOR, VALVE BOX, AND STEM RISER. SEE DWG C309 FOR ALTERNATE VALVE LOCATION OPTION.
3. 16" CL 52 D.I. SPOOL (PExPE).
4. 16" D.I. CROSS (MJxMJ) W/ RETAINER GLANDS.
5. 16" D.I. TEE (MJxMJ) W/ RETAINER GLANDS.
6. 16" FOSTER ADAPTER.
7. 16"x12" D.I. REDUCER (MJxMJ) W/ RETAINER GLANDS.
8. 12" CL 53 D.I. SPOOL (FLxPE).
9. VERTICAL TURBINE DAF PUMPS W/ 14"ø PUMP CAN, AS SPECIFIED.
10. VERTICAL TURBINE IRRIGATION PUMPS W/ 16"ø PUMP CAN, AS SPECIFIED.
11. 6" FLEXIBLE COUPLING (FLxFL).
12. 6" SWING CHECK VALVE (FLxFL) AS SPECIFIED.
13. 6" PLUG VALVE (FLxFL) W/ GEAR OPERATOR & HAND WHEEL, AS SPECIFIED.
14. 6" CL 53 D.I. SPOOL (FLxFL).
15. 6" DISMANTLING JOINT, ROMAC DJ400 W/ THRUST RESTRAINT RODS.
16. 6" D.I. TEE (FLxFL) W/ BLIND FLANGE & IRRIGATION AIR RELIEF ASSEMBLY, PRESSURE GAUGE, & TRANSDUCER. SEE DTL 1, DWG M323.
17. 6" D.I. 90° BEND (MJxMJ) W/ RETAINER GLANDS & THRUSTBLOCK.
18. 6" CL 52 D.I. SPOOL (PExPE).
19. 6" D.I. TEE (MJxMJ) W/ RETAINER GLANDS & VERT. THRUSTBLOCK.
20. 6" DAF-F PIPING TO DAF BUILDING.
21. 10" D.I. 22½° BEND (MJxMJ) W/ RETAINER GLANDS & THRUSTBLOCK.
22. 10"x6" D.I. REDUCER (MJxMJ) W/ RETAINER GLANDS.
23. 10" CL 52 D.I. SPOOL (PExPE).
24. REMOVE EXTG BEND, INSTALL 10" D.I. TEE (MJxMJ) W/ RETAINER GLANDS & THRUSTBLOCK. EXTG 10" INV=±343.9 SEE SEQUENCE OF OPERATIONS ON DWG G006 FOR ADDITIONAL INFORMATION.
25. 6" CL 53 D.I. SPOOL (FLxPE).
26. TYPE A PIPE SUPPORT PER DWG M003 (TYP OF 4).
27. PUMP CAN BASE, 48"ø MH RISER 24" HIGH. FILL W/ 18" OF CONC OVER 6" OF COMPACTED GRAVEL BASE. INSTALL STEEL CENTERING RING FOR CAN.
28. 6" D.I. TEE (FLxFL) W/ BLIND FLANGE & DAF AIR RELIEF ASSEMBLY & PRESSURE GAUGE. SEE DTL 2, DWG M323.
29. 10"x6" D.I. TEE (MJxMJxMJ) W/ RETAINER GLANDS & THRUSTBLOCK.
30. 6" FOSTER ADAPTER.
31. 10" D.I. 90° BEND (MJxMJ) W/ RETAINER GLANDS & THRUSTBLOCK.
32. CUT AND REMOVE EXTG 6" IRRIGATION PIPE AS REQUIRED FOR EXCAVATION. UPON COMPLETION OF PUMP CAN INSTALLATION, INSTALL NEW IRRIGATION/SLUDGE FLUSH LINE. SEE DWG C308. EXTG 6" INV=±344.23
33. 6" D.I. 45° BEND (MJxMJ) W/ RETAINER GLANDS & THRUSTBLOCK.
34. 6" BOLLARDS. SEE DTL 226 , DWG C005.
35. TYPE 'C' UTILITY STATION. SEE DTL 3, DWG M004.
36. 6" D.I. TEE (MJxMJ) W/ RETAINER GLANDS.
37. 6" D.I. 90° BEND (MJxMJ) W/ RETAINER GLANDS.
38. 6" PLUG VALVE (MJxMJ) W/ GEAR OPERATOR & 2" OPERATING NUT, AS SPECIFIED; RETAINER GLAND, FOSTER ADAPTER, AND VALVE BOX.
39. TYPE A PIPE PENETRATION PER DWG M002.
40. SETTLEMENT MONITORING POINTS. CONTRACTOR SHALL INSTALL 3 SETTLEMENT MONITORING POINTS ALONG THE EAST BUILDING WALL. SEE SPECIFICATION SECTION 01530 FOR SETTLEMENT MONITORING REQUIREMENTS.

NO.	DATE	DESCRIPTION	BY
1		REVISIONS	

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0 1"
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DSN. CB
DRN. TMT
CKD. CB
DATE: MAY 2026

REGISTERED PROFESSIONAL ENGINEER
OREGON
JAN. 14, 2005
CHRISTOPHER J. BRUKOVICH
RENEWS: 12/31/2027

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
3841 Fairview Industrial Dr. S.E., Suite 100, Salem, OR 97302
Phone: (503) 585-2474 Fax: (503) 585-3986
E-mail: westech@westech-eng.com

CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

IRRIGATION/DAF PUMP STATION MECHANICAL SECTIONS

DRAWING
M322
143 OF 223

JOB NUMBER
2599.3220.0

5/26/2026 12:22:35 PM
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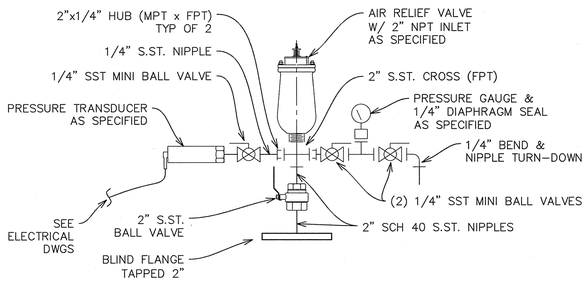
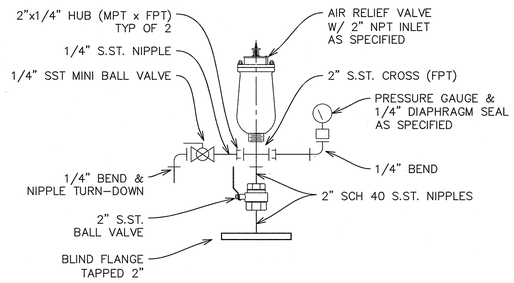


IRRIGATION PUMP AIR RELIEF VALVE, SAMPLE TAP, PRESSURE GAUGE, & PRESSURE TRANSDUCER DETAIL

1" = 1'–0"

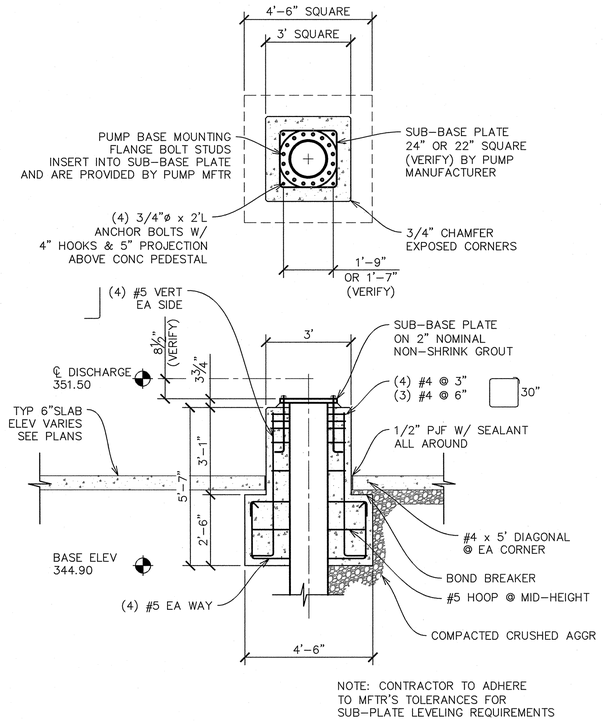
1



DAF PUMP AIR RELIEF VALVE, SAMPLE TAP & PRESSURE GAUGE DETAIL

1" = 1'–0"

2



NOTE: CONTRACTOR TO ADHERE TO MFTR'S TOLERANCES FOR SUB-PLATE LEVELING REQUIREMENTS

PUMP PEDESTAL DETAIL

3/8" = 1'–0"

3

M323

NO.	DATE	DESCRIPTION	BY
1		REVISIONS	

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DSN.: CB
DRN.: TMT
CKD.: CB
DATE: MAY 2026

REGISTERED PROFESSIONAL ENGINEER
OREGON
JULY 14, 2023
CHRISTOPHER T. BROCKTO
56473PE
RENEWS: 12/31/2027

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
3841 Fairview Industrial Dr. S.E., Suite 100, Salem, OR 97302
Phone: (503) 585-2474 Fax: (503) 585-3986
E-mail: westech@westech-eng.com

CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

IRRIGATION/DAF PUMP STATION DETAILS

DRAWING
M323
144 OF 223

JOB NUMBER
2599.3220.0

5/26/2026 12:22:45 PM
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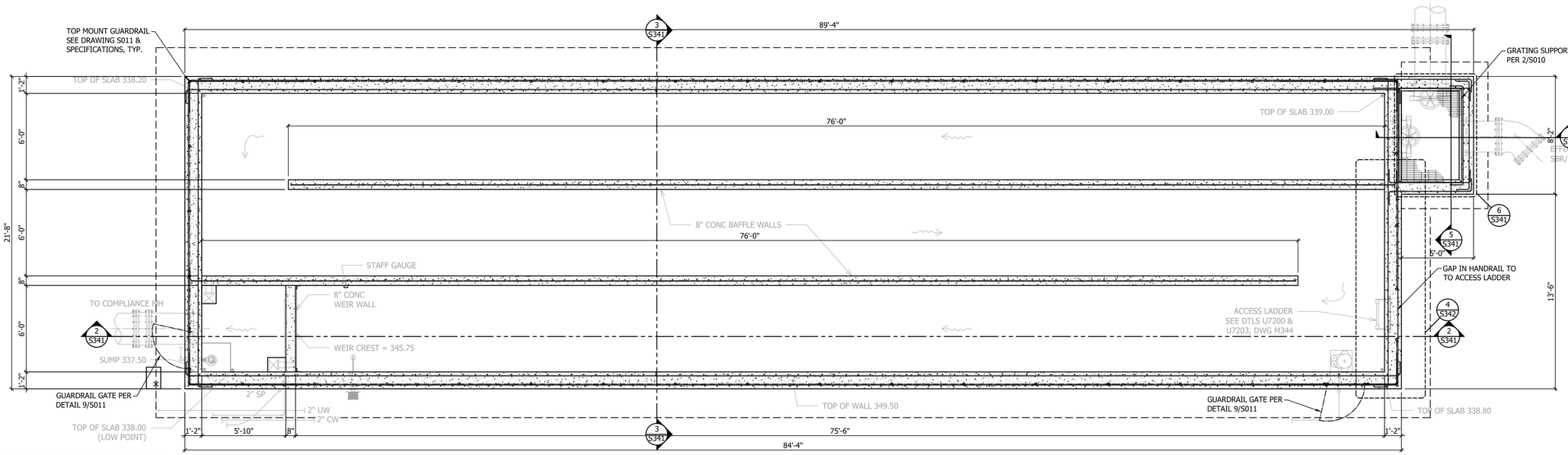
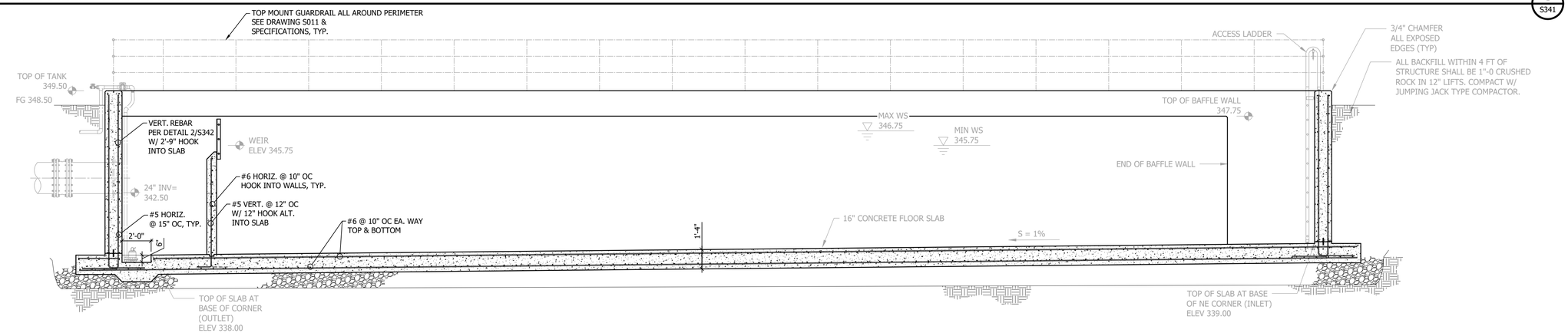


CHLORINE CONTACT CHAMBER - FOUNDATION PLAN

1/4" = 1'-0"

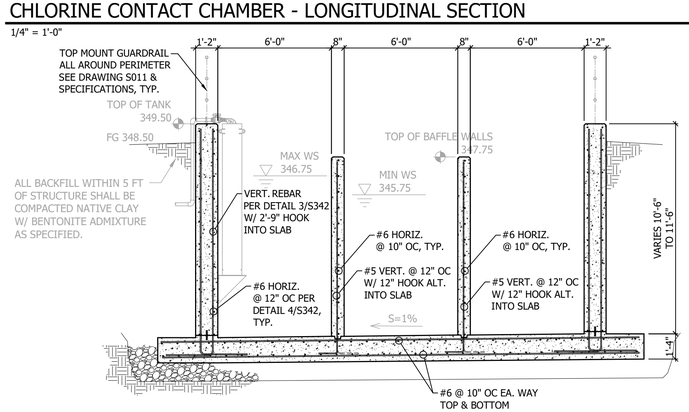
1 S341



CHLORINE CONTACT CHAMBER - LONGITUDINAL SECTION

1/4" = 1'-0"

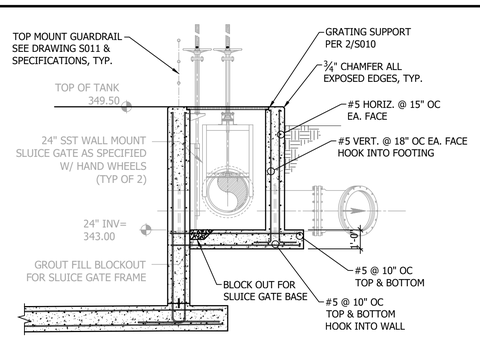
2 S341



CHLORINE CONTACT CHAMBER - TRANSVERSE SECTION

1/4" = 1'-0"

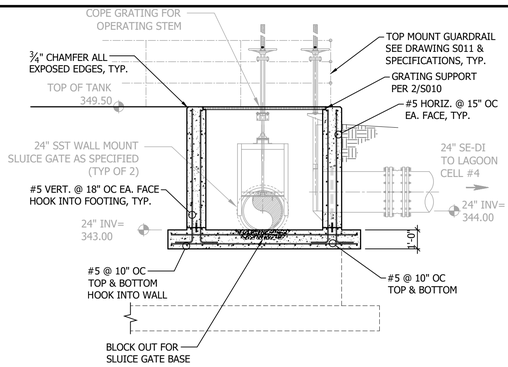
3 S341



CONTACT CHAMBER SECTION

1/4" = 1'-0"

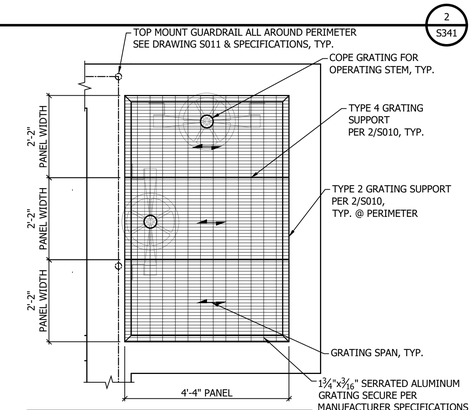
4 S341



CONTACT CHAMBER SECTION

1/4" = 1'-0"

5 S341



INLET BOX GRATING PLAN

1/2" = 1'-0"

6 S341

MSC ENGINEERS
CONSULTING STRUCTURAL ENGINEERS
SINCE 1925
3457 Ryan Street Pkwy NE
Salem, OR 97301
503.585.2474
mscengineers.com

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

VERIFY SCALE
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DSN. CBS
DRN. SMC
CKD. CBS
DATE: MAY '26

REGISTERED PROFESSIONAL ENGINEER
63202
DIGITALLY SIGNED
OREGON
CAMERON B. SWEARINGEN
2026
EXPIRES: JUNE 30, 2028

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
3841 Fairview Industrial Dr. S.E., Suite 100, Salem, OR 97302
Phone: (503) 585-2474 Fax: (503) 585-3986
E-mail: westech@westech-eng.com

CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

CHLORINE CONTACT CHAMBER PLAN AND SECTION

DRAWING
S341
145 OF 223

JOB NUMBER
231048

5/19/2026 7:26:51 AM
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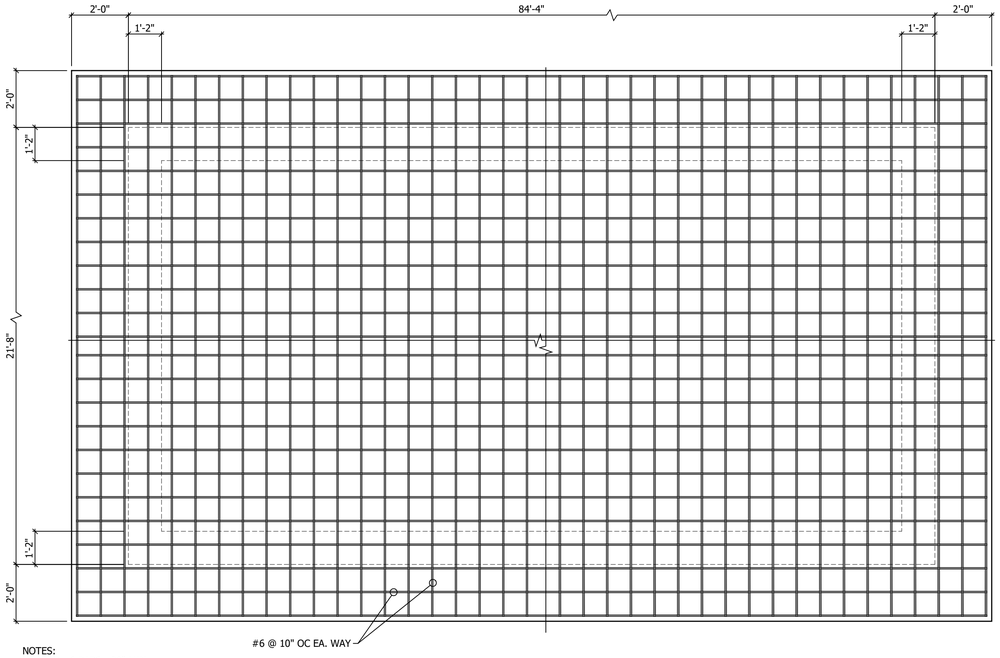
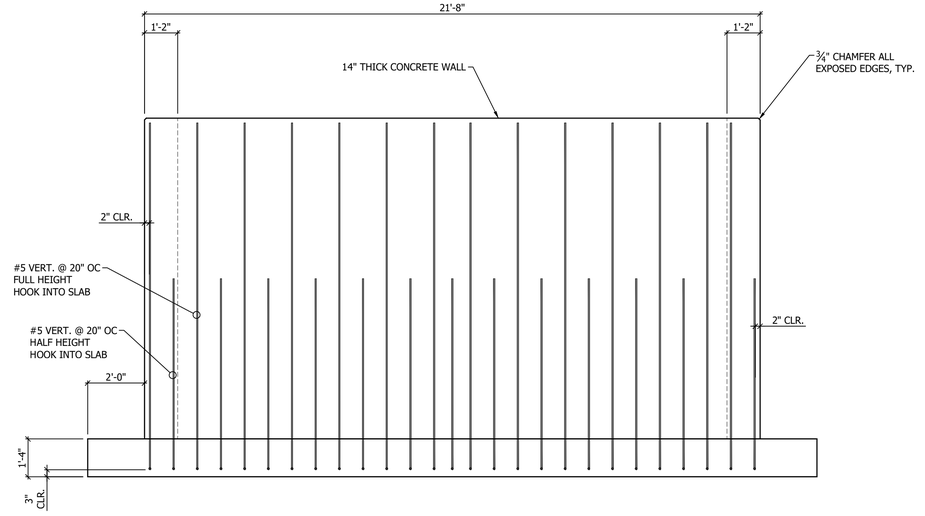


NOTES:
1. LAP #6 BARS - 38" MIN.
2. (2) MATS REQUIRED

CHLORINE CONTACT CHAMBER - FLOOR SLAB REINFORCING

3/8" = 1'-0"

1 S342

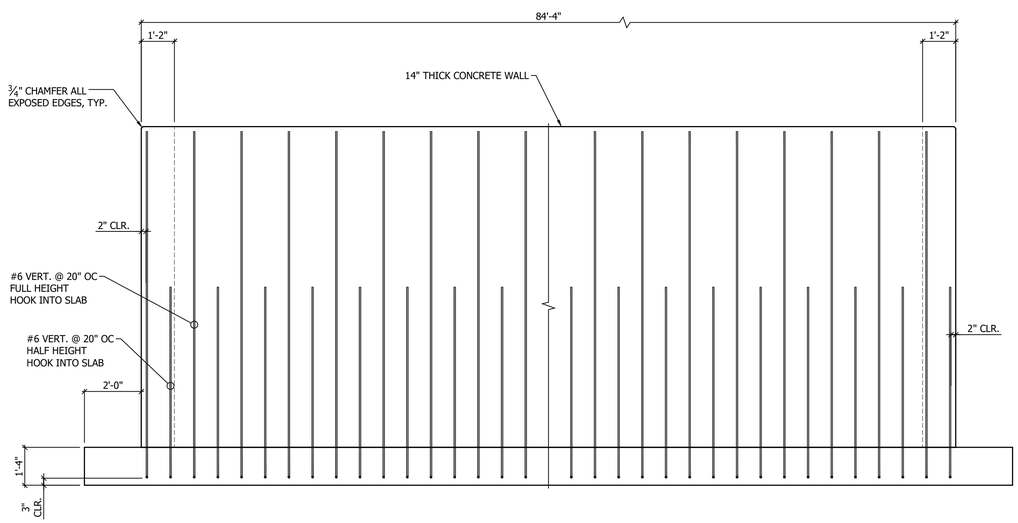


NOTES:
1. #5 @ 15" OC HORIZ. NOT SHOWN FOR CLARITY
2. SLAB REINFORCEMENT NOT SHOWN FOR CLARITY
3. (2) MATS REQUIRED

CHLORINE CONTACT CHAMBER - VERTICAL REINFORCEMENT @ TANK ENDWALL

3/8" = 1'-0"

2 S342

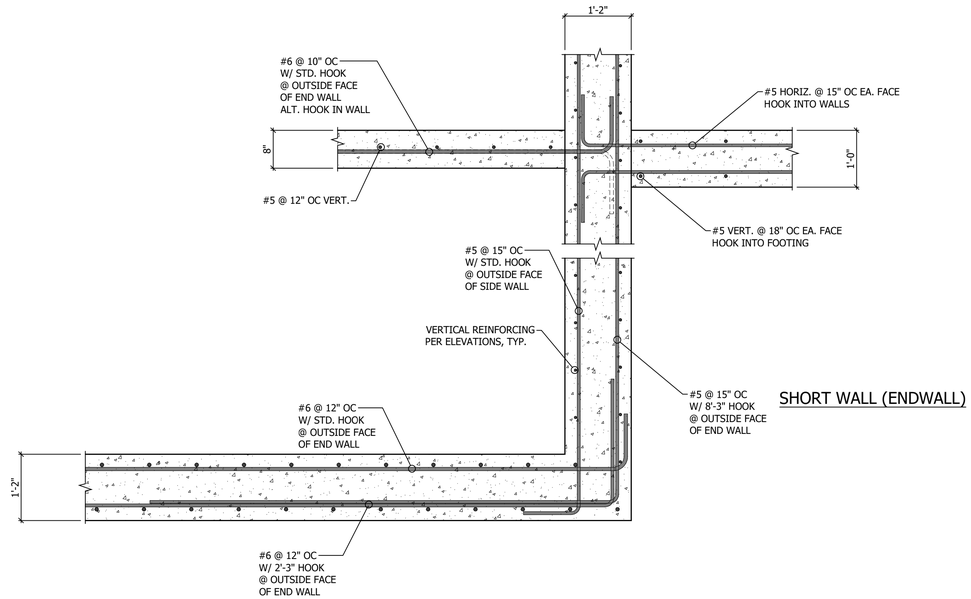


NOTES:
1. #6 @ 12" OC HORIZ. NOT SHOWN FOR CLARITY
2. SLAB REINFORCEMENT NOT SHOWN FOR CLARITY
3. (2) MATS REQUIRED

CHLORINE CONTACT CHAMBER - VERTICAL REINFORCEMENT @ TANK SIDEWALL

3/8" = 1'-0"

3 S342



CHLORINE CONTACT CHAMBER - WALL CORNER

3/4" = 1'-0"

4 S342

MSC ENGINEERS
CONSULTING STRUCTURAL ENGINEERS
SINCE 1925
540 Ferry Street Phone NE
Suite 200 Salem, OR 97301
Salem, OR 97301 503.585.2474
mscengineers.com

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REGISTERED PROFESSIONAL ENGINEER
63202
DIGITALLY SIGNED
OREGON
CAMERON B. SWARTWOUT
EXPIRES: JUNE 30, 2028

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
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CITY OF AUMSVILLE, OREGON

WASTEWATER TREATMENT PLANT IMPROVEMENTS

CHLORINE CONTACT CHAMBER SECTION AND DETAILS

DRAWING
S342
146 OF 223

JOB NUMBER
231048

5/19/2026 7:26:53 AM
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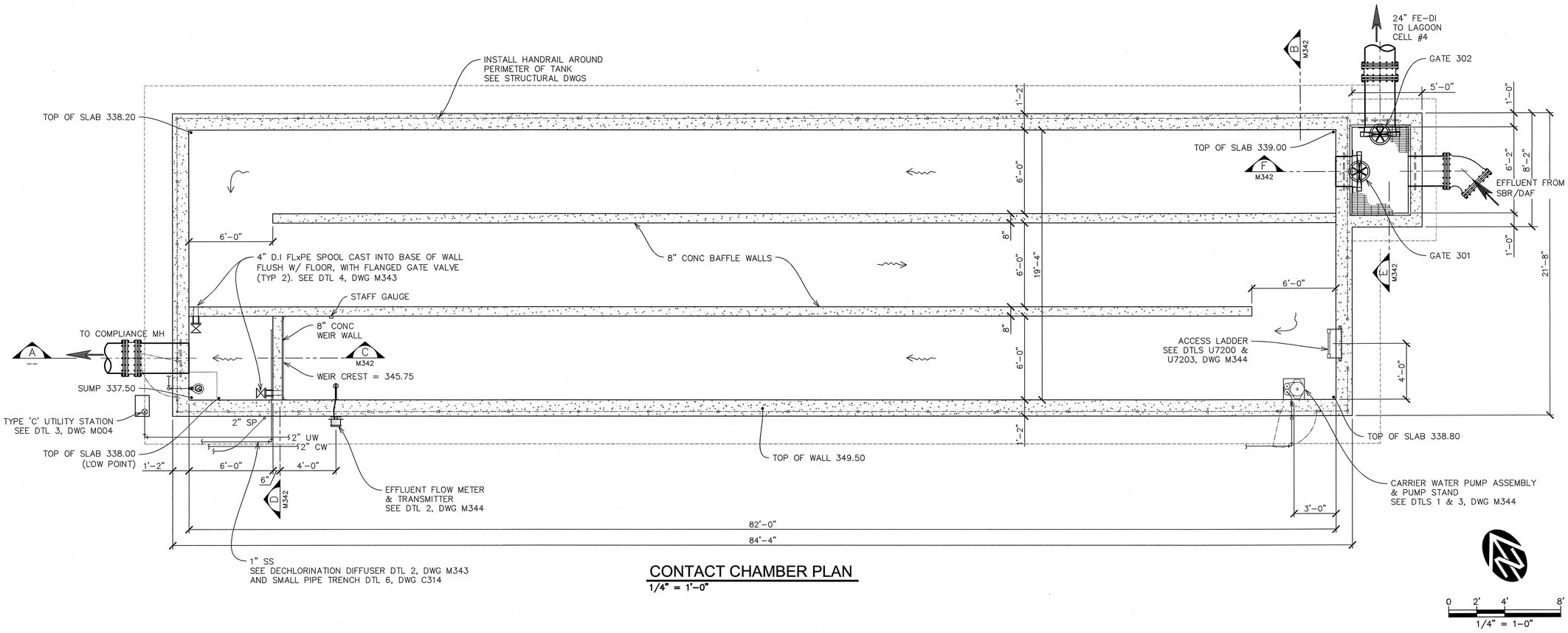
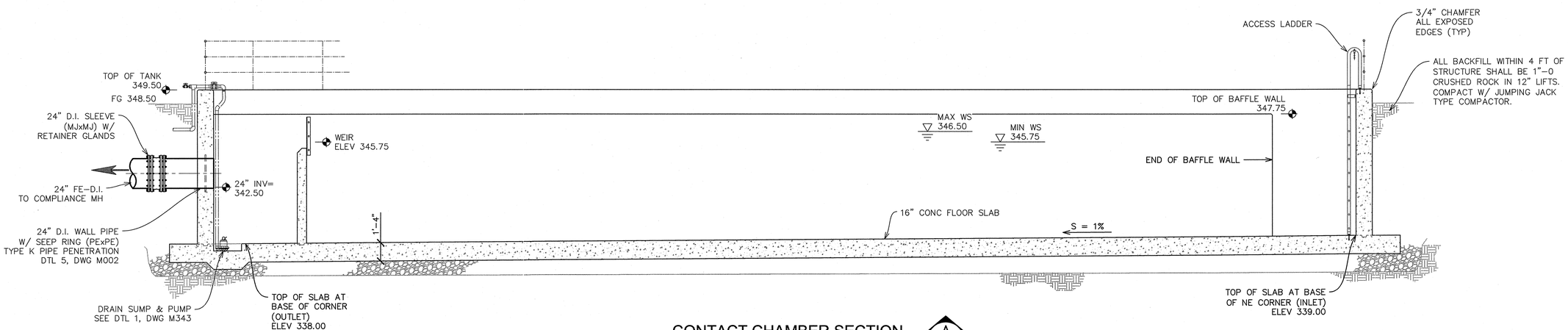


CONTACT CHAMBER PLAN
1/4" = 1'-0"

0 2' 4' 8'
1/4" = 1-0"



CONTACT CHAMBER SECTION A
1/4" = 1'-0"

NO.	DATE	DESCRIPTION	BY
1		REVISIONS	

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DSN. CB
DRN. TMT
CKD. CB
DATE: MAY 2026

REGISTERED PROFESSIONAL ENGINEER
OREGON
JULY 14, 2006
CHRISTOPHER T. BUCKATO
86473PE
RENEWS: 12/31/2027

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
3841 Fairview Industrial Dr. S.E., Suite 100, Salem, OR 97302
Phone: (503) 585-2474 Fax: (503) 585-3986
E-mail: westech@westech-eng.com

CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

CHLORINE CONTACT CHAMBER MECHANICAL PLAN & SECTION

DRAWING
M341
147 OF 223

JOB NUMBER
2599.3220.0

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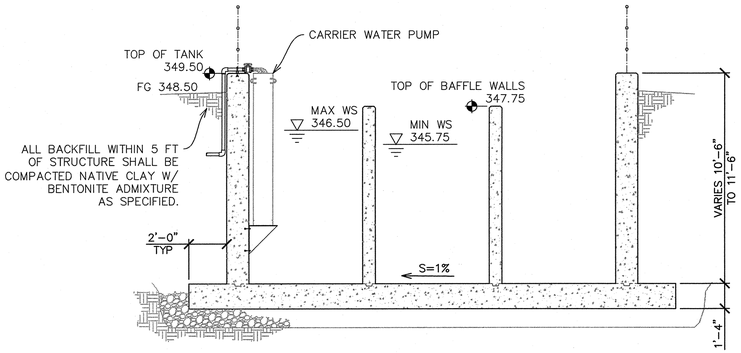
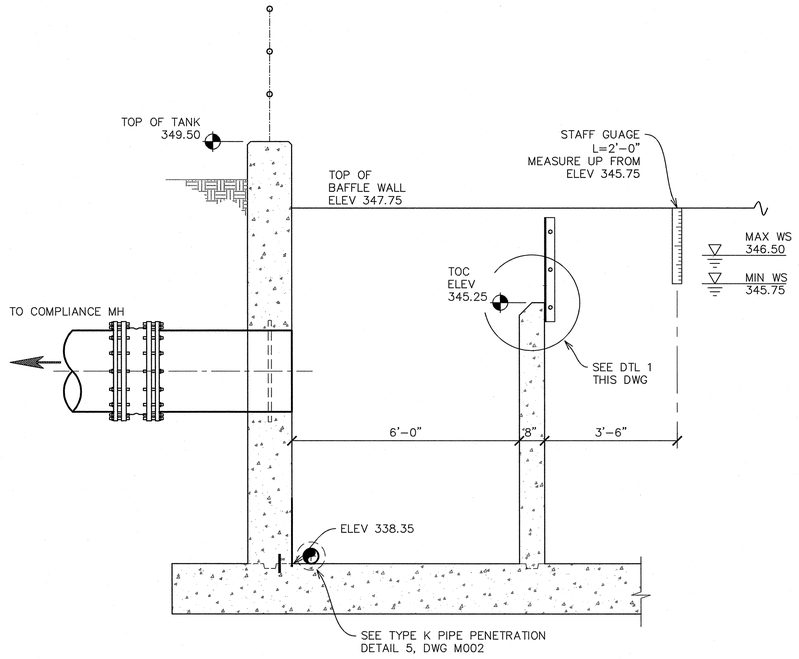
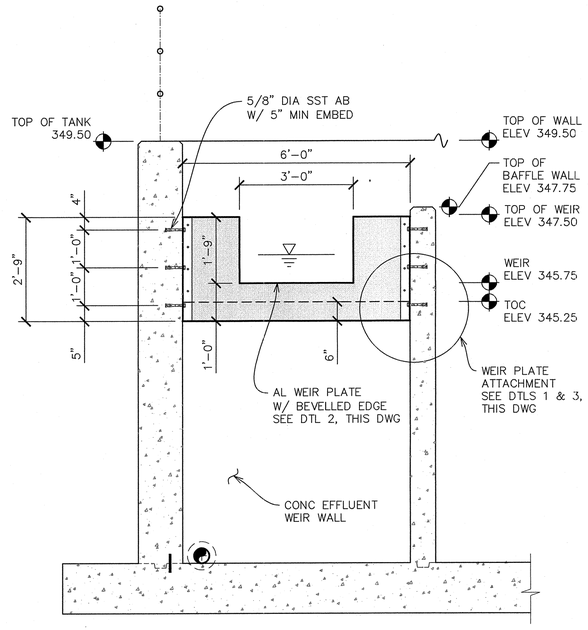


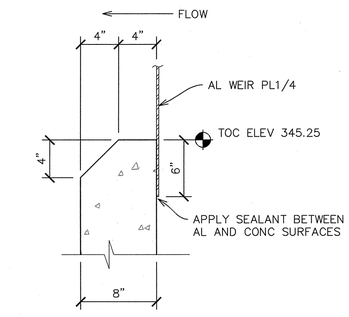
CONTACT CHAMBER SECTION B
1/4" = 1'-0"



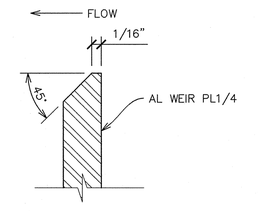
EFFLUENT WEIR SECTION C
1/2" = 1'-0"



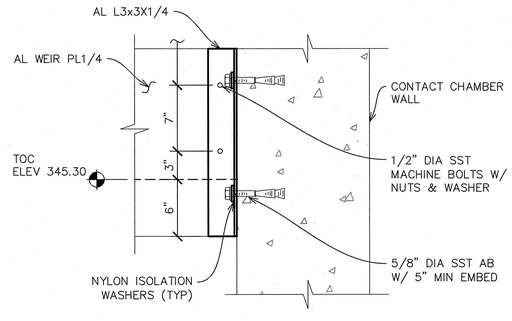
EFFLUENT WEIR SECTION D
1/2" = 1'-0"



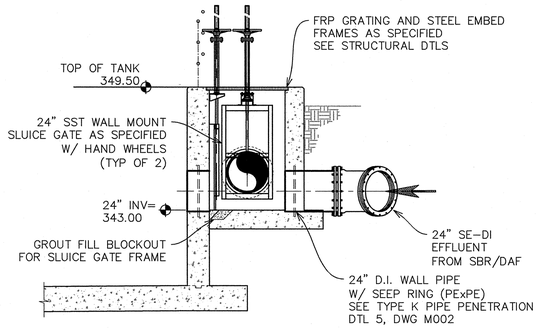
WEIR WALL DETAIL 1
1-1/2" = 1'-0"



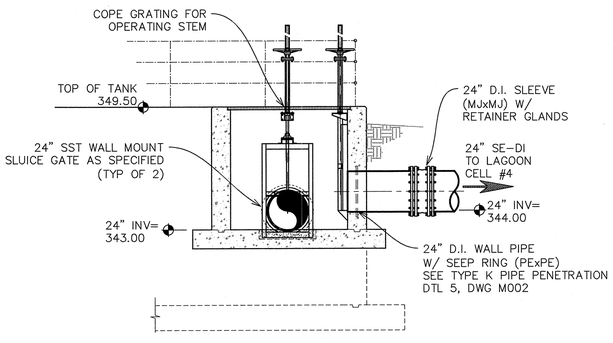
WEIR PLATE BEVEL 2
N.T.S.



WEIR PLATE ATTACHMENT DETAIL 3
1-1/2" = 1'-0"



CONTACT CHAMBER SECTION E
1/4" = 1'-0"



CONTACT CHAMBER SECTION F
1/4" = 1'-0"

NO.	DATE	DESCRIPTION	BY
1		REVISIONS	

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DRN. TMT
CKD. CB
DATE: MAY 2026

REGISTERED PROFESSIONAL ENGINEER
OREGON
JAN. 14, 2005
CHRISTOPHER J. BRUNOTO
56473PE
RENEWS: 12/31/2027

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
3841 Fairview Industrial Dr. S.E., Suite 100, Salem, OR 97302
Phone: (503) 585-2474 Fax: (503) 585-3986
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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

CHLORINE CONTACT CHAMBER MECHANICAL SECTIONS & DETAILS

DRAWING
M342
148 OF 223

JOB NUMBER
2599.3220.0

5/26/2026 12:22:58 PM
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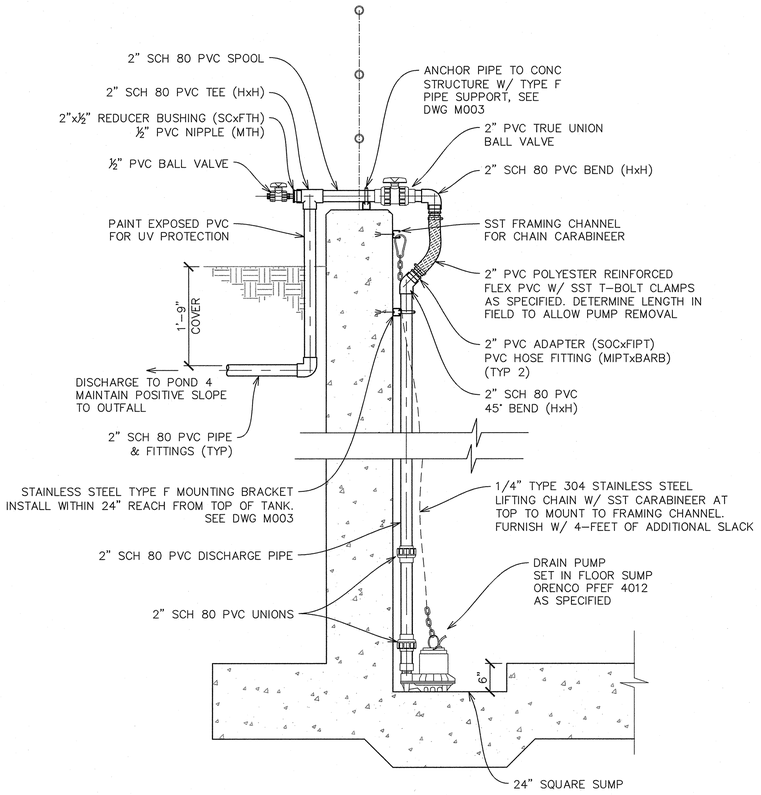
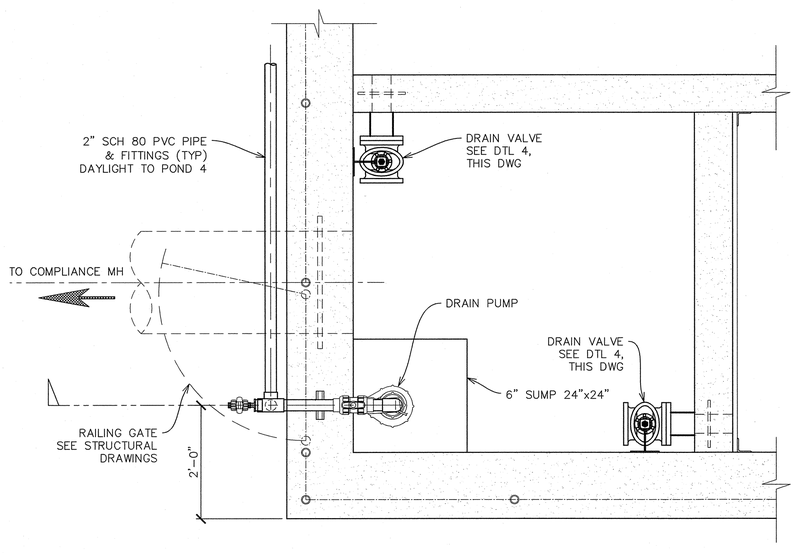


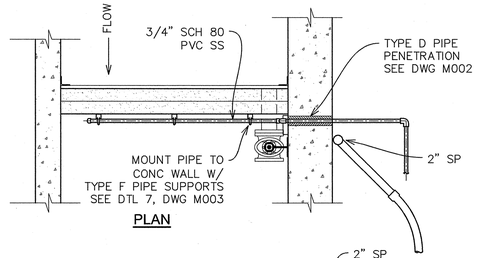
SECTION



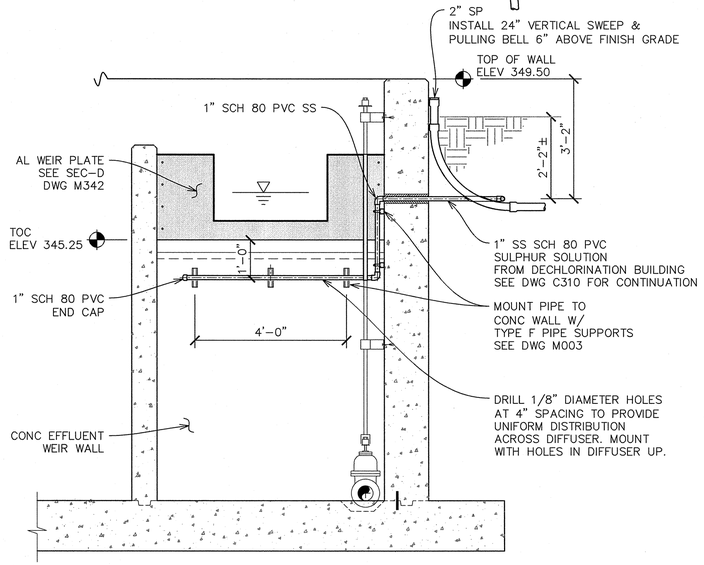
PLAN

CONTACT CHAMBER DRAIN PUMP DETAIL 1

3/4" = 1'-0"



PLAN

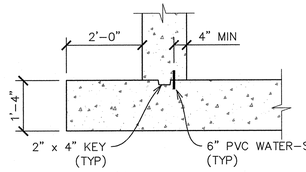


NOTE: INSTALL DIFFUSER ON DOWNSTREAM SIDE OF WEIR

SECTION

DECHLORINATION DIFFUSER DETAIL 2

1/2" = 1'-0"

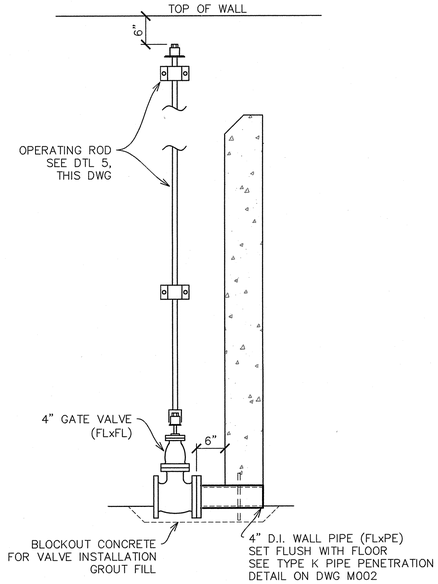


NOTES:

1. UNLESS OTHERWISE SHOWN, ALL CONSTRUCTION JOINTS (BOTH HORZ & VERT) SHALL HAVE BOTH A PVC WATER-STOP AS SPECIFIED AND A SHEAR KEY.
2. REBAR NOT SHOWN FOR CLARITY.

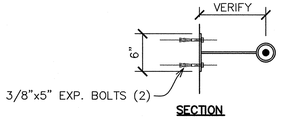
TYP. CONSTRUCTION JOINT 3

1/2" = 1'-0"



DRAIN VALVE DETAIL 4

3/4" = 1'-0"



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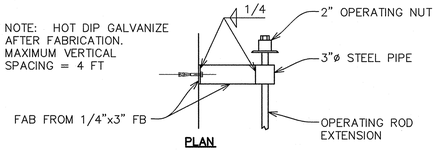

PLAN

OPERATING ROD SUPPORT DETAIL 5

1" = 1'-0"

NO.	DATE	DESCRIPTION	BY
		REVISIONS	
1			

VERIFY SCALE
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CKD.: CB
DATE: MAY 2026

REGISTERED PROFESSIONAL ENGINEER
OREGON
JAN. 14, 2014
CHRISTOPHER J. BRUCKA
RENEWS: 12/31/2027

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
3841 Fairview Industrial Dr. S.E., Suite 100, Salem, OR 97302
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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

CHLORINE CONTACT CHAMBER MECHANICAL DETAILS

DRAWING
M343
149 OF 223

JOB NUMBER
2599.3220.0

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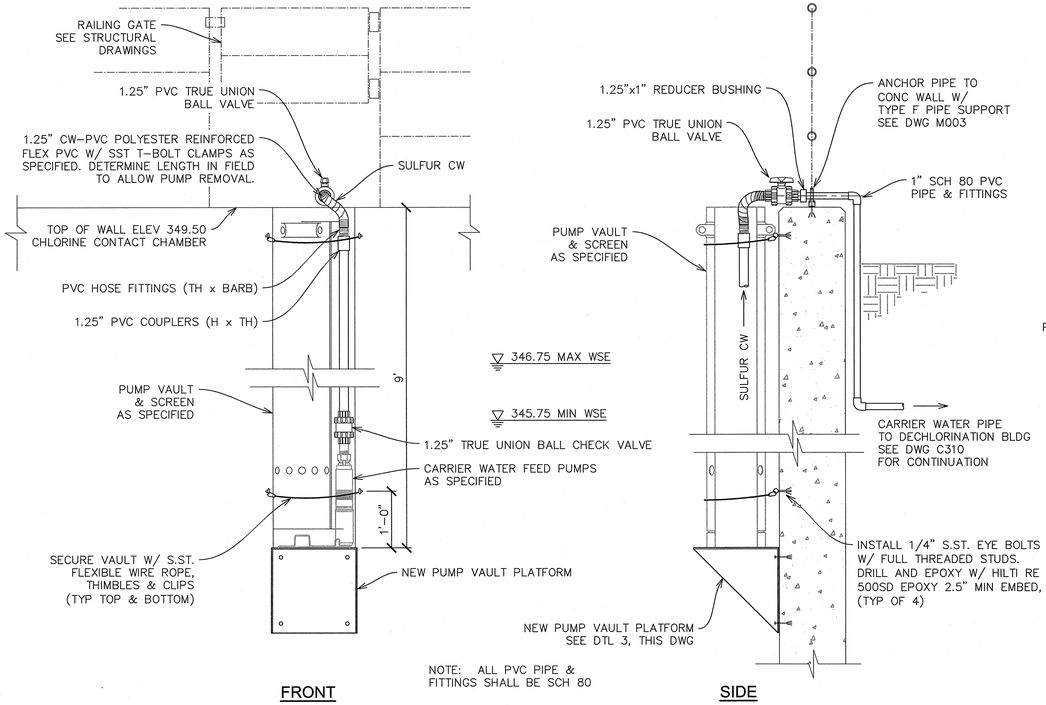
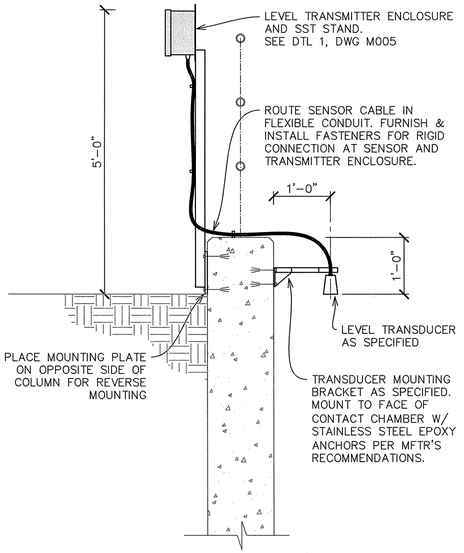


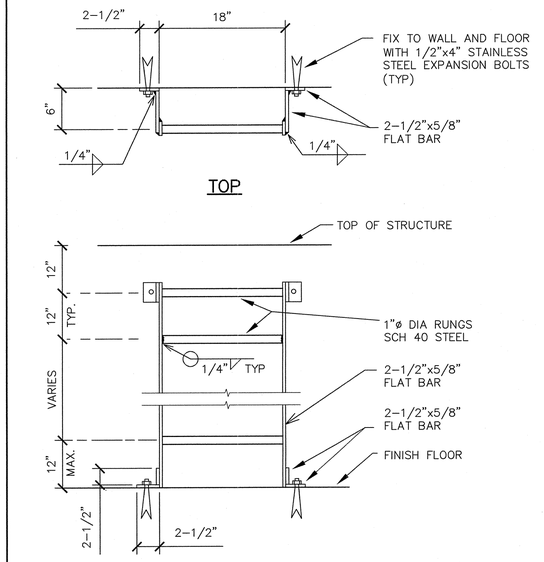
CARRIER WATER PUMP ASSEMBLY (1)

3/4" = 1'–0"



EFFLUENT FLOW METER DETAIL (2)

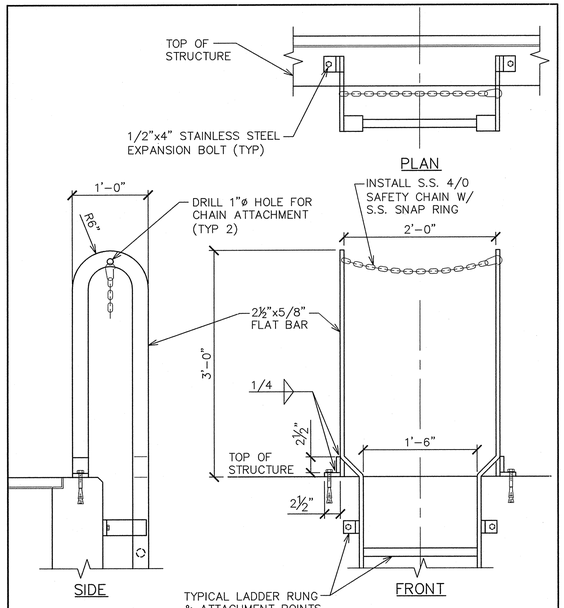
3/4" = 1'–0"



ACCESS LADDER

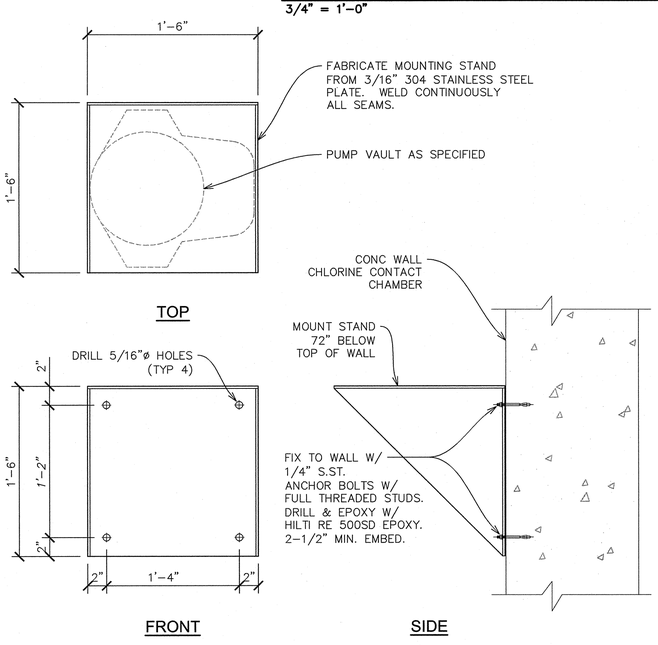
NOTE:
FABRICATE LADDER FROM 304 STAINLESS STEEL

LAST REVISION DATE:	JO #
APR 2026	2599.3220.0
ACCESS LADDER	
(NTS)	
WESTECH ENG.	DETAIL NO. U7200



NOTE:
FABRICATE LADDER TOP FROM 304 STAINLESS STEEL.

LAST REVISION DATE:	JO #
APR 2026	2599.3220.0
LADDER TOP RETURN DETAIL	
(NTS)	
WESTECH ENG.	DETAIL NO. U7203



PUMP VAULT PLATFORM & MOUNTING DETAIL (3)

1–1/2" = 1'–0"

NO.	DATE	DESCRIPTION	BY
1		REVISIONS	

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DSN.: CB
DRN.: TMT
CKD.: CB
DATE: MAY 2026

REGISTERED PROFESSIONAL ENGINEER
OREGON
JULY 14, 1978
CHRISTOPHER J. BRUCATO
RENEWS: 12/31/2027

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
3841 Fairview Industrial Dr. S.E., Suite 100, Salem, OR 97302
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E–mail: westech@westech–eng.com

CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

CHLORINE CONTACT CHAMBER MECHANICAL DETAILS

DRAWING
M344
150 OF 223

JOB NUMBER
2599.3220.0

5/26/2026 12:23:08 PM
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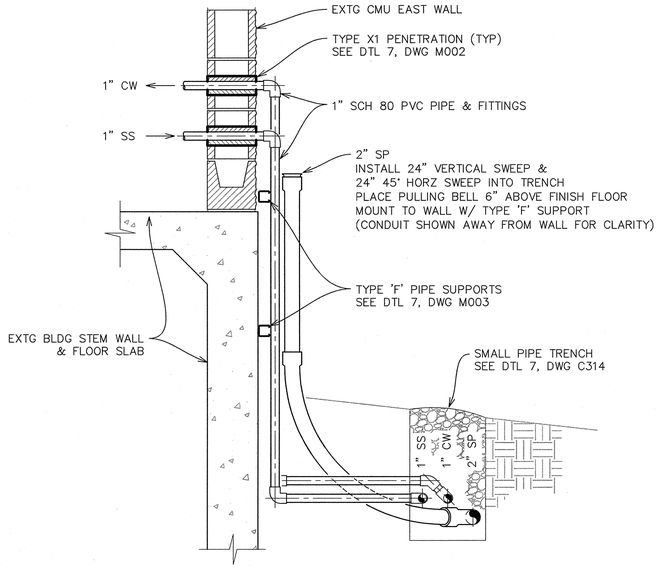
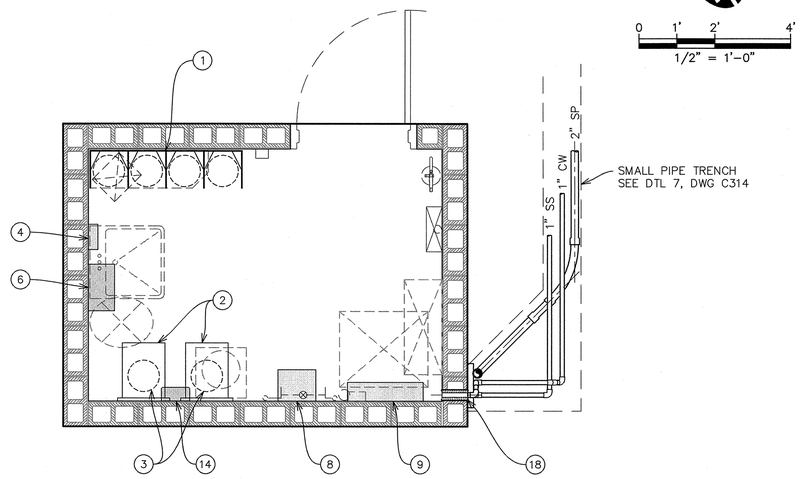


SMALL PIPE DECHLOR BUILDING ENTRANCE DETAIL

1" = 1'-0"

1



0 1' 2' 4'

1/2" = 1'-0"

EXTG DE-CHLORINATION BUILDING PLAN

1/2" = 1'-0"

NOTE: ALL WORK INSIDE THE DECHLORINATION BUILDING SHALL BE COMPLETED DURING THE DRY WEATHER MONTHS OF MAY–OCTOBER. SEE SEQUENCE OF OPERATIONS ON DWG G006 FOR ADDITIONAL INFORMATION.

KEY CALLOUTS

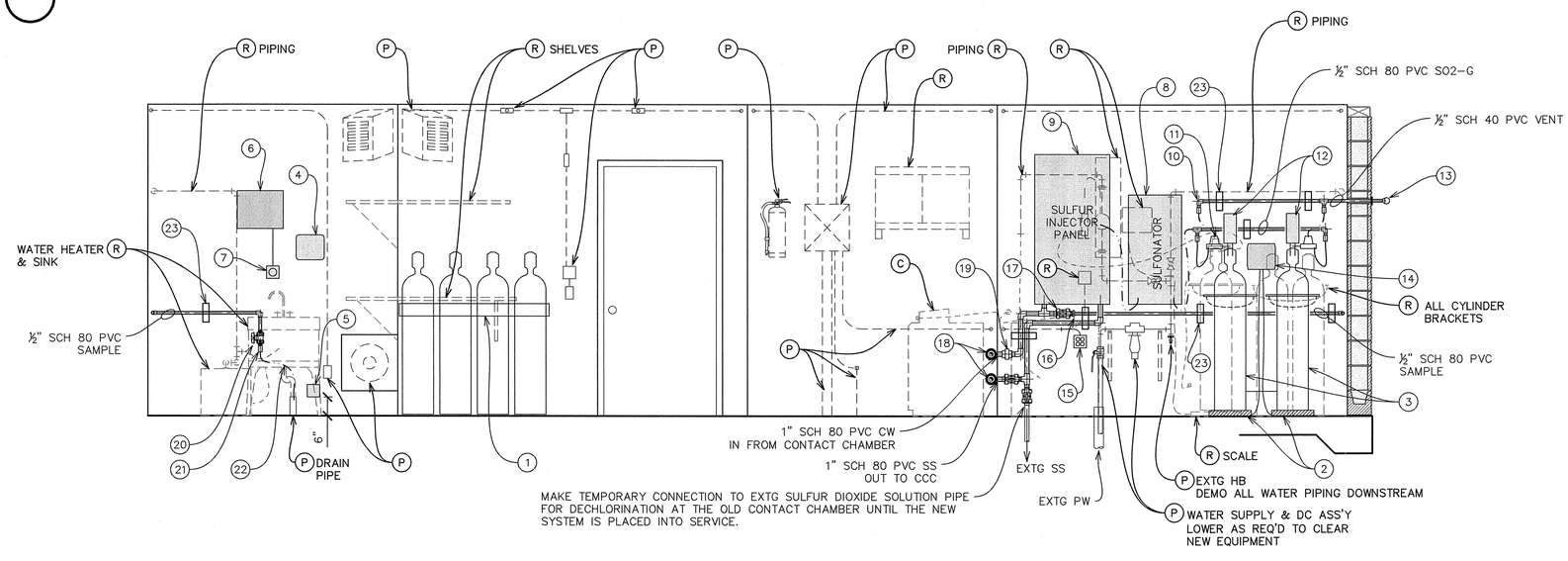
1. F&I 150 POUND SULFUR DIOXIDE CYLINDER STORAGE RACK SEE DTL 2, THIS DWG.
2. F&I SULFUR DIOXIDE CYLINDER SCALES AS SPEC'D.
3. 150 POUND SULFUR DIOXIDE CYLINDERS (IN USE).
4. F&I SULFUR DIOXIDE GAS DETECTOR RECEIVER AS SPEC'D.
5. F&I SULFUR DIOXIDE GAS TRANSMITTER SENSOR AS SPEC'D.
6. F&I EMERGENCY CYLINDER VALVE CLOSURE CONTROLLER AS SPEC'D.
7. EMERGENCY SHUTOFF SWITCH.
8. F&I SULFONATOR AS SPEC'D.
9. F&I SULFUR DIOXIDE INJECTOR PANEL, SEE DTL 1, DWG M352.
10. TYP POLY TUBING CONNECTION, SEE DTL 3, DWG M352 (6 REQ'D).
11. VACUUM REGULATORS AS SPEC'D.
12. CYLINDER VALVE ACTUATORS AS SPEC'D.
13. INSTALL VENT THROUGH WALL, SEE DTL 4, THIS DWG.
14. SCALE TRANSMITTER AS SPEC'D.
15. NEW 4–PLEX RECEPTICAL. CONNECT TO EXTG CONDUIT.
16. 1"x½" SCH 80 PVC REDUCER BUSHING.
17. 1" PVC TRUE UNION BALL VALVE (TYP OF 3).
18. CORE DRILL, INSTALL TYPE X1 PENETRATIONS SEE DTL 7, DWG M002 (TYP 2). SEE DTL 1, THIS DRAWING FOR CONTINUATION.
19. 1" SCH 80 PVC UNION.
20. 1/2" TRUE UNION BALL VALVE (SLxSL).
21. 1/2" SLxTH ADAPTER AND TUBING ADAPTER, SIMILAR TO DTL 4, DWG M303.
22. 1/2" POLY TUBING. PROVIDE SUFFICIENT LENGTH FOR SLACK TO BE INSERTED INTO DRAIN.
23. MOUNT PIPING TO WALL WITH TYPE 'F' PIPE SUPPORT AT 5' O.C. (TYP), PER DWG M003.

ABBREVIATIONS & PIPING SYSTEMS

SO2–G	SULFURE DIOXIDE GAS
CW	CARRIER WATER SUPPLY
GF	GAS FEED
SS	SULFUR SOLUTION
PW	POTABLE WATER SUPPLY

DEMOLITION CALLOUTS

- (P) CONTRACTOR TO PROTECT.
- (R) CONTRACTOR TO REMOVE AND DISPOSE.
- (C) COORDINATE W/ CITY TO REMOVE EXTG SAMPLER.



EXISTING DE-CHLORINATION ROOM INTERIOR ELEVATIONS

NO.	DATE	DESCRIPTION
1		REVISIONS

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VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING. IF NOT ONE INCH ON THIS SHEET ADJUST SCALES ACCORDINGLY
0 1"
DSN. CB
DRN. TMT
CKD. CB
DATE: MAY 2026

REGISTERED PROFESSIONAL ENGINEER
CHRISTOPHER J. BRUCKA
OREGON
JAN. 14, 2005
RENEWS: 12/31/2027

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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

EXISTING DE–CHLORINATION BUILDING MODIFICATIONS

DRAWING
M351
151 OF 223

JOB NUMBER
2599.3220.0

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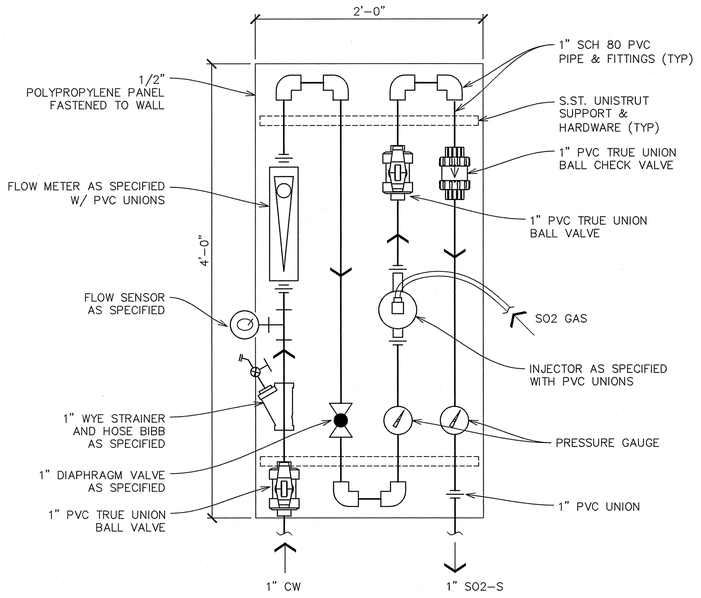
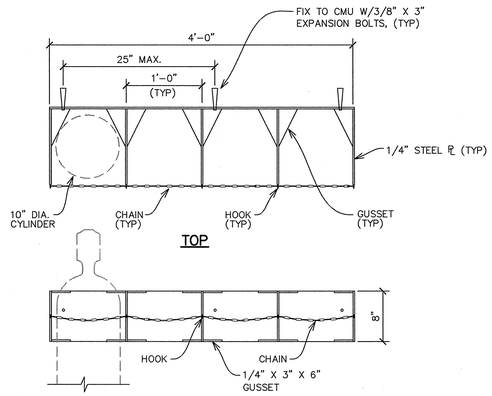
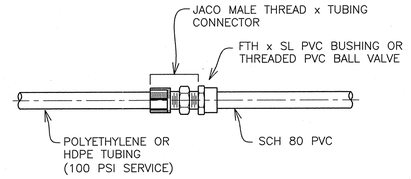


SULFUR INJECTOR PANEL 1
1-1/2" = 1'-0"

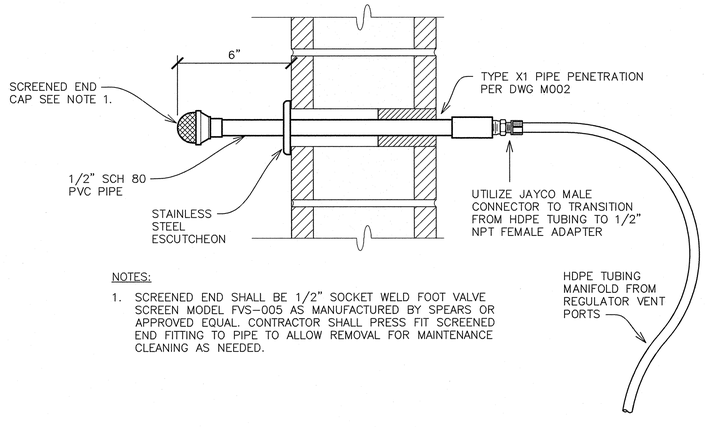


CYLINDER STORAGE RACK DETAIL 2
1" = 1'-0"



NOTE: SEE PLANS FOR PIPE SIZE AND TUBING MATERIAL.

TYPE 1
PVC TO TUBING COUPLING 3
N.T.S.



NOTES:

1. SCREENED END SHALL BE 1/2" SOCKET WELD FOOT VALVE SCREEN MODEL FVS-005 AS MANUFACTURED BY SPEARS OR APPROVED EQUAL. CONTRACTOR SHALL PRESS FIT SCREENED END FITTING TO PIPE TO ALLOW REMOVAL FOR MAINTENANCE CLEANING AS NEEDED.

REGULATOR VENT 4
3" = 1'-0"

NO.	DATE	DESCRIPTION	BY
1		REVISIONS	

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DRN. TMT
CKD. CB
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OREGON
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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

EXISTING DE-CHLORINATION BUILDING DETAILS

DRAWING
M352
152 OF 223

JOB NUMBER
2599.3220.0

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Electrical Abbreviations, General Notes, & Symbol Legend

Abbreviations

A	AMPERE
AC	ALTERNATING CURRENT, AIR CONDITIONING UNIT, AMPS CONTINUOUS
AHJ	AUTHORITY HAVING JURISDICTION
AI	ANALOG INPUT
AIC	AVAILABLE INTERRUPTING CAPACITY
AF	AMPERE FRAME / AMPERE FUSED
AFC	ABOVE FINISHED CEILING
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AL	ALUMINUM
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
AO	ANALOG OUTPUT
ARMS	ARC FLASH REDUCTION MAINTENANCE SYSTEM
AT	AMPERE TRIP
AV	AUDIO / VIDEO
AWG	AMERICAN WIRE GAUGE
BAS	BUILDING AUTOMATION SYSTEM
BFG	BELOW FINISHED GRADE
BLDG	BUILDING
C	CONDUIT
CAT#	CATEGORY #
CB	CIRCUIT BREAKER
CFM	CUBIC FEET PET MINUTE
CFCI	CONTRACTOR FURNISHED, CONTRACTOR INSTALLED
CFOI	CONTRACTOR FURNISHED, OWNER INSTALLED
CKT	CIRCUIT
CP	CONTROL PANEL
CPT	CONTROL POWER TRANSFORMER
CR	CONTROL RELAY
CSC	CONTRACTOR SUPPLIED CABLE
CU	COPPER
dB	DECIBEL
DC	DIRECT CURRENT
DI	DIGITAL INPUT
DIM	DIMENSION
DIV	DIVISION
DO	DIGITAL OUTPUT
DTL	DETAIL
DWG	DRAWING
E/IP	ETHERNET IP
EF	EXHAUST FAN
EL	ELEVATION
EMT	ELECTRICAL METALLIC TUBING
EOLR	END OF LINE RESISTOR
FACP	FIRE ALARM CONTROL PANEL
FE	FLOWMETER ELEMENT
FF	FINISH FLOOR
FIT	FLOWMETER TRANSMITTER
FLA	FULL LOAD AMPERES
FT	FOOT, FEET
FBO	FURNISHED BY OTHERS
G, GND	GROUND
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
HH	HAND HOLE
HP	HORSEPOWER
HRG	HIGH RESISTANCE GROUND
H2S	HYDROGEN SULFIDE
ID	IDENTIFICATION
IDC	INITIATING DEVICE CIRCUIT
IDF	INTERMEDIATE DISTRIBUTION FRAME
IEEE	INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS
IG	ISOLATED GROUND
IT	INFORMATION TECHNOLOGY
I/O	INPUT / OUTPUT
JB	JUNCTION BOX
KAIC	THOUSAND AMPS INTERRUPTING CURRENT
KCMIL	THOUSAND CIRCULAR MILS
KVA	KILOVOLT-AMPERE
KW	KILOWATT
LAN	LOCAL AREA NETWORK
LCP	LOCAL CONTROL PANEL
LCS	LOCAL CONTROL STATION
LED	LIGHT EMITTING DIODE
LEL	LOWER EXPLOSIVE LEVEL
LRG	LOW RESISTANCE GROUND
LS	LIMIT SWITCH
LSI	ELECTRONIC TRIP UNIT ADJUSTABLE LONG TIME DELAY, SHORT TIME DELAY, INSTANTANEOUS TRIP
LSIG	ELECTRONIC TRIP UNIT WITH ADJUSTABLE LONG TIME DELAY, SHORT TIME DELAY, INSTANTANEOUS TRIP, AND GROUND FAULT
LV	LOW VOLTAGE
MCA	MINIMUM CIRCUIT AMPACITY
MCC	MOTOR CONTROL CENTER
MCP	MOTOR CIRCUIT PROTECTOR
MDF	MAIN DISTRIBUTION FRAME
MHz	MEGAHERTZ
MISC	MISCELLANEOUS
MLO	MAIN LUGS ONLY
MOCP	MAXIMUM OVERCURRENT PROTECTION
MSC	MANUFACTURER SUPPLIED CABLE
MV	MEDIUM VOLTAGE
MVA	MEGAVOLT AMPERES
MW	MEGAWATT
N	NEUTRAL
NAC	NOTIFICATION APPLIANCE CIRCUIT
N/A	NOT APPLICABLE
NC	NORMALLY CLOSED
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NEX	REPLACE EXISTING WIRING DEVICE AND FACEPLATE WITH NEW. BACK BOX AND CONDUIT SHALL REMAIN.
NL	NIGHT LIGHT
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OC	ON CENTER
OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED, OWNER INSTALLED
OSI	OWNER'S SYSTEM INTEGRATOR
Ø	PHASE
PB	PULL BOX, PANIC BUTTON, PUSH BUTTON
PCP	PUMP CONTROL PANEL
PDP	PUMP DISCONNECT PANEL
PE	PHOTO EYE
PLC	PROGRAMMABLE LOGIC CONTROLLER
PNL	PANEL
POE	POWER OVER ETHERNET
PPM	PARTS PER MILLION
PTZ	PAN, TILT, ZOOM
RF	RADIO FREQUENCY
RFI	REQUEST FOR INFORMATION
SCADA	SUPERVISORY CONTROL AND DATA ACQUISTION
SLC	SIGNALING LINE CIRCUIT
SPD	SURGE PROTECTION DEVICE
STD	STANDARD
SW	SWITCH
SWBD	SWITCHBOARD
SWGR	SWITCHGEAR
T/M	THERMAL MAGNETIC CIRCUIT BREAKER
TBD	TO BE DETERMINED
TSP	TWISTED SHIELDED PAIR
TV	TELEVISION / MONITOR OUTLET
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR
TYP	TYPICAL
UH	UNIT HEATER
UG	UNDERGROUND
UL	UNDERWRITERS LABORATORIES
UPS	UNINTERRUPTIBLE POWER SUPPLY
UON	UNLESS OTHERWISE NOTED
USB	UNIVERSAL SERIAL BUS
V	VOLTS, VOLTAGE
VA	VOLT-AMPERE
VFD	VARIABLE FREQUENCY DRIVE
W	WATT, WIRE
WCR	WITHSTAND CURRENT RATING
WAP	WIRELESS ACCESS POINT
WI-FI	WIRELESS FIDELITY
W/	WITH
W/O	WITHOUT
XFMR	TRANSFORMER
XMTR	TRANSMITTER
Y	WYE
1P	ONE POLE
2P	TWO POLE
3P	THREE POLE
4P	FOUR POLE

General Electrical Notes

1. ALL LIGHTING BRANCH CIRCUITS SHALL BE 2#10, 1#10G IN 3/4" CONDUIT, UON.
2. ALL 20-AMP RECEPTACLE AND HARDWIRED BRANCH CIRCUITS SHALL BE 2#12, 1#12G IN 3/4" CONDUIT, UON.
3. ALL EXIT SIGNS SHALL BE WIRED TO THE LOCAL LIGHTING BRANCH CIRCUIT AHEAD OF ALL SWITCHING.
4. PROVIDE 0-10V DIMMING CONDUCTORS TO ALL LUMINAIRES WHICH ARE CONTROLLED BY 0-10V DIMMERS SHOWN ON THE DRAWINGS.
5. ALL ELEVATION HEIGHTS SHALL BE TO CENTERLINE OF EQUIPMENT OR DEVICE UNLESS OTHERWISE NOTED.

Annotation

(N)	INDICATES NEW EQUIPMENT.
(E)	INDICATES EXISTING EQUIPMENT TO REMAIN.
(D)	INDICATES EXISTING EQUIPMENT TO BE DEMOLISHED.
(RR)/(RD)	INDICATED EXISTING EQUIPMENT OR DEVICE TO BE REMOVED AND REINSTALLED.
XXX	CONDUIT & CONDUCTOR CALLOUT. REFER TO CONDUIT & CONDUCTOR SCHEDULE.
XX	KEYED NOTE CALLOUT. REFER TO CORRESPONDING SHEET KEYNOTES.
XX	KEYED NOTE CALLOUT. REFER TO CORRESPONDING SHEET KEYNOTES.
XX	KEYED NOTE CALLOUT. REFER TO CORRESPONDING SHEET KEYNOTES.
XX	HVAC MECHANICAL EQUIPMENT CALLOUT. REFER TO MECHANICAL EQUIPMENT CONNECTION SCHEDULE.
XX / EX.XX	DETAIL CALLOUT. REFER TO DETAIL AND SHEET AS INDICATED ON CALLOUT.
XX'-XX"	FIXTURE MOUNTING CALLOUT. HEIGHT ABOVE FINISHED FLOOR (A.F.F.) FOR INTERIOR OR GRADE (A.F.G.) FOR EXTERIOR
XXXXX	EQUIPMENT CALLOUT.
# / -	SECTION CALLOUT. REFER TO SECTION AND SHEET AS INDICATED ON CALLOUT.
# / EX.XX / #	ELEVATION CALLOUT. REFER TO ELEVATION AND SHEET AS INDICATED ON CALLOUT.
XXX	INSTRUMENT CALLOUT. REFER TO PROCESS & INSTRUMENTATION DIAGRAM (P&ID).

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		REVISIONS	

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CKD. CHCK
DATE: JUN 2026

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MAY 08, 2012
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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS
ELECTRICAL SYMBOL LEGEND & ABBREVIATIONS

DRAWING
E001
153 OF 223

JOB NUMBER
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Electrical Symbol Legend

Power Distribution

- DUPLEX RECEPTACLE, MOUNTED AT 18" AFF, UON.
- SIMPLEX RECEPTACLE, MOUNTED AT 18" AFF, UON.
- QUADPLEX RECEPTACLE, MOUNTED AT 18" AFF, UON.
- GFCI DUPLEX RECEPTACLE, MOUNTED AT 18" AFF, UON.
- GFCI QUADPLEX RECEPTACLE, MOUNTED AT 18" AFF, UON.
- TAMPER RESISTANT DUPLEX RECEPTACLE, MOUNTED AT 18" AFF, UON.
- TAMPER RESISTANT QUADPLEX RECEPTACLE, MOUNTED AT 18" AFF, UON.
- SWITCHED DUPLEX RECEPTACLE, MOUNTED AT 18" AFF, UON.
- NEMA SPECIAL RECEPTACLE, MOUNTED AT 18" AFF, UON. NEMA CONFIGURATION AS INDICATED.
- CENTER HATCHED RECEPTACLE TO BE WIRED TO EMERGENCY CIRCUIT.
- RECEPTACLE MOUNTED ON CEILING.
- RECEPTACLE MOUNTED IN-COUNTER.
- DISCONNECT SWITCH.
- FUSED DISCONNECT SWITCH.
- ENCLOSED CIRCUIT BREAKER.
- COMBINATION STARTER.
- FLOORBOX COMBINATION POWER & DATA.
- FLOORBOX POWER.
- POKETHRU COMBINATION POWER & DATA.
- POKETHRU POWER.
- POWER/DATA POLE.
- PANELBOARD SURFACE MOUNT.
- PANELBOARD FLUSH MOUNT.
- MAIN DISTRIBUTION PANEL.
- UTILITY CT METER.
- UTILITY TRANSFORMER.

Drawing Symbol Variables

3	THREE WAY SWITCH.
4	FOUR WAY SWITCH.
#J	QUANTITY OF JACKS AND HORIZONTAL CABLES. J = CAT6, JA = CAT6A, JE = CAT5E
+XX	MOUNTING UNITS EXPRESSED IN INCHES TO CENTERLINE ABOVE FINISHED FLOOR OR GRADE.
C	MOUNTED HORIZONTALLY AT 4" ABOVE COUNTERTOP.
CL	CLOCK.
DR	DUAL RELAY.
E	RED EMERGENCY SWITCH.
EL	ELEVATOR RECALL.
ETR	EXISTING DEVICE SHALL REMAIN.
G	GLASS BREAK SENSOR.
K	KEYED SWITCH.
LF	LOW FREQUENCY.
LV	LOW VOLTAGE SWITCH.
M	MOTOR RATED TOGGLE SWITCH.
NEX	REPLACE EXISTING WIRING DEVICE AND FACEPLATE WITH NEW. BACK BOX AND CONDUIT SHALL REMAIN.
O	INTEGRAL OCCUPANCY SENSOR.
P	ADA PHONE, VERIFY HEIGHT WITH ARCHITECT / OWNER.
REX	REMOVE EXISTING DEVICE / EQUIPMENT.
TK	MOUNTED IN TOE KICK OF CASEWORK.
TV	MOUNTED ADJACENT TO TV AT 60" AFF, UON.
V	VANDAL RESISTANT.
WG	WIREGUARD.
WP	WEATHERPROOF.

Lighting

- TROFFER LUMINAIRE, SURFACE OR RECESS MOUNTED AS INDICATED ON THE DRAWINGS.
- DOWNLIGHT LUMINAIRE, SURFACE, RECESS, OR PENDANT MOUNTED AS INDICATED ON THE DRAWINGS.
- UNDERCABINET LUMINAIRE.
- EMERGENCY BATTERY PACK LUMINAIRE, WALL OR CEILING MOUNTED.
- LINEAR PENDANT MOUNTED LUMINAIRE.
- LINEAR WALL MOUNTED LUMINAIRE.
- BOLLARD LUMINAIRE.
- SITE LUMINAIRE POLE MOUNTED. NUMBER OF HEADS AS SHOWN.
- TRACK LUMINAIRE.
- SPOT LUMINAIRE.
- WALL MOUNTED LUMINAIRE.
- EXIT SIGN, WALL OR CEILING MOUNTED, SINGLE FACE WITH DIRECTIONAL CHEVRONS AS INDICATED ON DRAWINGS.
- EXIT SIGN, WALL OR CEILING MOUNTED, DOUBLE FACE WITH DIRECTIONAL CHEVRONS AS INDICATED ON DRAWINGS.
- HALF HATCHED LUMINAIRE TO BE WIRED TO EMERGENCY CIRCUIT.
- FULL HATCHED LUMINAIRE TO BE WIRED TO NIGHTLIGHT CIRCUIT.
- WALL WASH LUMINAIRE POINTED IN DIRECTION AS SHOWN

Raceways

- CONDUIT AND/OR CONDUCTORS INSTALLED ABOVE GRADE, CONCEALED IN WALL OR CEILING SPACE.
- CONDUIT AND/OR CONDUCTORS INSTALLED BELOW GRADE, BELOW SLAB.
- CONDUIT TURNED DOWN.
- CONDUIT TURNED UP.
- CONDUIT STUBBED AND CAPPED.
- CONDUIT DIRECT CONNECTION TO EQUIPMENT.
- FLEXIBLE CONNECTION TO EQUIPMENT.
- CONDUIT / WIRING CONTINUATION.
- HOMERUN TO PANELBOARD.
- CABLE TRAY. SIZE AND TYPE AS INDICATED ON DRAWINGS.

Switches

- SINGLE POLE SWITCH - MOUNTED AT 42" AFF, UON.
- LOW VOLTAGE 0-10 VOLT DIMMING SWITCH - MOUNTED AT 42" AFF, UON.
- OCCUPANCY SENSOR - CEILING OR WALL MOUNTED.
- OCCUPANCY SENSOR POWER PACK.
- PHOTOCELL - CEILING OR WALL MOUNTED.
- ADA DOOR PUSHPLATE.
- EMERGENCY STOP SWITCH, MUSHROOM HEAD.
- PUSHBUTTON, SINGLE OR DOUBLE.

One-Line Diagram

- CIRCUIT BREAKER.
- DRAWOUT CIRCUIT BREAKER.
- ENCLOSED CIRCUIT BREAKER.
- MOTOR STARTER CONTACT.
- DISCONNECT SWITCH.
- ENCLOSED DISCONNECT SWITCH.
- FUSED DISCONNECT SWITCH.
- ENCLOSED FUSED DISCONNECT SWITCH.
- CURRENT TRANSFORMER METER.
- FUSE, RATING AS SHOWN ON DRAWINGS.
- GENERATOR, CONFIGURATION AS INDICATED ON DRAWING.
- GROUND ROD.
- EQUIPMENT GROUND.
- MOTOR, RATED AS INDICATED ON DRAWINGS.
- NEMA CONNECTION.
- PANEL.
- MINI POWER CENTER.
- SHUNT TRIP.
- HEATER.
- REMOTE ANNUNCIATOR.
- BATTERY CHARGER.
- SURGE PROTECTION DEVICE.
- DIGITAL METER.
- KIRK KEY.
- VARIABLE FREQUENCY DRIVE.
- SOFT STARTER.
- TRANSFER SWITCH, WITH FUSES OR BREAKERS AS SHOWN ON DRAWINGS.
- TRANSFORMER.

Miscellaneous

- JUNCTION BOX (ROUND, SQUARE).
- THERMOSTAT.
- RELAY.
- CORD REEL.
- MOTOR / EXHAUST FAN.
- CEILING FAN.
- UTILITY POLE.
- WEATHERHEAD.
- GROUND ROD.
- GROUND ROD WITH TEST WELL.
- SURFACE RACEWAY / WIREMOLD.
- FIRE RATED BACKBOARD.
- GROUND BUS BAR.

Access Control & Security

- ACCESS CONTROL - DOOR CONTACT. PROVIDE 3/4" CONDUIT FROM DOOR FRAME TO ACCESSIBLE CEILING OR SECURITY JUNCTION BOX AS SHOWN ON THE DRAWINGS.
- ACCESS CONTROL - CARD READER. PROVIDE 3/4" CONDUIT FROM DOOR FRAME TO ACCESSIBLE CEILING OR SECURITY JUNCTION BOX AS SHOWN ON THE DRAWINGS.
- ACCESS CONTROL - ELECTRIC STRIKE. PROVIDE 3/4" CONDUIT FROM DOOR FRAME TO ACCESSIBLE CEILING OR SECURITY JUNCTION BOX AS SHOWN ON THE DRAWINGS.
- ACCESS CONTROL - KEY PAD. PROVIDE 3/4" CONDUIT FROM DOOR FRAME TO ACCESSIBLE CEILING OR SECURITY JUNCTION BOX AS SHOWN ON THE DRAWINGS.
- ACCESS CONTROL - MAGNETIC LOCK. PROVIDE 3/4" CONDUIT FROM DOOR FRAME TO ACCESSIBLE CEILING OR SECURITY JUNCTION BOX AS SHOWN ON THE DRAWINGS.
- ACCESS CONTROL - REQUEST TO EXIT. PROVIDE 3/4" CONDUIT FROM DOOR FRAME TO ACCESSIBLE CEILING OR SECURITY JUNCTION BOX AS SHOWN ON THE DRAWINGS.
- ACCESS CONTROL - ELECTRIFIED PANIC BAR. PROVIDE 3/4" CONDUIT FROM DOOR FRAME TO ACCESSIBLE CEILING OR SECURITY JUNCTION BOX AS SHOWN ON THE DRAWINGS.
- ACCESS CONTROL - SECURITY JUNCTION BOX. SIZED AS RECOMMENDED BY SECURITY SYSTEM MANUFACTURER.
- ACCESS CONTROL - CAMERA / INTERCOM.
- ACCESS CONTROL - PANIC BUTTON.
- SECURITY CAMERA - CEILING MOUNTED. PROVIDE ONE (1) CAT6.
- SECURITY CAMERA - WALL MOUNTED. PROVIDE ONE (1) CAT6.
- INTRUSION SENSOR - CEILING MOUNTED.
- INTRUSION SENSOR - WALL MOUNTED.
- INTRUSION KEYPAD.

Low Voltage

- ETHERNET OUTLET MOUNTED AT 18" AFF, UON.
- COAXIAL OUTLET MOUNTED AT 18" AFF, UON.
- PHONE OUTLET MOUNTED AT 18" AFF, UON.
- LOW VOLTAGE OUTLET CEILING MOUNTED.
- WIRELESS ACCESS POINT CEILING MOUNTED.
- WIRELESS ACCESS POINT WALL MOUNTED.
- DIGITAL CLOCK.
- FLOORBOX DATA.
- POKETHRU DATA.
- IT RACK.
- VERTICAL WIRE MANAGEMENT.

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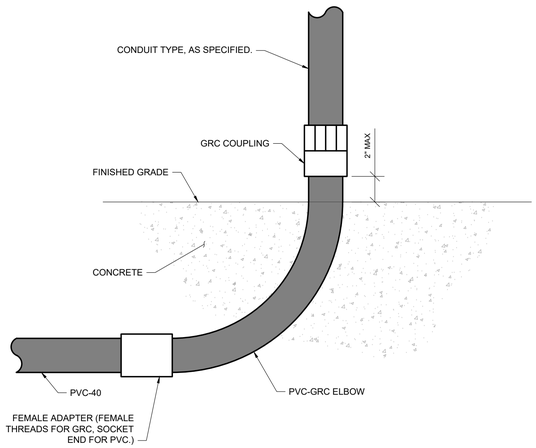
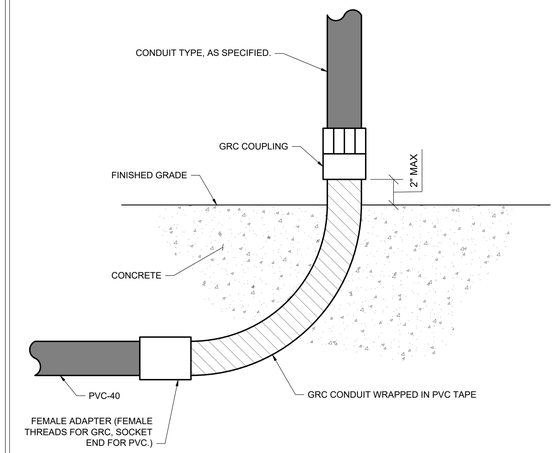


NOTES:

1.CONDUITS STUBBING UP THROUGH CONCRETE FLOORS OR SLABS AT OUTDOOR, INDUSTRIAL, OR ANY LOCATION OTHER THAN ENCLOSED BUILDINGS SHALL USE PVC-GRC ELBOWS, NO EXCEPTIONS.

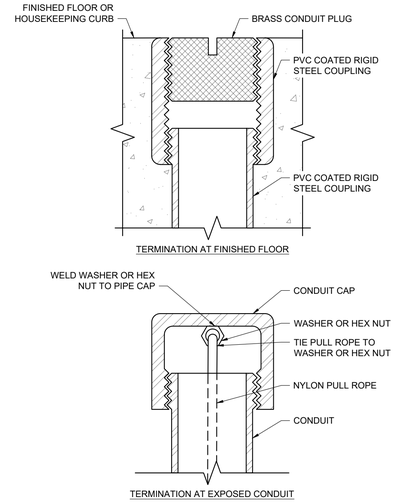
PVC-GRC ELBOW CONDUIT TRANSITION		
SCALE: NTS	DETAIL NO.	100



NOTES:

1.CONDUITS STUBBING UP THROUGH CONCRETE FLOORS OR SLABS INSIDE ENCLOSED BUILDINGS SUCH AS THE BLOWER BUILDING, DAF BUILDING, OR STORAGE BUILDING MAY USE GRC CONDUIT WRAPPED WITH PVC TAPE.

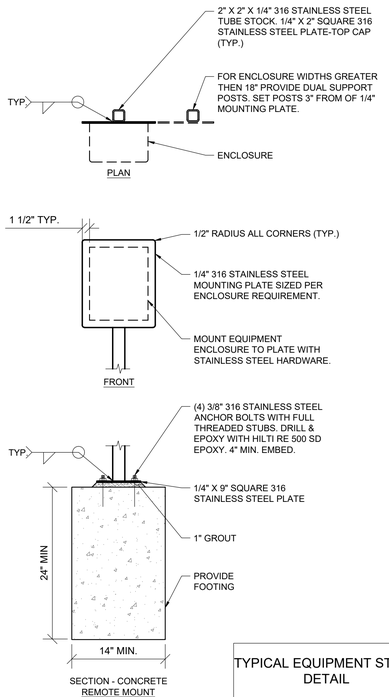
GRC ELBOW WITH PVC WRAP CONDUIT TRANSITION		
SCALE: NTS	DETAIL NO.	002



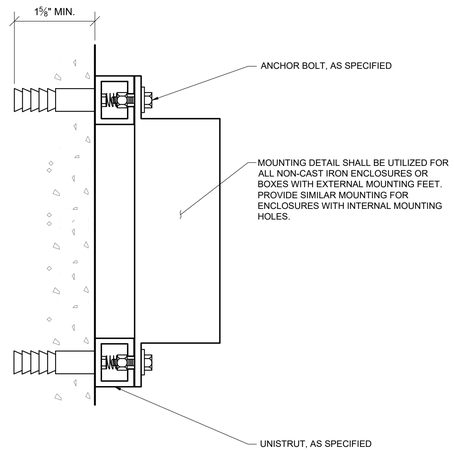
NOTES:

1.PROVIDE 2" MIN. CLEAR BETWEEN ADJACENT CONDUITS.

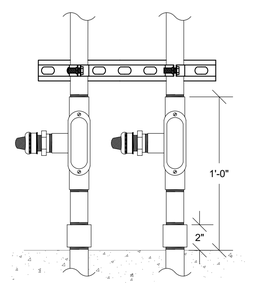
CONDUIT TERMINATIONS		
SCALE: NTS	DETAIL NO.	101



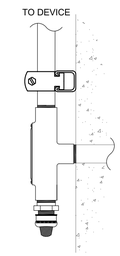
TYPICAL EQUIPMENT STAND DETAIL		
SCALE: NTS	DETAIL NO.	103



ENCLOSURE WALL MOUNTING DETAIL		
SCALE: NTS	DETAIL NO.	201



THROUGH FLOOR CONDUITS



THROUGH WALL CONDUITS

NOTES:

1.PROVIDE CONDUIT SYSTEM DRAINS FOR ALL CONDUITS THAT STUB THROUGH BELOW-GRADE VAULTS.
SYSTEM DRAINS SHALL BE PROVIDED TO PREVENT ACCUMULATED CONDENSATE AND TO PROVIDE VENTILATION IN ORDER TO MINIMIZE CONDENSATION.

CONDUIT DRAIN DETAIL		
SCALE: NTS	DETAIL NO.	102

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
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DRN. DRWN
CKD. CHCK
DATE: JUN 2026

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MAY 08, 2012
BENJAMIN E. PERRY
EXPIRES: 12-31-2026

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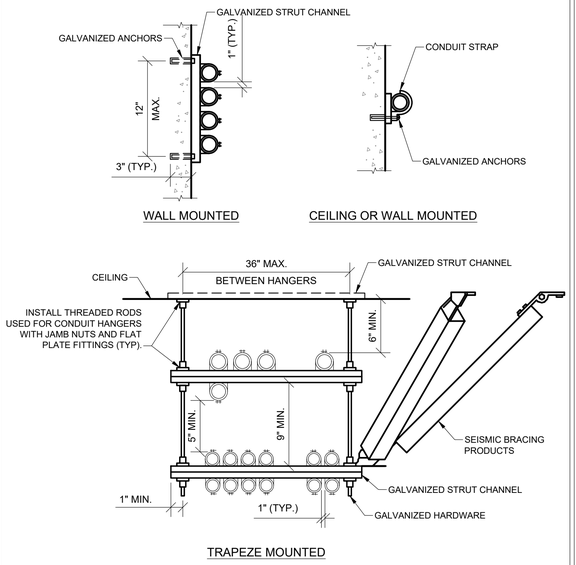
CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

ELECTRICAL DETAILS (1 OF 3)

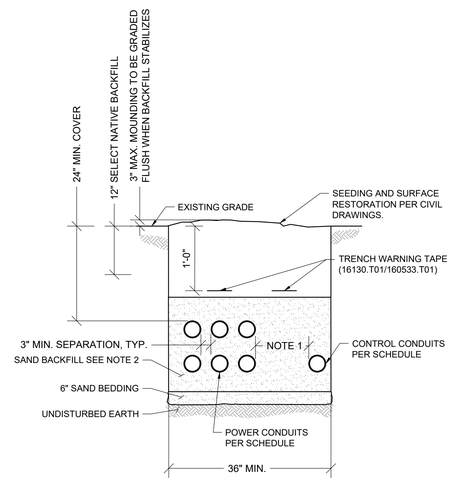
DRAWING
E003
155 OF 223

JOB NUMBER
2599.3220.0



CONDUIT MOUNTING

SCALE: NTS | DETAIL NO. 202



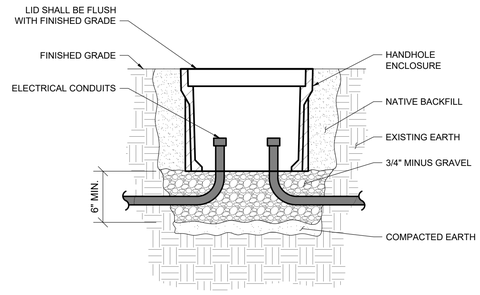
NOTES:

1. MAINTAIN A MINIMUM 12" SEPARATION BETWEEN POWER CONDUITS AND CONTROL, TELECOMMUNICATIONS, AND INSTRUMENTATION CONDUITS.

2. SAND BACKFILL AND BEDDING SHALL BE WATER JETTED TO DENSELY CONSOLIDATE MATERIAL AROUND CONDUITS.

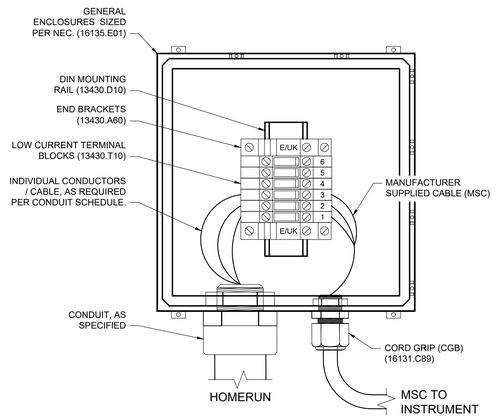
NON-CONCRETE ENCASED DUCTBANK DETAIL

SCALE: NTS | DETAIL NO. 404



HANDHOLE ENCLOSURE

SCALE: NTS | DETAIL NO. 410



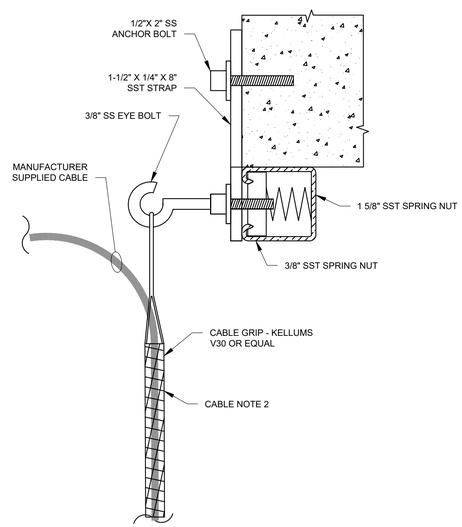
NOTES:

1. PULL BOXES SHALL BE SIZED PER NEC FOR THE NUMBER OF CONDUIT AND CABLES IN EACH ENCLOSURE. MOUNT PULL BOXES ON EQUIPMENT STANDS ADJACENT OR BELOW THE EQUIPMENT / INSTRUMENT.

2. ENCLOSURE SHALL BE RATED FOR THE PLANT AREA THEY ARE INSTALLED AS DEFINED BY SECTION 16050 PLANT AREA ELECTRICAL WORK REQUIREMENTS.

TERMINAL BOX TRANSITION FROM MSC TO CONDUCTORS

SCALE: NTS | DETAIL NO. 116



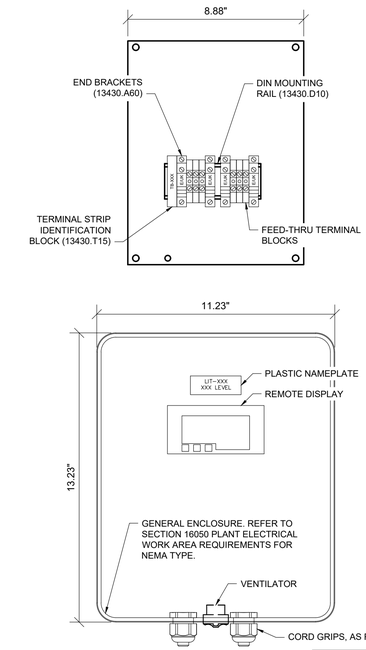
NOTES:

1. ALL HARDWARE SHALL BE 316 STAINLESS STEEL.

2. CABLE SHALL BE INSTALLED WITHIN THE WET WELL SO THAT IT DOES NOT BLOCK OR INHIBIT ACCESS THROUGH THE HATCH OR FREE MOVEMENT OF THE PUMPS ON THE RAILS. THE ENTIRE CABLE INSTALLATION SHALL BE ACCESSIBLE TO AN OPERATOR FROM OUTSIDE OF THE WET WELL AND SHALL NOT REQUIRE ENTRANCE INTO THE WET WELL FOR ACCESS.

TYPICAL CABLE STRAIN RELIEF

SCALE: NTS | DETAIL NO. 112



NOTES:

1. PROVIDE FEED-THRU TERMINAL BLOCKS TO TRANSITION FROM NAUFACTURER SUPPLIED CABLE TO CONDUCTORS HOMERUNNING BACK TO PLC.

2. PROVIDE ENOUGH FEED-THRU TERMINALS FOR BOTH LEVEL TRANSMITTER (LIT) AND FLOAT SWITCH.

LEVEL TRANSMITTER TERMINAL VENT ENCLOSURE DETAIL

SCALE: NTS | DETAIL NO. 113

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

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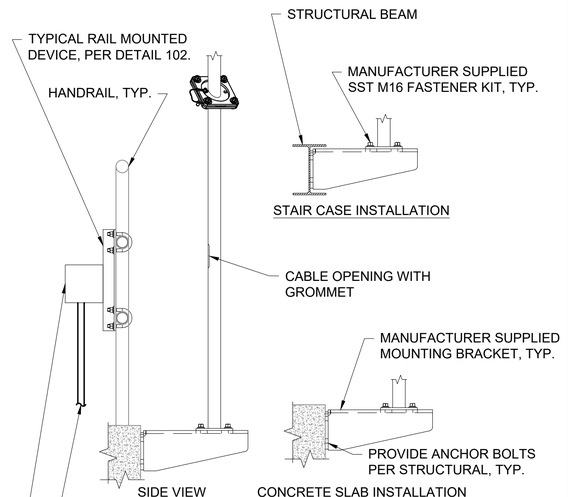
CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

ELECTRICAL DETAILS (2 OF 3)

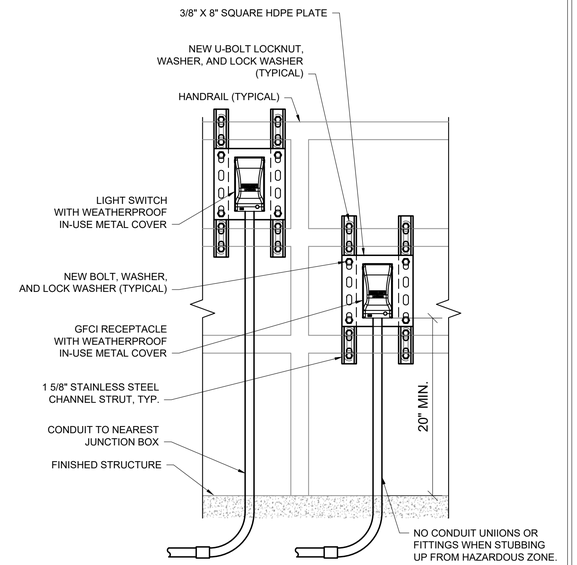
DRAWING
E004
156 OF 223

JOB NUMBER
2599.3220.0



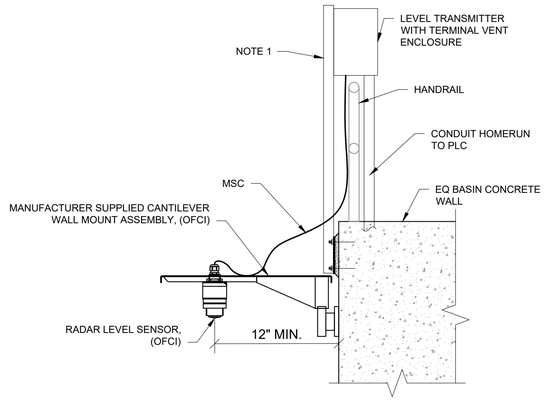
SWIVEL POLE SIDE MOUNTED WITH BRACKET

SCALE: NTS | DETAIL NO. 101



TYPICAL RAIL MOUNTED DEVICE DETAIL

SCALE: NTS | DETAIL NO. 102

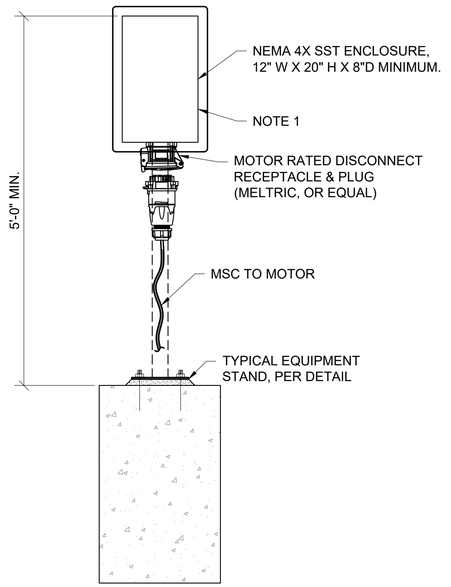


NOTES

1. MOUNT J-BOX PER ENCLOSURE AND STAND DETAIL ON M005, DETAIL 1.
2. COORDINATE WITH OWNER'S SYSTEM INTEGRATOR (OSI) FOR INSTALLATION AND TERMINATION OF THE LEVEL SENSOR.

EQ BASIN LEVEL SENSOR INSTALLATION

SCALE: NTS | DETAIL NO. 503

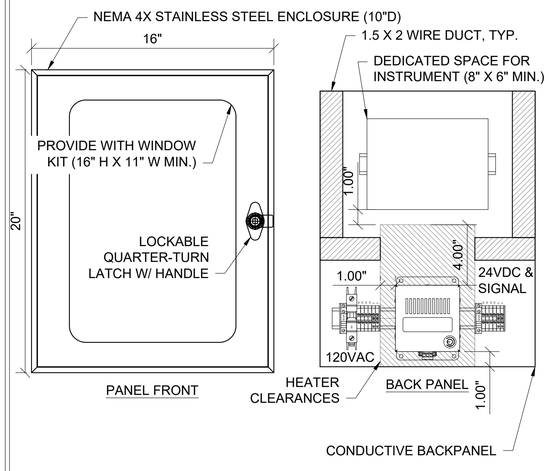


NOTES

1. PROVIDE TERMINAL BLOCKS WITHIN ENCLOSURE FOR TRANSITION FROM FIELD CONDUCTORS TO RECEPTACLE. DO NOT REMINATE FIELD CONDUCTORS DIRECTLY ON RECEPTACLE TERMINALS. TERMINAL BLOCKS SHALL BE SIZED FOR ALL PHASE, NEUTRAL, AND EQUIPMENT GROUNDING CONDUCTORS.
2. PROVIDE ENCLOSURE WITH VENT.

MOTOR DISCONNECT RECEPTACLE

SCALE: NTS | DETAIL NO. 501

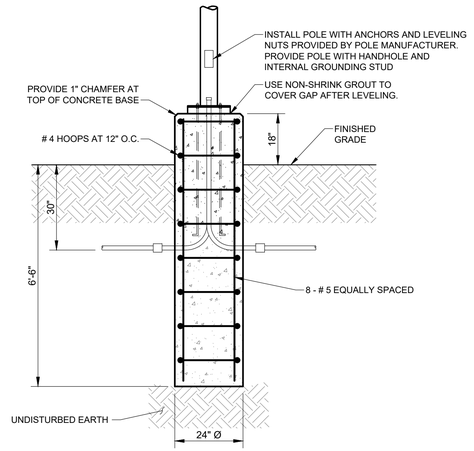


NOTES

1. PROVIDE SUBMITTAL FOR INSTRUMENT ENCLOSURES PRIOR TO ORDERING.
2. ENSURE SEPARATION BETWEEN 120VAC WIRING AND 24VDC WIRING, PER NEC. COORDINATE CONDUIT PENETRATION BELOW THE ENCLOSURE ACCORDINGLY.

INSTRUMENT PANEL WITH VIEWING WINDOW

SCALE: NTS | DETAIL NO. 502



POLE MOUNTED LIGHTING BASE

SCALE: NTS | DETAIL NO. 101

NO.	DESCRIPTION	DATE	BY
	REVISIONS		

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CITY OF AUMSVILLE, OREGON

WASTEWATER TREATMENT PLANT IMPROVEMENTS

ELECTRICAL DETAILS (3 OF 3)

DRAWING
E005
157 OF 223

JOB NUMBER
2599.3220.0

INTERIOR LUMINAIRE SCHEDULE

FIXTURE NO.	DESCRIPTION	LAMP TYPE	LUMEN OUTPUT	CRI	COLOR TEMP.	DRIVER	EMERGENCY DRIVER	INTEGRAL MOTION/PHOTO SENSOR	VOLTS	LOAD	MANUFACTURER	MODEL NUMBER
V4	CHAIN MOUNTED 48" x 7" x 6" VAPOR TIGHT LUMINAIRE WITH FIBERGLASS HOUSING, GASKETED FROSTED POLYCARBONATE LENS, STAINLESS STEEL LATCHES, AND WET LOCATION LISTED AND LABEL. PROVIDE 72" CHAIN MOUNT KIT AND BRACKETS.	LED	6,200 LM	80	4000K	STANDARD 0-10V	NO	NO	UNV	49 WATT	LITHONIA	VAP LED
V42	CHAIN MOUNTED 48" x 7" x 6" VAPOR TIGHT LUMINAIRE WITH FIBERGLASS HOUSING, GASKETED FROSTED POLYCARBONATE LENS, STAINLESS STEEL LATCHES, AND WET LOCATION LISTED AND LABEL. PROVIDE 72" CHAIN MOUNT KIT AND BRACKETS.	LED	12,000 LM	80	4000K	STANDARD 0-10V	NO	NO	UNV	99 WATT	LITHONIA	VAP LED
V4E	CHAIN MOUNTED 48" x 7" x 6" VAPOR TIGHT LUMINAIRE WITH FIBERGLASS HOUSING, GASKETED FROSTED POLYCARBONATE LENS, EMERGENCY BATTERY PACK (15W) CONSTANT POWER, STAINLESS STEEL LATCHES, AND WET LOCATION LISTED AND LABEL. PROVIDE 72" CHAIN MOUNT KIT AND BRACKETS.	LED	6,200 LM	80	4000K	STANDARD 0-10V	YES 15-WATT	NO	UNV	49 WATT	LITHONIA	VAP LED

EXTERIOR LUMINAIRE SCHEDULE

FIXTURE NO.	DESCRIPTION	LAMP TYPE	LUMENS	CRI	COLOR TEMP.	DRIVER	EMERGENCY DRIVER	INTEGRAL MOTION/PHOTO SENSOR	VOLTS	LOAD	MANUFACTURER	MODEL NUMBER
PL1	27"L X 8"W X 4"H SITE LUMINAIRE WITH RUGGED DIE-CAST ALUMINUM HOUSING, SINGLE HEAD, TYPE IV DISTRIBUTION, 0-10V DIMMING DRIVER, AND BLACK FINISH, FINISH SHALL BE RATED FOR 3,000 HOUR SALT SPRAY TEST.	LED	10,050 LM	70	5000K	STANDARD 0-10V	NO	NO	UNV	69 WATTS	AMERICAN ELECTRIC LIGHTING	AUTOBAHN SERIES ATB0
T2	16.75"L X 11.25"W X 4"H SITE LUMINAIRE WITH DIE-CAST ALUMINUM HOUSING, SINGLE HEAD, TYPE II DISTRIBUTION, INTEGRAL SURGE PROTECTION, 0-10V DIMMING DRIVER, AND BLACK FINISH. FINISH SHALL BE RATED FOR 3,000 HOUR SALT SPRAY TEST. PROVIDE 2-3/8" ADJUSTABLE KNUCKLE MOUNTING OPTION.	LED	7,500 LM	70	4000K	STANDARD 0-10V	NO	NO	UNV	50 WATTS	HUBBEL BEACON	SMALL VIPER
T4	16.75"L X 11.25"W X 4"H SITE LUMINAIRE WITH DIE-CAST ALUMINUM HOUSING, SINGLE HEAD, TYPE IV DISTRIBUTION, INTEGRAL SURGE PROTECTION, 0-10V DIMMING DRIVER, AND BLACK FINISH. FINISH SHALL BE RATED FOR 3,000 HOUR SALT SPRAY TEST. PROVIDE 2-3/8" ADJUSTABLE KNUCKLE MOUNTING OPTION.	LED	7,500 LM	70	4000K	STANDARD 0-10V	NO	NO	UNV	50 WATTS	HUBBEL BEACON	SMALL VIPER
WD1	EXTERIOR WALL MOUNTED 5.5"L x 9"W x 8"H RECTILINEAR LUMINAIRE WITH SINGLE PIECE DIE-CAST ALUMINUM HOUSING. WIDE DISTRIBUTION, INTEGRAL PHOTOCELL, 4W EMERGENCY BATTERY BACKUP, WET LOCATION LISTED, AND IP66 RATED LUMINAIRE. EXTERIOR PARTS SHALL BE PROTECTED BY A ZINC-INFUSED SUPER DURABLE TGIC THERMOSET POWDER COAT FINISH MINIMUM 3 MILS THICK. FINISH SHALL BE BLACK. WHEN MOUNTED ON SPLIT FACE BLOCK CONTRACTOR SHALL SEAL AROUND ANY OPENING BETWEEN ELECTRICAL BOX AND LUMINAIRE WITH A SILICONE SEALANT WHICH MATCHES THE COLOR OF THE BLOCK. WHEN MOUNTED ON METAL SIDING CONTRACTOR SHALL MOUNT ELECTRICAL BOX ON FLAT PART OF THE SIDING AND BOX SHALL EXTEND BEYOND SIDING A DISTANCE EQUAL TO THE RIBBING ON THE SIDING SO THE LUMINAIRE SEALS PROPERLY AGAINST THE BOX. CONTRACTOR SHALL PROVIDE SILICONE SEALANT AROUND OPENING IN SIDING & ELECTRICAL BOX FOR PROPER SEALING.	LED	1,200 LM	80	4000K	STANDARD 0-10V	YES	YES	UNV	10 WATTS	LITHONIA	WDGE1 LED SERIES
W3	EXTERIOR WALL MOUNTED 8"L x 18"W x 9"H RECTILINEAR LUMINAIRE WITH SINGLE PIECE DIE-CAST ALUMINUM HOUSING. FORWARD THROW DISTRIBUTION, INTEGRAL PHOTOCELL, WET LOCATION LISTED, AND IP65 RATED LUMINAIRE. EXTERIOR PARTS SHALL BE PROTECTED BY A ZINC-INFUSED SUPER DURABLE TGIC THERMOSET POWDER COAT FINISH MINIMUM 3 MILS THICK. FINISH SHALL BE BLACK. PROVIDE WITH NLIGHT AIR INTEGRAL WIRELESS CONTROLLER. SENSOR SHALL BE INSTALLED RECESSED IN THE HOUSING AND NOT EXTERNALLY MOUNTED. WHEN MOUNTED ON SPLIT FACE BLOCK CONTRACTOR SHALL SEAL AROUND ANY OPENING BETWEEN ELECTRICAL BOX AND LUMINAIRE WITH A SILICONE SEALANT WHICH MATCHES THE COLOR OF THE BLOCK. WHEN MOUNTED ON METAL SIDING CONTRACTOR SHALL MOUNT ELECTRICAL BOX ON FLAT PART OF THE SIDING AND BOX SHALL EXTEND BEYOND SIDING A DISTANCE EQUAL TO THE RIBBING ON THE SIDING SO THE LUMINAIRE SEALS PROPERLY AGAINST THE BOX. CONTRACTOR SHALL PROVIDE SILICONE SEALANT AROUND OPENING IN SIDING & ELECTRICAL BOX FOR PROPER SEALING.	LED	6,985 LM	70	4000K	STANDARD 0-10V	NO	YES	UNV	52 WATTS	LITHONIA	WDGE3 LED SERIES
W3	SAME AS W3 EXCEPT WITH BATTERY BACKUP.	LED	6,985 LM	70	4000K	STANDARD 0-10V	YES (15-WATTS)	YES	UNV	52 WATTS	LITHONIA	WDGE3 LED SERIES

LIGHT FIXTURE POLE SCHEDULE

FIXTURE NO.	DESCRIPTION	HEIGHT	MOUNTING	MFR.	POLE MODEL	ACCESSORIES
PH10	1-1/2" DIAMETER ROUND HOT DIPPED GALVANIZED COLLAPSIBLE STEEL POLE. SWIVEL JOINT SHALL BE LOCATED AT 3'-11" ABOVE THE BOTTOM OF THE POLE. TOP AND BOTTOM OF POLE SHALL BE THREADED NPS.	10' - 0"	POLE BASE	LITHONIA	SSS SERIES	-
P10	1-1/2" DIAMETER ROUND HOT DIPPED GALVANIZED COLLAPSIBLE STEEL POLE. SWIVEL JOINT SHALL BE LOCATED AT 3'-11" ABOVE THE BOTTOM OF THE POLE. TOP AND BOTTOM OF POLE SHALL BE THREADED NPS. POLE SHALL BE PROVIDED WITH 3/4" CONDUIT KNOCKOUTS. CONTRACTOR SHALL PROVIDING ANCHOR BOLTS. CONTRACTOR SHALL VERIFY ANCHOR BASE BOLT PATTERN WITH MANUFACTURER.	10' - 0"	STRUCTURE MOUNTED TO CONCRETE SLAB (INDEPENDENT OF HAND RAIL)	SWIVEL POLE	ST4 SERIES	1-1/2" TO 2" SLIP-ON ADAPTER: LMK8401

MECHANICAL EQUIPMENT CONNECTION SCHEDULE

EQUIPMENT	TAG	SHEET REF	ELECTRICAL								CONDUIT		CONDUCTORS			PANEL	CIRCUIT	LOCAL DISCONNECT	DISCONNECT RATING	NOTES
			VOLTAGE	PHASE	MCA	MOCP	HP	WATTS	FLA	FLA @ 125%	QTY	SIZE	UNGROUNDED	GROUNDED	GROUNDING					
DAF UNIT HEATER	UH-1	E307	208	1	-	-	-	7,500	-	-	1	1.0 INCH	2 - #6	-	1 - #10	LP-3000	5,7	-	-	-
DAF UNIT HEATER	UH-2	E307	208	1	-	-	-	7,500	-	-	1	1.0 INCH	2 - #6	-	1 - #10	LP-3000	9,11	-	-	-
DAF UNIT HEATER	UH-3	E307	208	1	-	-	-	7,500	-	-	1	1.0 INCH	2 - #6	-	1 - #10	LP-3000	6,8	-	-	-
DAF UNIT HEATER	UH-4	E307	208	1	-	-	-	7,500	-	-	1	1.0 INCH	2 - #6	-	1 - #10	LP-3000	10,12	-	-	-
DAF EXHAUST FAN	EF-1	E307	120	1	12.5	20	-	-	-	-	1	0.75 INCH	1 - #12	1 - #12	1 - #12	LP-3000	13	-	-	-
DAF OUTDOOR AIR CONDITIONER	OAC-1	E307	208	1	16.3	20	-	-	-	-	1	0.75 INCH	2 - #12	-	1 - #12	LP-3000	14,16	-	-	-
DAF INDOOR CONDITIONER	IAC-1	E307	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
BLOWER OUTDOOR AIR CONDITIONER	OAC-2	E206	208	1	16.3	20	-	-	-	-	1	0.75 INCH	2 - #12	-	1 - #12	LP-2000	7,9	-	-	-
BLOWER INDOOR AIR CONDITIONER	IAC-2	E206	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1

NOTES:
[1] FEED THROUGH OAC UNIT.

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

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WASTEWATER TREATMENT PLANT IMPROVEMENTS

ELECTRICAL LIGHT FIXTURE SCHEDULE

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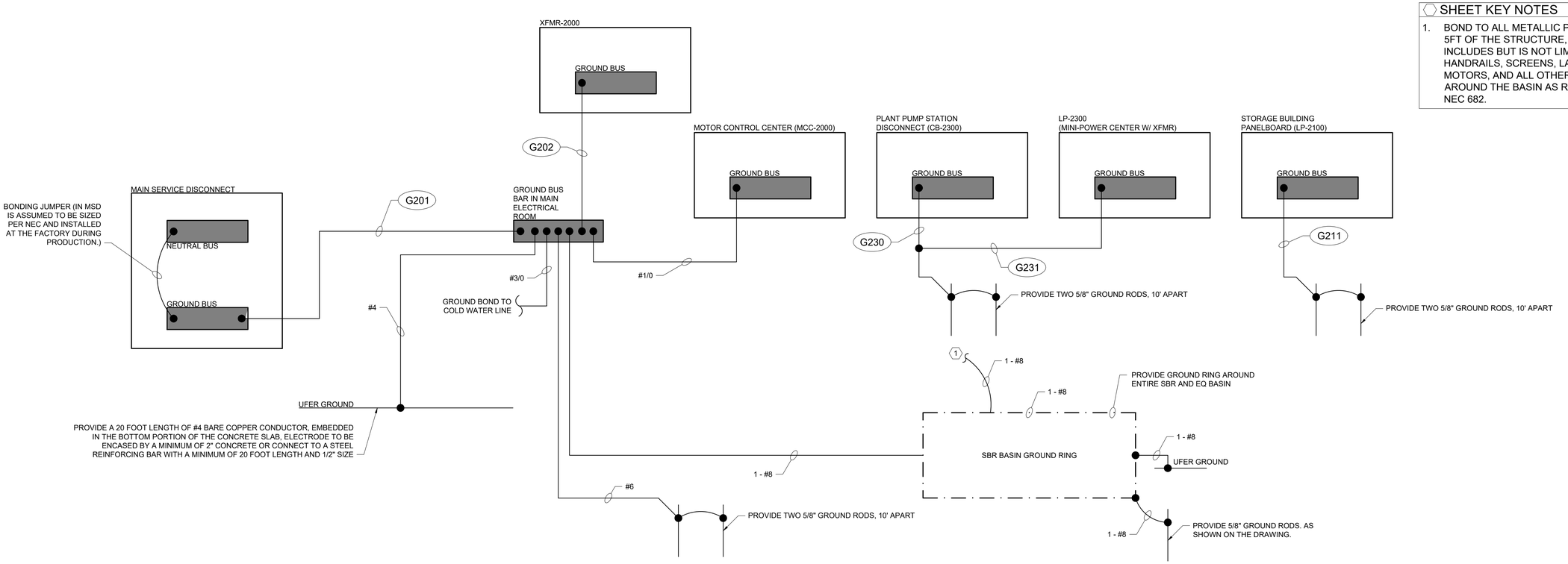
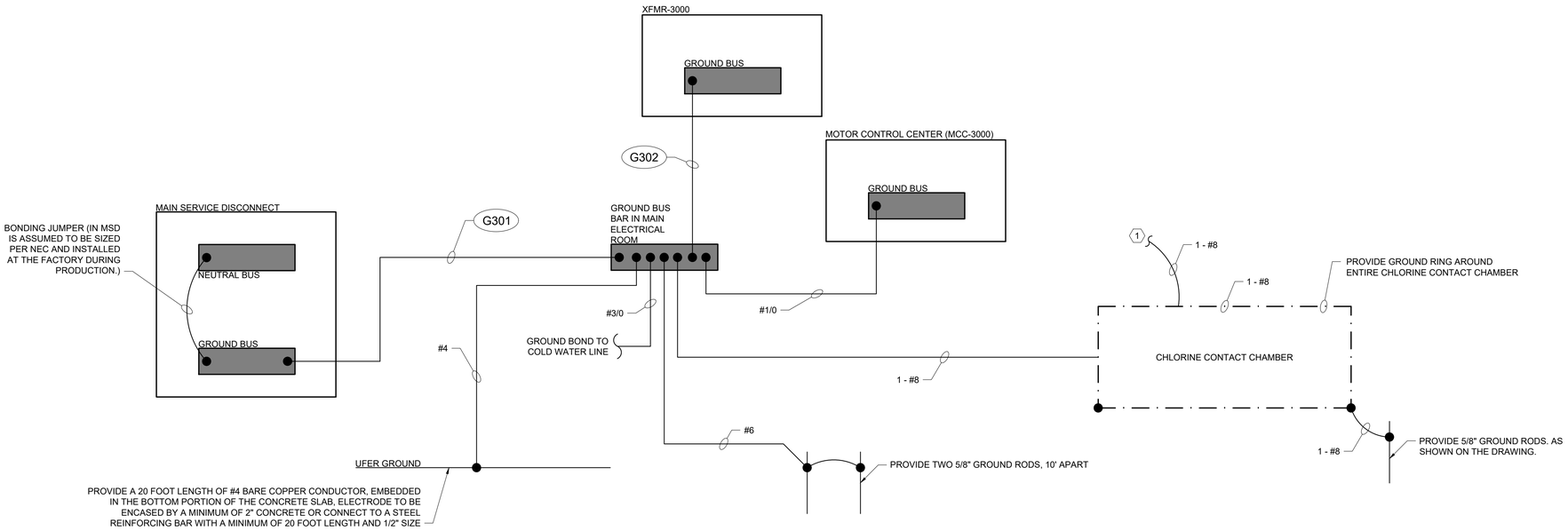
2599.3220.0

SHEET KEY NOTES

1. BOND TO ALL METALLIC PARTS WITHIN 5FT OF THE STRUCTURE, WHICH INCLUDES BUT IS NOT LIMITED TO: HANDRAILS, SCREENS, LADDERS, MOTORS, AND ALL OTHER EQUIPMENT AROUND THE BASIN AS REQUIRED BY NEC 682.



1 BLOWER BUILDING & SBR GROUNDING DETAIL
SCALE: NTS



2 DAF BUILDING & AREA GROUNDING DETAIL
SCALE: NTS

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

VERIFY SCALE
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DSN. DSN
DRN. DRWN
CKD. CHCK
DATE: JUN 2026

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REGISTERED PROFESSIONAL ENGINEER
86683
Digitally Signed
OREGON
MAY 08, 2012
BENJAMIN E. PERRY
EXPIRES: 12-31-2026

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
3841 Fairview Industrial Dr. S.E., Suite 100, Salem, OR 97302
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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

GROUNDING DETAILS

DRAWING
E007
159 OF 223

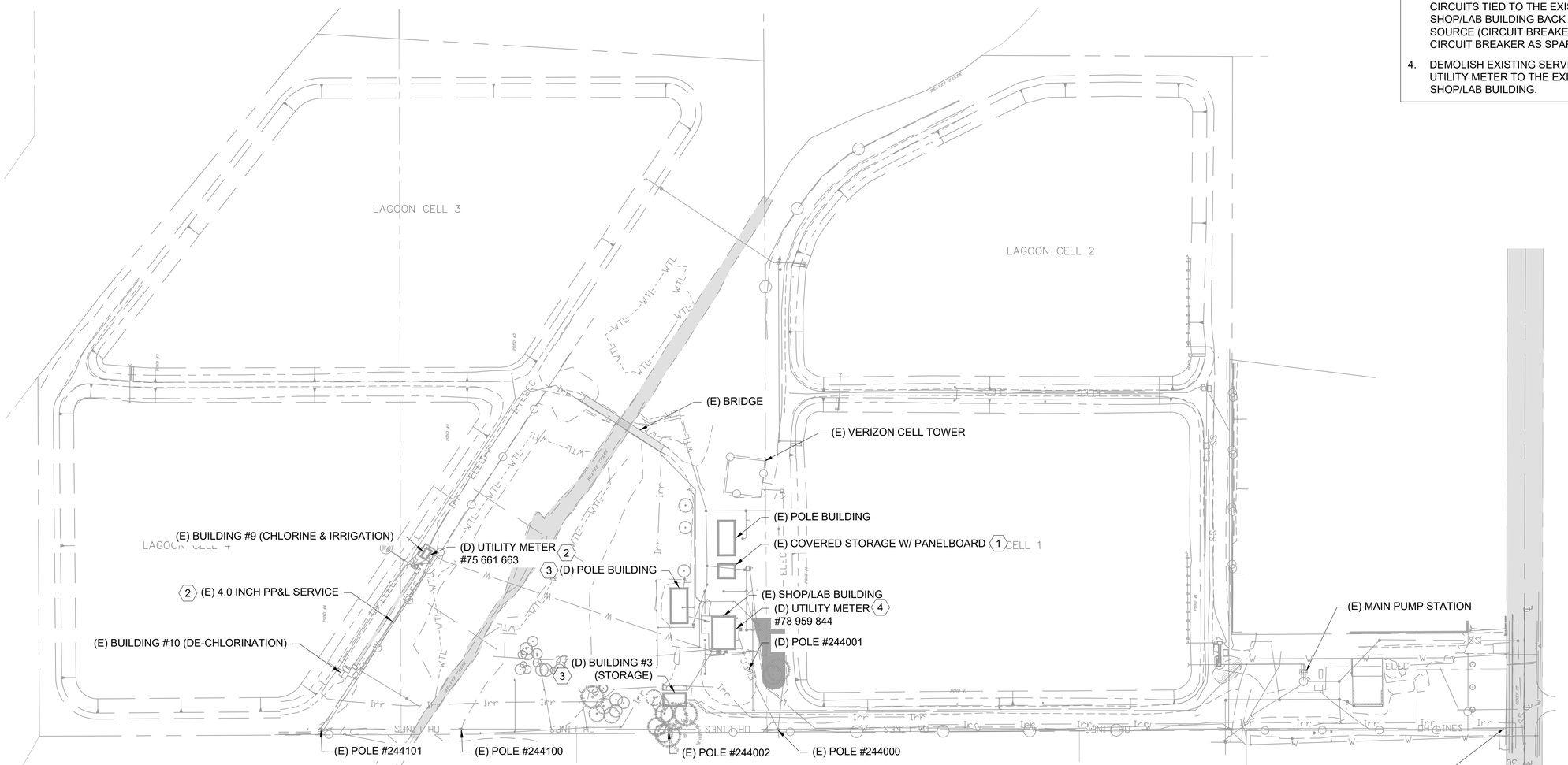
JOB NUMBER
2599.3220.0

GENERAL SHEET NOTES

1. REFER TO DRAWING C201 FOR ADDITIONAL DEMOLITION REQUIREMENTS.

SHEET KEY NOTES

1. EXISTING POWER SERVICE TO REMAIN.
2. EXISTING POWER SERVICE TO BE DEMOLISHED, PANELBOARD, AND ELECTRICAL EQUIPMENT TO REMAIN AND REFED FROM THE NEW DAF CLARIFIER BUILDING. THE EXISTING IRRIGATION PUMPS SHALL BE REFED FROM THE NEW DAF CLARIFIER BUILDING AS SHOWN ON E300. DEMOLISH THE EXISTING MOTOR STARTER CONTROL PANEL AND ASSOCIATED WIRING BACK TO THE SOURCE. DEMOLISH ANY EXPOSED CONDUITS AND ABANDON UNDERGROUND.
3. EXISTING BUILDING TO BE DEMOLISHED. DEMOLISH EXISTING LIGHTING, RECEPTACLES, AND ANY ELECTRICAL EQUIPMENT LOCATED INSIDE THE BUILDING. DEMOLISH CIRCUITS TIED TO THE EXISTING SHOP/LAB BUILDING BACK TO THE SOURCE (CIRCUIT BREAKER.) LABEL CIRCUIT BREAKER AS SPARE.
4. DEMOLISH EXISTING SERVICE AND UTILITY METER TO THE EXISTING SHOP/LAB BUILDING.



1 EXISTING CONDITIONS AND DEMOLITION SITE PLAN
SCALE: 1" = 100'

0' 25' 50' 100'

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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

EXISTING CONDITIONS AND DEMOLITION SITE PLAN

DRAWING
E100
160 OF 223

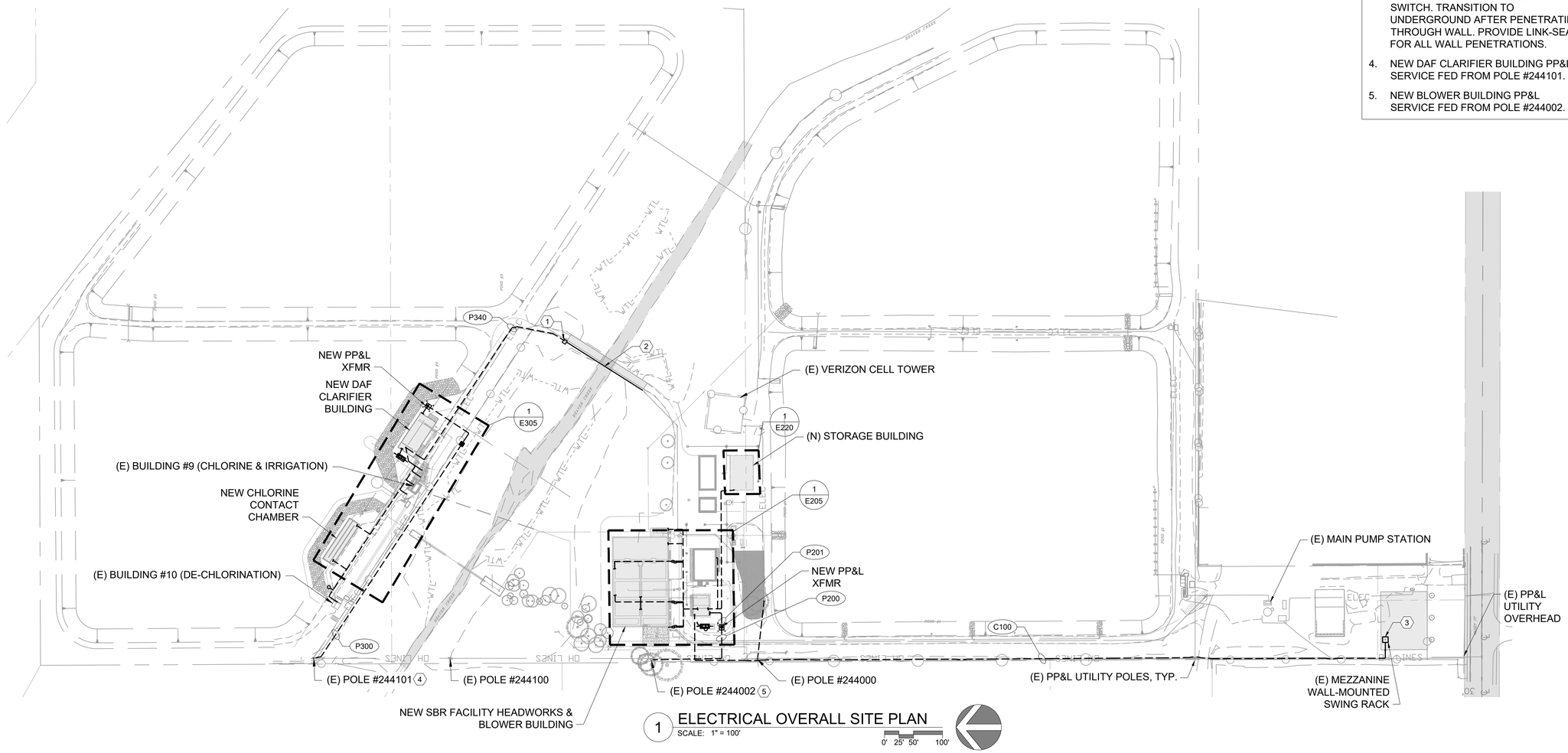
JOB NUMBER
2599.3220.0

GENERAL SHEET NOTES

1. CONTRACTOR SHALL COORDINATE POWER UTILITY WORK WITH PACIFIC POWER (PP&L) PER SECTION 16210.

SHEET KEY NOTES

1. HEAT TAPE CONTROLLER PER SECTION 16128. PROVIDE TYPICAL EQUIPMENT STAND PER E003, DETAIL 103. PROVIDE 6" X 6" X 6" NEMA 4X SST JUNCTION BOX WITH AT LEAST TWO LOOPS OF EXCESS CONDUCTOR. PROVIDE LOCAL 30 AMP SWITCHED DISCONNECT SWITCH, NEMA 4X SS. INSTALL IN ACCESSIBLE LOCATION AS REQUIRED BY CODE AND AS APPROVED BY OWNER. EXPOSED PIPE LENGTH IS APPROXIMATELY 150-FT, 6-INCH CL53 DUCTILE IRON.
2. INSTALL HEAT TRACE ON SLUDGE PIPING. REFER TO MECHANICAL DRAWINGS FOR ADDITIONAL DETAILS.
3. PROVIDE CONDUIT FROM THE EXISTING WALL-MOUNTED SWING RACK, LOCATED IN THE MEZZANINE (SECOND LEVEL). CONDUIT SHALL ROUTE TO THE IT RACK FIBER OPTIC SWITCH. COORDINATE WITH THE OWNER'S SYSTEM INTEGRATOR FOR TERMINATIONS AT THE FIBER OPTIC SWITCH. TRANSITION TO UNDERGROUND AFTER PENETRATING THROUGH WALL. PROVIDE LINK-SEAL FOR ALL WALL PENETRATIONS.
4. NEW DAF CLARIFIER BUILDING PP&L SERVICE FED FROM POLE #244101.
5. NEW BLOWER BUILDING PP&L SERVICE FED FROM POLE #244002.



1 ELECTRICAL OVERALL SITE PLAN
SCALE: 1" = 100'
0' 25' 50' 100'

NO.	DATE	DESCRIPTION	BY
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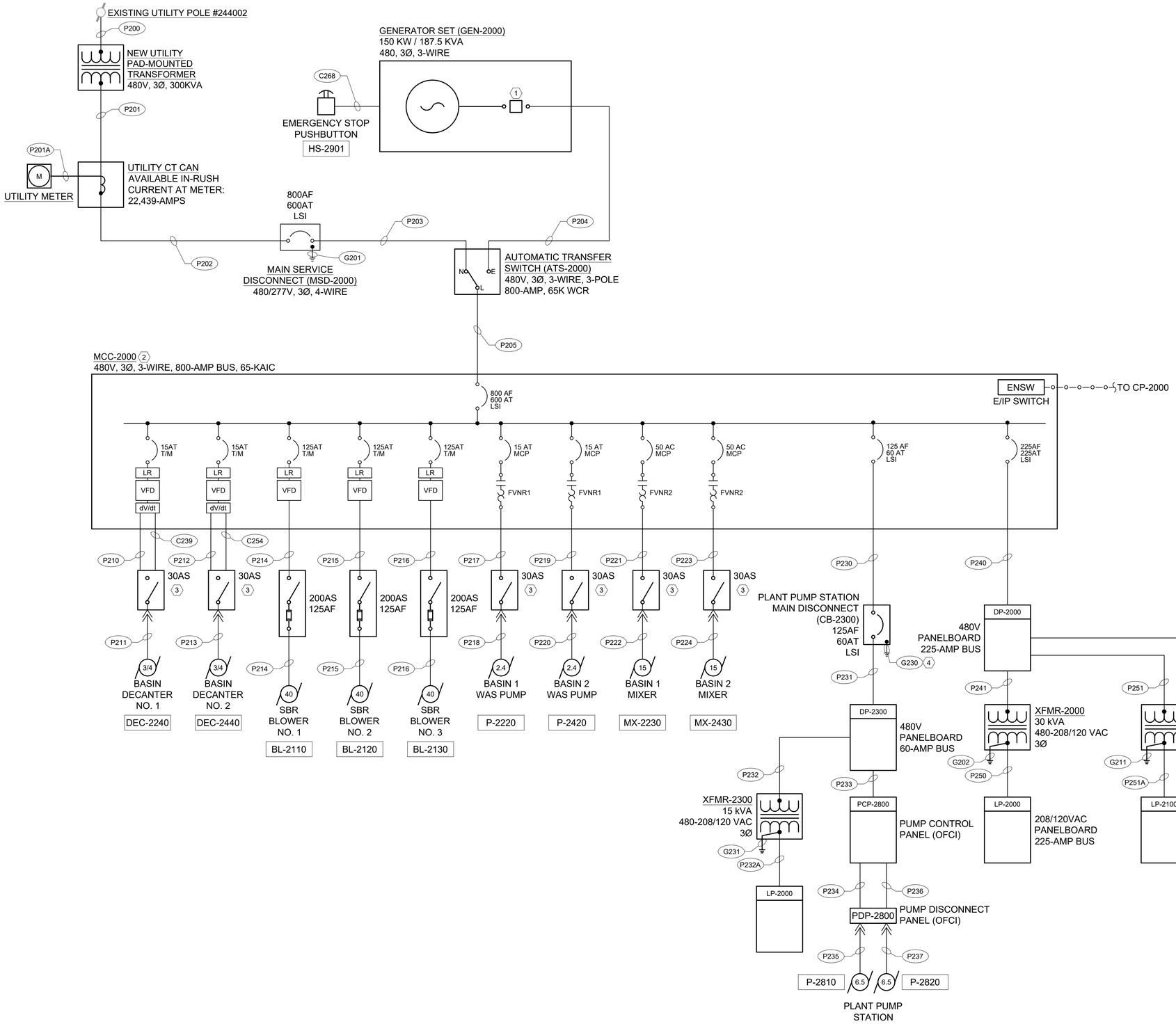
CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

ELECTRICAL OVERALL SITE PLAN

DRAWING
E101
161 OF 223

JOB NUMBER
2599.3220.0



SHEET KEY NOTES

1. AMP SENTRY RELAY. SET OVERCURRENT DEVICE TO 300-AMPS.
2. MCC-2000 IS FURNISHED BY THE SBR SYSTEM SUPPLIER, CONTRACTOR INSTALLED. COORDINATE WITH THE OWNER AND SBR SYSTEM SUPPLIER (XYLEM) FOR INSTALLATION AND DELIVERY OF THE MCC.
3. PROVIDE SWITCH-RATED PIN-AND-SLEEVE QUICK-DISCONNECT, MELTRIC, OR APPROVED EQUAL. DISCONNECT SHALL INCLUDE MATCHING PLUG AND RECEPTACLE, WITH HORSEPOWER-RATED LOAD-BREAK DISCONNECT. DEVICE SHALL BE NEMA 4X AND SIZED FOR THE CONNECTED LOAD.
4. PROVIDE GROUNDING ELECTRODE CONNECTION FOR SEPARATE STRUCTURE PER NEC 250. DO NOT PROVIDE A SYSTEM BONDING JUMPER BETWEEN GROUND AND NEUTRAL.

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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

SBR BUILDING ONE-LINE DIAGRAM

DRAWING
E200
162 OF 223

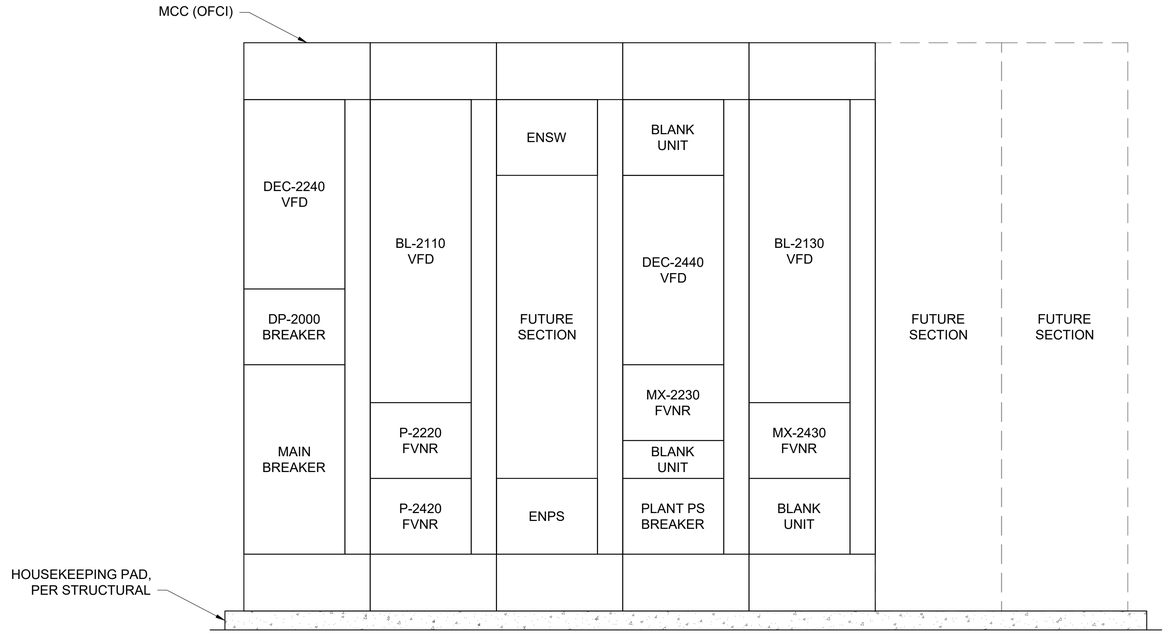
JOB NUMBER
2599.3220.0

GENERAL SHEET NOTES

1. MCC-2000 IS FURNISHED BY THE SBR SYSTEM SUPPLIER, CONTRACTOR INSTALLED. COORDINATE WITH THE OWNER AND SBR SYSTEM SUPPLIER (XYLEM) FOR INSTALLATION AND DELIVERY OF THE MCC.

SBR BLOWER BUILDING LOAD CALCULATIONS

DESCRIPTION	LOAD TYPE	VOLTAGE	PHASE	XFMR KVA	MCA	HP	KW	AMPS	DEMAND FACTOR	CONNECTED LOAD (KW)	DEMAND LOAD (KW)
MCC-2000											
SBR BASIN DECANTER 1	Motor, Pump, Fan	480	3	-	-	0.75	-	-	1	1.3 KW	1.3 KW
SBR BASIN DECANTER 2	Motor, Pump, Fan	480	3	-	-	0.75	-	-	1	1.3 KW	1.3 KW
SBR BLOWER 1	Largest Motor, Pump, Fan	480	3	-	-	40	-	-	1.25	43.2 KW	54.0 KW
SBR BLOWER 2	Motor, Pump, Fan	480	3	-	-	40	-	-	1	43.2 KW	43.2 KW
SBR BLOWER 3	Motor, Pump, Fan	480	3	-	-	40	-	-	1	43.2 KW	43.2 KW
SBR BASIN 1 SLUDGE PUMP	Motor, Pump, Fan	480	3	-	-	3	-	-	1	4.0 KW	4.0 KW
SBR BASIN 2 SLUDGE PUMP	Motor, Pump, Fan	480	3	-	-	3	-	-	1	4.0 KW	4.0 KW
SBR BASIN 1 MIXER	Motor, Pump, Fan	480	3	-	-	15	-	-	1	17.5 KW	17.5 KW
SBR BASIN 2 MIXER	Motor, Pump, Fan	480	3	-	-	15	-	-	1	17.5 KW	17.5 KW
PLANT PUMP STATION (DP-2300, 480VAC)											
PLANT PS PUMP 1	Motor, Pump, Fan	480	3	-	-	7.5	-	-	1	9.1 KW	9.1 KW
PLANT PS PUMP 2	Motor, Pump, Fan	480	3	-	-	7.5	-	-	1	9.1 KW	9.1 KW
XFMR-2300 (120VAC)	Transformer	-	-	15	-	-	-	-	1	15.0 KW	15.0 KW
SBR BUILDING DISTRUBUTION PANEL (DP-2000, 480VAC)											
HEADWORKS SCREEN	Motor, Pump, Fan	480	3	-	-	1	-	-	1	1.7 KW	1.7 KW
XFMR-2000 (LP-2000, 120VAC)	Transformer	-	-	30	-	-	-	-	1	30.0 KW	30.0 KW
XFMR-2100 (120VAC)	Transformer	-	-	15	-	-	-	-	1	15.0 KW	15.0 KW
XFMR-2700 (120VAC)	Transformer	-	-	45	-	-	-	-	1	45.0 KW	45.0 KW
FUTURE LOADS [NOTE 1]	Equipment	480	3	-	-	-	-	100	1	83.1 KW	83.1 KW



1 SBR MCC ELEVATION
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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

SBR MCC ELEVATION

DRAWING
E201
163 OF 223

JOB NUMBER
2599.3220.0

SBR POWER CONDUIT / CONDUCTOR SCHEDULE

CONDUIT ID NO.	CONDUIT		CONDUCTORS PER CONDUIT					FROM	TO	DESCRIPTION	NOTES
	QUANTITY	SIZE	UNGROUNDED	GROUNDED	GROUNDING	CABLE	SPARE				
P200	1	6.0 INCH	-	-	-	-	-	EXISTING UTILITY POLE #244002	NEW UTILITY PAD-MOUNTED TRANSFORMER	INSTALL CONDUIT PER PP&L REQUIREMENTS.	1
P201	3	4.0 INCH	-	-	-	-	-	NEW UTILITY PAD-MOUNTED TRANSFORMER	UTILITY CT CAN	INSTALL CONDUIT PER PP&L REQUIREMENTS.	1
P201A	1	1.25 INCH	-	-	-	-	-	UTILITY CT CAN	UTILITY METER	INSTALL CONDUIT PER PP&L REQUIREMENTS.	1
P202	3	2.5 INCH	3 - #3/0	1 - #3/0	-	-	-	UTILITY CT CAN	MAIN SERVICE DISCONNECT (MSD-2000)	-	-
P203	3	2.5 INCH	3 - #3/0	-	1 - #1	-	-	MAIN SERVICE DISCONNECT (MSD-2000)	AUTOMATIC TRANSFER SWITCH (ATS-2000)	-	-
P204	3	2.5 INCH	3 - #3/0	-	1 - #1	-	-	AUTOMATIC TRANSFER SWITCH (ATS-2000)	GENERATOR SET (GEN-2000)	-	-
P205	3	2.5 INCH	3 - #3/0	-	1 - #1	-	-	AUTOMATIC TRANSFER SWITCH (ATS-2000)	MCC-2000	-	-
P210	1	0.75 INCH	3 - #14	-	1 - #18	VFD	-	MCC-2000	DISCONNECT SWITCH DEC-2240	PROVIDE VFD CABLE (16121.V01)	2
P211	1	1.0 INCH	-	-	-	1 - MSC	-	DISCONNECT SWITCH DEC-2240	BASIN DECANTER NO. 1 DEC-2240	MANUFACTURER SUPPLIED CABLE, PROVIDE FLEX CONDUIT AS NEEDED.	-
P212	1	0.75 INCH	3 - #14	-	1 - #18	VFD	-	MCC-2000	DISCONNECT SWITCH DEC-2440	PROVIDE VFD CABLE (16121.V01)	2
P213	1	1.0 INCH	-	-	-	1 - MSC	-	DISCONNECT SWITCH DEC-2440	BASIN DECANTER NO. 2 DEC-2440	MANUFACTURER SUPPLIED CABLE, PROVIDE FLEX CONDUIT AS NEEDED.	-
P214	1	1.5 INCH	3 - #6	-	3 - #12	VFD	-	MCC-2000	SBR BLOWER NO.1 BL-2110	PROVIDE VFD CABLE (16121.V01), ROUTE VIA FUSED DISCONNECT SWITCH	-
P215	1	1.5 INCH	3 - #6	-	3 - #12	VFD	-	MCC-2000	SBR BLOWER NO.2 BL-2120	PROVIDE VFD CABLE (16121.V01), ROUTE VIA FUSED DISCONNECT SWITCH	-
P216	1	1.5 INCH	3 - #6	-	1 - #6	VFD	-	MCC-2000	SBR BLOWER NO.3 BL-2130	PROVIDE VFD CABLE (16121.V01), ROUTE VIA FUSED DISCONNECT SWITCH	-
P217	1	0.75 INCH	3 - #12	-	1 - #12	-	-	MCC-2000	DISCONNECT SWITCH P-2220	-	2
P218	1	-	-	-	-	1 - MSC	-	DISCONNECT SWITCH P-2220	BASIN 1 WAS PUMP P-2220	-	3, 4
P219	1	0.75 INCH	3 - #12	-	1 - #12	-	-	MCC-2000	DISCONNECT SWITCH P-2420	-	2
P220	1	-	-	-	-	1 - MSC	-	DISCONNECT SWITCH P-2420	BASIN 2 WAS PUMP P-2420	-	3, 4
P221	1	0.75 INCH	3 - #10	-	1 - #10	-	-	MCC-2000	DISCONNECT SWITCH MX-2230	-	2
P222	1	-	-	-	-	1 - MSC	-	DISCONNECT SWITCH MX-2230	BASIN 1 MIXER MX-2230	-	3, 4
P223	1	0.75 INCH	3 - #10	-	1 - #10	-	-	MCC-2000	DISCONNECT SWITCH MX-2430	-	2
P224	1	-	-	-	-	1 - MSC	-	DISCONNECT SWITCH MX-2430	BASIN 2 MIXER MX-2430	-	3, 4
P230	1	1.25 INCH	3 - #4	-	1 - #10	-	-	MCC-2000	PLANT PUMP STATION MAIN DISCONNECT CB-2300	-	-
P231	1	1.25 INCH	3 - #4	-	1 - #10	-	-	PLANT PUMP STATION MAIN DISCONNECT CB-2300	DP-2300	-	-
P232	1	0.75 INCH	3 - #10	-	1 - #10	-	-	DP-2300	XFMR-2300	-	-
P232A	1	1.25 INCH	3 - #4	1 - #4	1 - #8	-	-	XFMR-2300	LP-2300	-	-
P233	1	0.75 INCH	3 - #12	-	1 - #12	-	-	DP-2300	PCP-2800	-	-
P234	1	0.75 INCH	3 - #12	-	1 - #12	-	-	PUMP CONTROL PANEL PCP-2800	PUMP DISCONNECT PANEL PDP-2800 (PUMP #1)	-	-
P235	1	-	-	-	-	1 - MSC	-	PUMP DISCONNECT PANEL PDP-2800 (PUMP #1)	PLANT PUMP STATION PUMP NO.1, P-2810	ROUTE TO WET WELL VIA CABLE TRENCH.	3
P236	1	0.75 INCH	3 - #12	-	1 - #12	-	-	PUMP CONTROL PANEL PCP-2800	PUMP DISCONNECT PANEL PDP-2800 (PUMP #2)	-	-
P237	1	-	-	-	-	1 - MSC	-	PUMP DISCONNECT PANEL PDP-2800 (PUMP #2)	PLANT PUMP STATION PUMP NO.2, P-2820	ROUTE TO WET WELL VIA CABLE TRENCH.	3
P240	1	2.5 INCH	3 - #4/0	-	1 - #4	-	-	MCC-2000	DP-2000	-	-
P241	1	1.25 INCH	3 - #6	-	1 - #10	-	-	DP-2000	XFMR-2000	-	-
P242	1	0.75 INCH	3 - #12	-	1 - #12	-	-	DP-2000	CP-1000	CIRCUIT #2,4,6	2
P243	1	1.25 INCH	3 - #4	-	1 - #8	-	-	DP-2000	XFMR-2700	CIRCUIT #7,9,11	-
P244	1	2.5 INCH	3 - #3/0	1 - #3/0	1 - #4	-	-	XFMR-2700	(E) LAB/SHOP PANEL	VIA CB-XFMR-2700	-
P250	1	1.5 INCH	3 - #2	1 - #2	1 - #8	-	-	XFMR-2000	LP-2000	-	-
P251	1	0.75 INCH	3 - #10	-	1 - #10	-	-	DP-2000	XFMR-2100	CIRCUIT #11,13,15	-
P251A	1	1.25 INCH	3 - #4	1 - #4	1 - #8	-	-	XFMR-2100	LP-2100	-	-
P252	1	0.75 INCH	1 - #12	1 - #12	1 - #12	-	-	LP-2000	SBR MAIN CONTROL PANEL (CP-2000)	CIRCUIT #27	-
P253	1	0.75 INCH	1 - #12	1 - #12	1 - #12	-	-	LP-2000	EXTERIOR LUMINAIRES	CIRCUIT #3	-
P254	1	0.75 INCH	1 - #10	1 - #10	1 - #10	-	-	LP-2000	EQ BASIN LIGHTING	CIRCUIT #5	2, 5
P255	1	0.75 INCH	2 - #12	-	1 - #12	-	-	LP-2000	AIR CONDITIONING UNIT, OAC-2	CIRCUIT #7,9	-
P256	1	0.75 INCH	1 - #12	1 - #12	1 - #12	-	-	LP-2000	ELECTRICAL ROOM/ BOILER ROOM LUMINAIRES	CIRCUIT #2	-
P257	1	0.75 INCH	1 - #12	1 - #12	1 - #12	-	-	LP-2000	ELECTRICAL ROOM / EXTERIOR RECEPTACLES	CIRCUIT #4	-
P258	1	0.75 INCH	1 - #12	1 - #12	1 - #12	-	-	LP-2000	BLOWER ROOM RECEPTACLES	CIRCUIT #6	-
P259	1	1.0 INCH	1 - #6	1 - #6	1 - #6	-	-	LP-2000	SBR BASIN RECEPTACLES (EAST)	CIRCUIT #8	2
P260	1	1.0 INCH	1 - #6	1 - #6	1 - #6	-	-	LP-2000	BASIN RECEPTACLES (WEST)	CIRCUIT #10	2
P261	1	0.75 INCH	1 - #12	1 - #12	1 - #12	-	-	LP-2000	BASIN #1 DO (AIT-2210)	CIRCUIT #12	2, 6
P262	1	0.75 INCH	1 - #12	1 - #12	1 - #12	-	-	LP-2000	BASIN #2 DO (AIT-2410)	CIRCUIT #14	2, 6
P263	1	1.0 INCH	2 - #10 1 - #10	1 - #10	1 - #10	-	-	LP-2000	GENERATOR SET (GEN-2000)	BLOCK HEATER & BATTERY CHARGER CIRCUITS #17,19 & #24	-
P264	1	0.75 INCH	1 - #12	1 - #12	1 - #12	-	-	LP-2000	INFLUENT FLOWMETER (FIT-1020)	CIRCUIT #18	2, 6
P265	1	0.75 INCH	1 - #12	1 - #12	1 - #12	-	-	LP-2000	INFLUENT SAMPLER (AIT-1030)	CIRCUIT #20	2
P266	1	0.75 INCH	1 - #12	1 - #12	1 - #12	-	-	LP-2000	ROLL-UP DOOR OPERATOR	CIRCUIT #22	-
P267	1	0.75 INCH	1 - #10	1 - #10	1 - #10	-	-	LP-2000	SBR BASIN LIGHTING	CIRCUIT #26	2,5
P268	1	0.75 INCH	1 - #8	1 - #8	1 - #8	-	-	LP-2000	EQ BASIN RECEPTACLES	CIRCUIT #28	2,5
P269	1	0.75 INCH	1 - #10	1 - #10	1 - #10	-	-	LP-2000	EQ BASIN EFFLUENT CONTROL VALVE (V-2505)	CIRCUIT #21, VIA DISCONNECT SWITCH	2,5
P270	1	0.75 INCH	1 - #12	1 - #12	1 - #12	-	-	LP-2000	EFFLUENT FLOWMETER (FIT-2510)	CIRCUIT #23	2
P271	1	0.75 INCH	1 - #10	1 - #10	1 - #10	-	-	LP-2000	PLANT PUMP PIPING HEAT TRACE (AT HEADWORKS)	CIRCUIT #25	2,5
P272	1	0.75 INCH	1 - #10	1 - #10	1 - #10	-	-	LP-2000	SBR CONTROLLER (CP-2100)	CIRCUIT #29	-
-	-	-	-	-	-	-	-	-	-	-	-
P280	1	2.0 INCH	-	-	-	-	-	MCC-2000	PJB-201	SPARE CONDUIT	7
P281	1	2.0 INCH	-	-	-	-	-	DP-2000	PJB-201	SPARE CONDUIT	7
P282	1	2.0 INCH	-	-	-	-	-	LP-2000	PJB-201	SPARE CONDUIT	7

NOTES:
[1] CONTRACTOR SHALL COORDINATE WITH THE ELECTRIC UTILITY (PP&L) FOR THE ROUTING, INSTALLATION, INSPECTION, AND APPROVAL OF THE SERVICE CONDUITS. REFERENCE SECTION 16121 FOR ADDITIONAL REQUIREMENTS. PROVIDE PULL STRING IN CONDUITS.
[2] CONDUIT WILL ROUTE THROUGH THE SBR BASIN CONCRETE AS SHOWN ON THE ENLARGED PLAN. COORDINATE THE ROUTING OF THE CONDUIT WITH THE OWNER PRIOR TO INSTALLATION. REFER TO DRAWING E216 FOR ADDITIONAL REQUIREMENTS.
[3] PROVIDE CABLE STRAIN RELIEF PER DRAWING E004, DETAIL 112.
[4] PROVIDE MELTRIC CORD & PLUG PER DRAWING E005, DETAIL 501.
[5] CONDUCTORS ARE OVERSIZED DUE TO VOLTAGE DROP.
[6] PROVIDE INSTRUMENT JUNCTION BOX WITH VIEWING WINDOW, PER DRAWING E005, DETAIL 502.
[7] REFERENCE SPECIFICATIONS FOR REQUIREMENTS FOR SPARE CONDUITS.

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING 0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY
DSN. DSN
DRN. DRWN
CKD. CHCK
DATE: JUN 2026

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Salem
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REGISTERED PROFESSIONAL ENGINEER
86683
Digitally Signed
OREGON
BENJAMIN E. PERRY
MAY 08, 2012
EXPIRES: 12-31-2026

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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

SBR POWER CONDUIT SCHEDULE

DRAWING
E202
164 OF 223

JOB NUMBER
2599.3220.0

SBR CONTROL CONDUIT / CONDUCTOR SCHEDULE

CONDUIT ID NO.	CONDUIT		CONDUCTORS PER CONDUIT					FROM	TO	DESCRIPTION	NOTES
	QUANTITY	SIZE	UNGROUNDED	GROUNDED	GROUNDING	CABLE	SPARE				
C100	1	2.0 INCH	-	-	1 - #14	1 - FO	-	(E) IT SWING RACK AT ADMIN SHOP BUILDING MEZZANINE	CP-2000 (MAIN PLC)	FIBER OPTIC SCADA CONNECTION (12-STRAND, MULTIMODE)	-
C200	1	1.0 INCH	-	-	1 - #14	1 - CAT6	-	MCC-2000	CP-2000 (MAIN PLC)	ETHERNET / IP COMMUNICATION	-
C201	1	1.0 INCH	-	-	1 - #14	1 - CAT6	-	MCC-2000	CP-2100 (SBR CONTROLLER)	ETHERNET / IP COMMUNICATION	-
C202	1	0.75 INCH	2 - #14	-	1 - #14	1 - CAT6	-	CP-2000	PLANT WATER FLOWMETER (FIT-2810)	24VDC & E/IP COMMUNICATION	-
-	-	-	-	-	-	-	-	-	-	-	-
C204	1	0.75 INCH	6 - #14	-	1 - #14	-	-	CP-2000	CP-1000 (HEADWORKS CONTROL PANEL)	DISCRETE: SCREEN RUNNING, FAIL & LOW LEVEL ALARMS	-
C205	1	0.75 INCH	-	-	1 - #14	1 - MSC	-	CP-1000	HEADWORKS SCREEN INFLUENT LEVEL TRANSMITTER (LIT-1002)	ANALOG: LEVEL	-
C206	1	0.5 INCH	2 - #14	-	1 - #14	-	-	CP-1000	SCREEN MOTOR T-STAT (TSH-1001)	DISCRETE: OVERTEMP	-
C207	1	0.5 INCH	2 - #14	-	1 - #14	-	-	CP-1000	SCREEN BASKET SPRAY SOLENOID (SV-1003)	DISCRETE: OPEN/CLOSE CMD	-
C208	1	0.5 INCH	2 - #14	-	1 - #14	-	-	CP-1000	SCREEN PRESSURE ZONE SOLENOID (SV-1004)	DISCRETE:OPEN/CLOSE CMD	-
C209	1	0.5 INCH	2 - #14	-	1 - #14	-	-	CP-1000	SCREEN E-STOP (HS-1005)	DISCRETE: E-STOP ALARM	-
C210	1	0.5 INCH	2 - #14	-	1 - #14	-	-	CP-1000	SCREEN INSPECTION DOOR INTERLOCK (ZS-1006)	DISCRETE: OPENED STATUS	-
-	-	-	-	-	-	-	-	-	-	-	-
C212	1	0.75 INCH	-	-	1 - #14	1 - TSP	-	CP-2000	INFLUENT FLOWMETER (FIT-1020)	ANALOG: INFLUENT FLOW	-
C213	1	0.75 INCH	2 - #14	-	1 - #14	-	-	CP-2000	INFLUENT FLOWMETER (FIT-1020)	DISCRETE: INFLUENT FLOW TOTALIZER	-
C214	1	1.0 INCH	-	-	1 - #14	1 - MSC	-	FIT-1020	FE-1020	INFLUENT FLOWMETER SENSOR CABLE	9
C215	1	1.0 INCH	-	-	-	-	-	CP-2000	INFLUENT SAMPLER (AIT-1030)	(FUTURE) I/O FOR INFLUENT SAMPLER	1
C216	1	0.75 INCH	-	-	1 - #14	1 - TSP	-	FIT-1020	AIT-1030	ANALOG: INFLUENT SAMPLER FLOW	-
-	-	-	-	-	-	-	-	-	-	-	-
C218	1	0.75 INCH	2 - #14	-	1 - #14	-	-	CP-2000	RAIN GAUGE (AIT-1040)	DISCRETE: RAIN GAUGE TOTALIZED	-
C219	1	2.0 INCH	18 - #14 14 - #14 20 - #14	-	1 - #14	-	-	MCC-2000	CP-2100	DISCRETE I/O: BLOWER VFDS (x3), WAS PUMP & MIXER STARTERS (x2), DECANTER VFDS (x2)	-
C220	1	2.0 INCH	-	-	1 - #14	6 - TSP 2 - TSP	-	MCC-2000	CP-2100	ANALOG I/O: BLOWER VFDS (x3), DECANTER VFDS (x2)	-
C221	1	2.0 INCH	-	-	-	-	-	MCC-2000	CP-2100	SPARE CONDUIT	1
C222	1	0.75 INCH	4 - #14	-	1 - #14	-	-	MCC-2000	SBR BLOWER NO. 1 DISCONNECT (BLO-2110-DIS)	DISCONNECT AUX. CONTACT & OVERTEMP	3, 4
C223	1	0.75 INCH	4 - #14	-	1 - #14	-	-	MCC-2000	SBR BLOWER NO. 2 DISCONNECT (BLO-2120-DIS)	DISCONNECT AUX. CONTACT & OVERTEMP	3, 4
C224	1	0.75 INCH	4 - #14	-	1 - #14	-	-	MCC-2000	SBR BLOWER NO. 3 DISCONNECT (BLO-2130-DIS)	DISCONNECT AUX. CONTACT & OVERTEMP	3, 4
C225	1	1.0 INCH	6 - #14 4 - #14 4 - #14 11 - #14	-	1 - #14	-	-	CP-2100	SBR NO. 1 LOCAL CONTROL PANEL (CP-2200)	DISCRETE: ACV-2200 OPENED, CLOSED LIGHTS, & OPEN-CLOSE-AUTO-OFF, P-2200 HOA & RUNNING LIGHT, MX-2230 HOA & RUNNING LIGHT, DEC-2240 HOA & RAISE/LOWER LIMIT SWITCHES (x4)	-
-	-	-	-	-	-	-	-	-	-	-	-
C227	1	0.75 INCH	5 - #14	-	1 - #14	-	-	CP-2100	SBR NO. 1 AIR VALVE (ACV-2200)	DISCRETE: OPEN/CLOSE CMD & OPENED/CLOSED STATUS	-
C228	1	0.75 INCH	1 - #12	1 - #12	1 - #12	-	-	CP-2100	SBR NO. 1 AIR VALVE (ACV-2200)	120VAC POWER	-
C229	1	0.75 INCH	2 - #14	-	1 - #14	-	-	CP-2100	SBR NO. 1 AIR PURGE SOLENOID (SV-2201)	DISCRETE: OPEN/CLOSE CMD	-
C230	1	1.0 INCH	2 - #14	-	1 - #14	1 - TSP	-	MCC-2000	SBR NO. 1 WAS PUMP DISCONNECT (P-2220-DIS)	DISCONNECT AUX. CONTACT & OVERTEMP/LEAKAGE SIGNAL	3, 4
C231	1	0.75 INCH	2 - #14	-	1 - #14	1 - CAT6	-	CP-2000	SBR NO. 1 WAS FLOWMETER (FIT-2250)	24VDC & E/IP COMMUNICATION	-
C232	1	0.75 INCH	-	-	1 - #14	1 - TSP	-	CP-2100	SBR NO. 1 DO SENSOR (AIT-2210)	ANALOG: DO LEVEL	-
C233	1	1.0 INCH	2 - #14	-	1 - #14	1 - TSP	-	CP-2100	SBR NO. 1 LEVEL & STORM FLOAT (LE-2211, LSLL-2212)	ROUTE VIA JB-2211. ANALOG: BASIN LEVEL. DISCRETE: STORM FLOAT.	2, 6
C234	1	1.0 INCH	2 - #14	-	1 - #14	1 - TSP	-	MCC-2000	SBR NO. 1 MIXER DISCONNECT (MX-2230-DIS)	DISCONNECT AUX. CONTACT & OVERTEMP/LEAKAGE SIGNAL	3, 4
C235	1	0.75 INCH	4 - #14	-	1 - #14	-	-	SBR NO. 1 DECANTER RAISE LIMIT SWITCHES (ZSH-2240, ZSHH-2240)	SBR NO. 1 DECANTER RAISE LIMIT SWITCH J-BOX (JBH-2240)	DISCRETE I/O: RAISE PRIMARY & SECONDARY LIMITS	-
C236	1	0.75 INCH	4 - #14	-	1 - #14	-	-	SBR NO. 1 DECANTER LOWER LIMIT SWITCHES (ZSL-2240, ZSLL-2240)	SBR NO. 1 DECANTER LOWER LIMIT SWITCH J-BOX (JBL-2240)	DISCRETE I/O: LOWER PRIMARY & SECONDARY LIMITS	-
C237	1	0.75 INCH	4 - #14	-	1 - #14	-	-	JBH-2240	CP-2200	DISCRETE I/O: RAISE PRIMARY & SECONDARY LIMITS	-
C238	1	0.75 INCH	4 - #14	-	1 - #14	-	-	JBL-2240	CP-2200	DISCRETE I/O: LOWER PRIMARY & SECONDARY LIMITS	-
C239	1	0.75 INCH	2 - #14	-	1 - #14	-	-	MCC-2000	SBR NO. 1 DECANTER DISCONNECT (DEC-2240-DIS)	DISCONNECT AUX. CONTACT	3
C240	1	1.0 INCH	6 - #14 4 - #14 4 - #14 11 - #14	-	1 - #14	-	-	CP-2100	SBR NO. 2 LOCAL CONTROL PANEL (CP-2400)	DISCRETE: ACV-2400 OPENED, CLOSED LIGHTS, & OPEN-CLOSE-AUTO-OFF, P-2400 HOA & RUNNING LIGHT, MX-2430 HOA & RUNNING LIGHT, DEC-2440 HOA & RAISE/LOWER LIMIT SWITCHES (x4)	-
-	-	-	-	-	-	-	-	-	-	-	-
C242	1	0.75 INCH	5 - #14	-	1 - #14	-	-	CP-2100	SBR NO. 2 AIR VALVE (ACV-2400)	DISCRETE: OPEN/CLOSE CMD & OPENED/CLOSED STATUS	-
C243	1	0.75 INCH	1 - #12	1 - #12	1 - #12	-	-	CP-2100	SBR NO. 2 AIR VALVE (ACV-2400)	120VAC POWER	-
C244	1	0.75 INCH	2 - #14	-	1 - #14	-	-	CP-2100	SBR NO. 2 AIR PURGE SOLENOID (SV-2401)	DISCRETE: OPEN/CLOSE CMD	-
C245	1	1.0 INCH	2 - #14	-	1 - #14	1 - TSP	-	MCC-2000	SBR NO. 2 WAS PUMP DISCONNECT (P-2420-DIS)	DISCONNECT AUX. CONTACT & OVERTEMP/LEAKAGE SIGNAL	3, 4
C246	1	0.75 INCH	2 - #14	-	1 - #14	1 - CAT6	-	CP-2000	SBR NO. 2 WAS FLOWMETER (FIT-2450)	24VDC & E/IP COMMUNICATION	-
C247	1	0.75 INCH	-	-	1 - #14	1 - TSP	-	CP-2100	SBR NO. 2 DO SENSOR (AIT-2410)	ANALOG: DO LEVEL	-
C248	1	1.0 INCH	2 - #14	-	1 - #14	1 - TSP	-	CP-2100	SBR NO. 2 LEVEL & STORM FLOAT (LE-2411, LSLL-2412)	ROUTE VIA JB-2411. ANALOG: BASIN LEVEL. DISCRETE: STORM FLOAT.	2, 6
C249	1	1.0 INCH	2 - #14	-	1 - #14	1 - TSP	-	MCC-2000	SBR NO. 2 MIXER DISCONNECT (MX-2430-DIS)	DISCONNECT AUX. CONTACT & OVERTEMP/LEAKAGE SIGNAL	3, 4

NOTES:
[1] REFERENCE SPECIFICATIONS FOR REQUIREMENTS FOR SPARE CONDUITS.
[2] PROVIDE JUNCTION BOXES ADJACENT TO THE EQUIPMENT / INSTRUMENT TO TRANSITION FROM CONDUIT TO CABLE/CORD. PROVIDE NAMEPLATES FOR J-BOXES AS LABELED ON THE DRAWINGS.
[3] PROVIDE DISCONNECTS WITH AUXILIARY CONTACTS INTERLOCKED WITH THE VFDS INPUT AS A 'RUN ENABLE' PERMISSIVE.
[4] ROUTE TEMPERATURE AND/OR MOISTURE SENSORS VIA THE DISCONNECT BACK TO THE MCC. COORDINATE FINAL TERMINATION IN THE MCC WITH APPROVED MCC SHOP DRAWINGS.
[5] REFER TO PROCESS & INSTRUMENTATION DIAGRAMS (P&IDS) FOR LIST OF INPUTS/OUTPUTS TO DEVICES. COORDINATE FINAL I/O WITH APPROVED SHOP DRAWINGS.
[6] INTRINSICALLY SAFE WIRING. ROUTE IN DEDICATED CONDUIT AND PROVIDE COLOR CODING PER SPECIFICATIONS.
[7] TERMINATE CONDUCTORS IN PDP AND ROUTE MANUFACTURER SUPPLIED CABLE (MSC) TO WET WELL VIA CABLE TRENCH.
[8] COORDINATE FINAL LOCATION OF CONDUIT STUB UPS WITH APPROVED GENERATOR SUBMITTALS PRIOR TO POURING CONCRETE SLAB.
[9] PROVIDE INSTRUMENT JUNCTION BOX WITH VIEWING WINDOW, PER DRAWING E005, DETAIL 502.
[10] CONDUIT WILL ROUTE THROUGH THE SBR BASIN CONCRETE AS SHOWN ON THE ENLARGED PLAN. COORDINATE THE ROUTING OF THE CONDUIT WITH THE OWNER PRIOR TO INSTALLATION. REFER TO DRAWING E216 FOR ADDITIONAL REQUIREMENTS.

NO.	DATE	DESCRIPTION	BY
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VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY
0 1"

DSN. DSN
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REGISTERED PROFESSIONAL ENGINEER
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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

SBR CONTROL CONDUIT SCHEDULE 1

DRAWING
E203A
165 OF 223

JOB NUMBER
2599.3220.0

SBR CONTROL CONDUIT / CONDUCTOR SCHEDULE

CONDUIT ID NO.	CONDUIT		CONDUCTORS PER CONDUIT					FROM	TO	DESCRIPTION	NOTES
	QUANTITY	SIZE	UNGROUNDED	GROUNDED	GROUNDING	CABLE	SPARE				
C250	1	0.75 INCH	4 - #14	-	1 - #14	-	-	SBR NO. 2 DECANTER RAISE LIMIT SWITCHES (ZSH-2440, ZSHH-2440)	SBR NO. 2 DECANTER RAISE LIMIT SWITCH J-BOX (JBH-2440)	DISCRETE I/O: RAISE PRIMARY & SECONDARY LIMITS	-
C251	1	0.75 INCH	4 - #14	-	1 - #14	-	-	SBR NO. 2 DECANTER LOWER LIMIT SWITCHES (ZSL-2440, ZSLL-2440)	SBR NO. 2 DECANTER LOWER LIMIT SWITCH J-BOX (JBL-2440)	DISCRETE I/O: LOWER PRIMARY & SECONDARY LIMITS	-
C252	1	0.75 INCH	4 - #14	-	1 - #14	-	-	JBH-2440	CP-2400	DISCRETE I/O: RAISE PRIMARY & SECONDARY LIMITS	-
C253	1	0.75 INCH	4 - #14	-	1 - #14	-	-	JBL-2440	CP-2400	DISCRETE I/O: LOWER PRIMARY & SECONDARY LIMITS	-
C254	1	0.75 INCH	2 - #14	-	1 - #14	-	-	MCC-2000	SBR NO. 2 DECANTER DISCONNECT (DEC-2440-DIS)	DISCONNECT AUX. CONTACT	3
C255	1	0.75 INCH	2 - #14	-	1 - #14	1 - TSP	-	CP-2000	EQ BASIN LEVEL TRANSMITTER & OVERFLOW (LIT-2500, LS-2501)	ROUTE VIA JB-2500. ANALOG: BASIN LEVEL. DISCRETE: OVERFLOW.	2, 6, 9
C256	1	0.75 INCH	-	-	1 - #14	2 - TSP	-	CP-2000	EQ BASIN EFFLUENT CONTROL VALVE (V-2505)	ANALOG: % OPEN / CLOSE, % FEEDBACK	-
C257	1	0.75 INCH	-	-	1 - #14	1 - TSP	-	CP-2000	EFFLUENT FLOWMETER (FIT-2510)	ANALOG: INFLUENT FLOW	-
C258	1	0.75 INCH	2 - #14	-	1 - #14	-	-	CP-2000	EFFLUENT FLOWMETER (FIT-2510)	DISCRETE: INFLUENT FLOW TOTALIZER	-
C259	1	1.0 INCH	-	-	1 - #14	1 - MSC	-	FIT-2510	FE-2510	ROUTE MSC PER DETAIL.	9
C260	1	1.0 INCH	-	-	1 - #14	1 - CAT6	-	CP-2000	PLANT PUMP STATION CONTROL PANEL (PCP-2800)	PLANT PUMP STATION ETHERNET / IP COMMUNICATION	-
C261	1	0.75 INCH	-	-	1 - #14	1 - TSP	-	PCP-2800	PLANT PUMP STATION DISCONNECT PANEL (PDP-2800)	WET WELL ANALOG: LEVEL	7
C262	1	0.75 INCH	-	-	1 - #14	2 - TSP	-	PCP-2800	PDP-2800	PLANT PUMPS NO. 1 & NO. 2 MOISTURE / SEAL LEAK SENSOR & OVERTEMP	7
C263	1	0.75 INCH	6 - #14	-	1 - #14	-	-	PCP-2800	PDP-2800	DISCRETE: LOW, HIGH, HIGH-HIGH FLOATS	7
C264	1	0.75 INCH	1 - #12	1 - #12	1 - #12	-	-	PCP-2800	PDP-2800	120VAC POWER FOR PANEL HEATER	-
C266	1	0.75 INCH	-	-	1 - #14	1 - TSP	-	CP-2000	GENERATOR SET (GEN-2000)	ANALOG: FUEL LEVEL	8
C267	1	0.75 INCH	8 - #14	-	1 - #14	-	-	CP-2000	GENERATOR SET (GEN-2000)	DISCRETE: LOW FUEL, RUNNING, FAIL, NOT-IN-AUTO SIGNALS	8
C268	1	0.5 INCH	2 - #14	-	1 - #14	-	-	GENERATOR E-STOP (HS-2901)	GENERATOR SET (GEN-2000)	DISCRETE: EMERGENCY STOP, LOCATED IN BLOWER BUILDING	8
C269	1	0.5 INCH	2 - #14	-	1 - #14	-	-	ATS-2000	GENERATOR SET (GEN-2000)	DISCRETE: REMOTE START COMMAND	8
C270	1	0.75 INCH	8 - #14	-	1 - #14	-	-	CP-2000	ATS-2000	DISCRETE: ATS ON UTILITY, GENERATOR, NORMAL POWER AVAILABLE, GENERATOR POWER AVAILABLE	-
C280	1	2.0 INCH	-	-	-	-	-	MCC-2000	CJB-201	SPARE CONDUIT	1
C281	1	2.0 INCH	-	-	-	-	-	CP-2000	CJB-201	SPARE CONDUIT	1
C290	1	0.75 INCH	-	-	1 - #14	1 - CAT6	-	CP-2000	ETHERNET BRIDGE	ROUTE OVERHEAD TO EXTERIOR PER OSI	-
C291	1	0.75 INCH	-	-	1 - #14	1 - CAT6	-	CP-2000	CP-2100	-	-

NOTES:
[1] REFERENCE SPECIFICATIONS FOR REQUIREMENTS FOR SPARE CONDUITS.
[2] PROVIDE JUNCTION BOXES ADJACENT TO THE EQUIPMENT / INSTRUMENT TO TRANSITION FROM CONDUIT TO CABLE/CORD. PROVIDE NAMEPLATES FOR J-BOXES AS LABELED ON THE DRAWINGS.
[3] PROVIDE DISCONNECTS WITH AUXILIARY CONTACTS INTERLOCKED WITH THE VFDS INPUT AS A 'RUN ENABLE' PERMISSIVE.
[4] ROUTE TEMPERATURE AND/OR MOISTURE SENSORS VIA THE DISCONNECT BACK TO THE MCC. COORDINATE FINAL TERMINATION IN THE MCC WITH APPROVED MCC SHOP DRAWINGS.
[5] REFER TO PROCESS & INSTRUMENTATION DIAGRAMS (P&IDS) FOR LIST OF INPUTS/OUTPUTS TO DEVICES. COORDINATE FINAL I/O WITH APPROVED SHOP DRAWINGS.
[6] INTRINSICALLY SAFE WIRING. ROUTE IN DEDICATED CONDUIT AND PROVIDE COLOR CODING PER SPECIFICATIONS.
[7] TERMINATE CONDUCTORS IN PDP AND ROUTE MANUFACTURER SUPPLIED CABLE (MSC) TO WET WELL VIA CABLE TRENCH.
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[9] PROVIDE INSTRUMENT JUNCTION BOX WITH VIEWING WINDOW, PER DRAWING E005, DETAIL 502.
[10] CONDUIT WILL ROUTE THROUGH THE SBR BASIN CONCRETE AS SHOWN ON THE ENLARGED PLAN. COORDINATE THE ROUTING OF THE CONDUIT WITH THE OWNER PRIOR TO INSTALLATION. REFER TO DRAWING E216 FOR ADDITIONAL REQUIREMENTS.

SBR GROUNDING CONDUIT / CONDUCTOR SCHEDULE

CONDUIT ID NO.	CONDUIT		CONDUCTORS PER CONDUIT					FROM	TO	DESCRIPTION	NOTES
	QUANTITY	SIZE	UNGROUNDED	GROUNDED	GROUNDING	CABLE	SPARE				
G201	1	1.0 INCH	-	-	1 - #1/0	-	-	GROUND BUS BAR	GROUNDING ELECTRODE SYSTEM	ROUTE IN PVC, SCHEDULE 40.	-
G202	1	1.0 INCH	-	-	1 - #2	-	-	XFMR-2000	GROUNDING ELECTRODE SYSTEM	ROUTE IN PVC, SCHEDULE 40.	-
G203	1	1.0 INCH	-	-	1 - #4	-	-	XFMR-2700	GROUNDING ELECTRODE SYSTEM	ROUTE IN PVC, SCHEDULE 40.	-
G211	1	0.75 INCH	-	-	1 - #8	-	-	XFMR-2100	GROUNDING ELECTRODE SYSTEM	ROUTE IN PVC, SCHEDULE 40.	-
G230	1	0.75 INCH	-	-	1 - #8	-	-	CB-2300	GROUNDING ELECTRODE SYSTEM	ROUTE IN PVC, SCHEDULE 40.	-
G231	1	0.75 INCH	-	-	1 - #8	-	-	XFMR-2300	GROUNDING ELECTRODE SYSTEM	ROUTE IN PVC, SCHEDULE 40.	-

NOTES:

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		REVISIONS	

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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS
SBR CONTROL CONDUIT SCHEDULE 2

DRAWING
E203B
166 OF 223

JOB NUMBER
2599.3220.0

SHEET KEY NOTES

1. PROVIDE ELECTRONIC TRIP (LSI) MAIN BREAKER.

PANEL NAME: DP-2000 | LOCATION: BLOWER ELECTRICAL ROOM
VOLT/PHASE: 480V, 3Ø | FED FROM: MCC-2000
NUM. POLES: 42 | BREAKER MOUNTING: BOLTED
AIC RATING: 42,000 | MAIN LUGS ONLY
NOTES: NEW PANEL | BUS RATING AMPS: 225
REF. KEY NOTE #: | SPD: YES

NOTES	LOAD DESCRIPTION	LOAD TYPE	VA L1	VA L2	VA L3	TRIP RATING AMPS	CIRCUIT NUMBER	CIRCUIT NUMBER	TRIP RATING AMPS	VA L1	VA L2	VA L3	LOAD TYPE	LOAD DESCRIPTION	NOTES
	XFMR-2000	T	10,000				1	2		800			E	HEADWORKS CONTROL PANEL, CP-1000	
		T		10,000		50	3	4	20		800		E		
		T			10,000		5	6				800	E		
	XFMR-2700	T	15,000				7	8	20	-				SPARE	
		T		15,000		70	9	10	20		-			SPARE	
		T			15,000		11	12	20			-		SPARE	
	XFMR-2100	T	5,000				13	14	20	-				SPARE	
		T		5,000		30	15	16	20		-			SPARE	
		T			5,000		17	18	20			-		SPARE	
	SPARE		-			20	19	20	20	-				SPARE	
	SPARE			-		20	21	22	20		-			SPARE	
	SPARE				-	20	23	24	20			-		SPARE	
	SPARE		-			20	25	26	20	-				SPARE	
	SPARE			-		20	27	28	20		-			SPARE	
	SPARE				-	20	29	30	20			-		SPARE	
	SPARE			-		20	31	32	20	-				SPARE	
	SPARE				-	20	33	34	20		-			SPARE	
	SPARE				-	20	35	36	20			-		SPARE	
	SPARE		-			20	37	38		10			R		
	SPARE			-		20	39	40	30		10		R	SURGE PROTECTION DEVICE	
	SPARE				-	20	41	42				10	R		

TOTAL LOAD:	30,000	30,000	30,000
COMBINED LOAD:	30,810	30,810	30,810

CONNECTED LOAD: 92,430
DEMAND LOAD: 92,430
DEMAND AMPS: 111

TOTAL LOAD:	810	810	810

Load Type Key		Demand Factor	Connected Load	Demand Load
R	General Purpose Receptacle	100% First 10kVA, 50% thereafter	30	30
L	Lighting	125% Load	0	0
M1	Largest Motor	125% Load	0	0
M	Motor	100% Load	0	0
A	Appliance	100% Load	0	0
H	HVAC	100% Load	0	0
K	Kitchen	100% Load	0	0
E	Equipment	100% Load	2,400	2,400
T	Transformer	100% Load	90,000	90,000
W	Welder	100% Load	0	0
RV	Recreational Vehicle	100% Load	0	0

1 - Units of Equipment - See NEC Table 220.56
1 - RV Sites - See NEC Table 551.71 (A)

NOTES:

PANEL NAME: LP-2000 | LOCATION: BLOWER ELECTRICAL ROOM
VOLT/PHASE: 208/120V, 3Ø | FED FROM: XFMR-2000
NUM. POLES: 42 | BREAKER MOUNTING: BOLTED
AIC RATING: 42,000 | MAIN BREAKER AMPS: 175 (1)
NOTES: NEW PANEL | BUS RATING AMPS: 225
REF. KEY NOTE #: | SPD: NO

NOTES	LOAD DESCRIPTION	LOAD TYPE	VA L1	VA L2	VA L3	TRIP RATING AMPS	CIRCUIT NUMBER	CIRCUIT NUMBER	TRIP RATING AMPS	VA L1	VA L2	VA L3	LOAD TYPE	LOAD DESCRIPTION	NOTES
	SPARE		-			20	1	2	20	639			L	ELECTRICAL ROOM / BOILER ROOM LUMINAIRES	
	BLOWER BUILDING EXTERIOR LUMINAIRES	L		416		20	3	4	20		720		R	ELECTRICAL ROOM / EXTERIOR RECEPTACLES	
	EQ BASIN LUMINAIRES	L			600	20	5	6	20			720	R	BLOWER ROOM RECEPTACLES	
1	AIR CONDITIONING UNIT OAC-2	M1	1,695			20	7	8	20	720			R	SBR BASIN RECEPTACLES (WEST)	
		M1		1,695			9	10	20		720		R	SBR BASIN RECEPTACLES (EAST)	
	SPARE				-	20	11	12	20			100	E	SBR BASIN #1 DO AIT-2210	
	SPARE		-			20	13	14	20	100			E	SBR BASIN #2 DO AIT-2410	
	SPARE			-		20	15	16	20		-			SPARE	
	GENERATOR BLOCK HEATER	E			1,000	20	17	18	20			50	E	INFLUENT FLOWMETER, FIT-1020	
		E	1,000				19	20	20	50			E	INFLUENT SAMPLER, AIT-1030	
	EQ BASIN EFFLUENT CONTROL VALVE, V-2505	E		50		20	21	22	20		500		M	BLOWER ROOM ROLL-UP DOOR OPERATOR	
	EFFLUENT FLOWMETER, FIT-2510	E			50	20	23	24	20			600	E	GENERATOR BATTERY CHARGER	
	PLANT PUMP PIPING HEAT TRACE (LOCATED AT HEADWORKS)	H	500			20	25	26	20	600			L	SBR BASIN LIGHTING	
	SBR MAIN CONTROL PANEL, CP-2100	E		1,500		20	27	28	20		180		R	EQ BASIN RECEPTACLE	
	SBR CONTROLLER, CP-2100	E			2,500	30	29	30	20			-		SPARE	
	SPARE		-			20	31	32	20	-				SPARE	
	SPARE			-		20	33	34	20		-			SPARE	
	SPARE				-	20	35	36	20			-		SPARE	
	SPARE		-			20	37	38	20	-				SPARE	
	SPARE			-		20	39	40	20		-			SPARE	
	SPARE				-	20	41	42	20			-		SPARE	

TOTAL LOAD:	3,195	3,661	4,150
COMBINED LOAD:	5,304	5,781	5,620

CONNECTED LOAD: 16,705
DEMAND LOAD: 18,116
DEMAND AMPS: 50

TOTAL LOAD:	2,109	2,120	1,470

Load Type Key		Demand Factor	Connected Load	Demand Load
R	General Purpose Receptacle	100% First 10kVA, 50% thereafter	3,000	3,000
L	Lighting	125% Load	2,255	2,819
M1	Largest Motor	125% Load	3,390	4,238
M	Motor	100% Load	500	500
A	Appliance	100% Load	0	0
H	HVAC	100% Load	500	500
K	Kitchen	100% Load	0	0
E	Equipment	100% Load	7,000	7,000
T	Transformer	100% Load	0	0
W	Welder	100% Load	0	0
RV	Recreational Vehicle	100% Load	0	0

XX - Units of Equipment - See NEC Table 220.56
XX - RV Sites - See NEC Table 551.71 (A)

NOTES:
[1] REFER TO THE MECHANICAL SCHEDULE ON SHEET E006 FOR CONDUIT AND CONDUCTORS.

PANEL NAME: DP-2300 | LOCATION: PLANT PUMP STATION
VOLT/PHASE: 480V, 3Ø | FED FROM: MCC-2000
NUM. POLES: 24 | BREAKER MOUNTING: BOLTED
AIC RATING: 42,000 | MAIN LUGS ONLY
NOTES: NEW PANEL | BUS RATING AMPS: 125
REF. KEY NOTE #: | SPD: YES

NOTES	LOAD DESCRIPTION	LOAD TYPE	VA L1	VA L2	VA L3	TRIP RATING AMPS	CIRCUIT NUMBER	CIRCUIT NUMBER	TRIP RATING AMPS	VA L1	VA L2	VA L3	LOAD TYPE	LOAD DESCRIPTION	NOTES
	PUMP CONTROL PANEL PCP-2800	E	6,850				1	2		5,000			T	XFMR-2300	
		E		6,850		40	3	4	30		5,000		T		
		E			6,850		5	6				5,000	T		
	SPARE		-			20	7	8	20	-				SPARE	
	SPARE			-		20	9	10	20		-			SPARE	
	SPARE				-	20	11	12	20			-		SPARE	
	SPACE		-			-	13	14	-	-				SPACE	
	SPACE				-	-	15	16	-		-			SPACE	
	SPACE				-	-	17	18	-			-		SPACE	
	SPACE		-			-	19	20		10			R		
	SPACE			-		-	21	22	30		10		R	SURGE PROTECTION DEVICE	
	SPACE				-	-	23	24				10	R		

TOTAL LOAD:	6,850	6,850	6,850
COMBINED LOAD:	11,860	11,860	11,860

CONNECTED LOAD: 35,580
DEMAND LOAD: 35,580
DEMAND AMPS: 43

TOTAL LOAD:	5,010	5,010	5,010

Load Type Key		Demand Factor	Connected Load	Demand Load
R	General Purpose Receptacle	100% First 10kVA, 50% thereafter	30	30
L	Lighting	125% Load	0	0
M1	Largest Motor	125% Load	0	0
M	Motor	100% Load	0	0
A	Appliance	100% Load	0	0
H	HVAC	100% Load	0	0
K	Kitchen	100% Load	0	0
E	Equipment	100% Load	20,550	20,550
T	Transformer	100% Load	15,000	15,000
W	Welder	100% Load	0	0
RV	Recreational Vehicle	100% Load	0	0

XX - Units of Equipment - See NEC Table 220.56
XX - RV Sites - See NEC Table 551.71 (A)

NOTES:

PANEL NAME: LP-2300 | LOCATION: PLANT PUMP STATION
VOLT/PHASE: 208/120V, 3Ø | FED FROM: DP-2300
NUM. POLES: 24 | BREAKER MOUNTING: BOLTED
AIC RATING: 42,000 | MAIN BREAKER AMPS: 60 (1)
NOTES: | BUS RATING AMPS: 225
REF. KEY NOTE #: | SPD: NO

NOTES	LOAD DESCRIPTION	LOAD TYPE	VA L1	VA L2	VA L3	TRIP RATING AMPS	CIRCUIT NUMBER	CIRCUIT NUMBER	TRIP RATING AMPS	VA L1	VA L2	VA L3	LOAD TYPE	LOAD DESCRIPTION	NOTES
	SPARE		-			20	1	2	20	-				SPARE	
	BUILDING EXHAUST FAN	M1		100		20	3	4	20		180		R	PDP RECEPTACLE	
	BUILDING UNIT HEATER	H			1,500	20	5	6	20			-		SPARE	
		H	1,500				7	8	20	-				SPARE	
	PLANT PUMP STATION LUMINAIRES	L		118		20	9	10	20		360		R	PLANT PUMP STATION RECEPTACLES	
	SPARE				-	20	11	12	20			-		SPARE	
	SPACE		-			-	13	14	-	-				SPACE	
	PLANT PUMP STATION EXTERIOR LIGHTING	L		50		-	15	16	-		-			SPACE	
	SPACE				-	-	17	18	-			-		SPACE	
	SPACE		-			-	19	20	-	-				SPACE	
	SPACE			-		-	21	22	-		-			SPACE	
	SPACE				-	-	23	24	-			-		SPACE	

TOTAL LOAD:	1,500	268	1,500
COMBINED LOAD:	1,500	808	1,500

CONNECTED LOAD: 3,808
DEMAND LOAD: 3,875
DEMAND AMPS: 11

TOTAL LOAD:	0	540	0

Load Type Key		Demand Factor	Connected Load	Demand Load
R	General Purpose Receptacle	100% First 10kVA, 50% thereafter	540	540
L	Lighting	125% Load	168	210
M1	Largest Motor	125% Load	100	125
M	Motor	100% Load	0	0
A	Appliance	100% Load	0	0
H	HVAC	100% Load	3,000	3,000
K	Kitchen	100% Load	0	0
E	Equipment	100% Load	0	0
T	Transformer	100% Load	0	0
W	Welder	100% Load	0	0
RV	Recreational Vehicle	100% Load	0	0

XX - Units of Equipment - See NEC Table 220.56
XX - RV Sites - See NEC Table 551.71 (A)

NOTES:

PANEL NAME: LP-2100 | LOCATION: STORAGE BUILDING
VOLT/PHASE: 208/120V, 3Ø | FED FROM: LP-2000
NUM. POLES: 24 | BREAKER MOUNTING: BOLTED
AIC RATING: 42,000 | MAIN BREAKER AMPS: 60 (1)
NOTES: | BUS RATING AMPS: 225
REF. KEY NOTE #: | SPD: NO

NOTES	LOAD DESCRIPTION	LOAD TYPE	VA L1	VA L2	VA L3	TRIP RATING AMPS	CIRCUIT NUMBER	CIRCUIT NUMBER	TRIP RATING AMPS	VA L1	VA L2	VA L3	LOAD TYPE	LOAD DESCRIPTION	NOTES
	INTERIOR LIGHTS	L	1,188			20	1	2	20	-				SPARE	
	EXTERIOR LIGHT	L		280		20	3	4	20		-			SPARE	
	RECEPTACLES	R			720	20	5	6	20			-		SPARE	
	SPARE		-			20	7	8	20	-				SPARE	
	SPARE			-		20	9	10	-		-			SPACE	
	SPACE				-	-	11	12	-			-		SPACE	
	SPACE		-			-	13	14	-	-				SPACE	
	SPACE			-		-	15	16	-		-			SPACE	
	SPACE				-	-	17	18	-			-		SPACE	
	SPACE		-			-	19	20	-	-				SPACE	
	SPACE			-		-	21	22	-		-			SPACE	
	SPACE				-	-	23	24	-			-		SPACE	

TOTAL LOAD:	1,188	280	720
COMBINED LOAD:	1,188	280	720

CONNECTED LOAD: 2,188
DEMAND LOAD: 2,555
DEMAND AMPS: 7

TOTAL LOAD:	0	0	0

Load Type Key		Demand Factor	Connected Load	Demand Load
R	General Purpose Receptacle	100% First 10kVA, 50% thereafter	720	720
L	Lighting	125% Load	1,488	1,835
M1	Largest Motor	125% Load	0	0
M	Motor	100% Load	0	0
A	Appliance	100% Load	0	0
H	HVAC	100% Load	0	0
K	Kitchen	100% Load	0	0
E	Equipment	100% Load	0	0
T	Transformer	100% Load	0	0
W	Welder	100% Load	0	0
RV	Recreational Vehicle	100% Load	0	0

XX - Units of Equipment - See NEC Table 220.56
XX - RV Sites - See NEC Table 551.71 (A)

NOTES:

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING
0 IF NOT ONE INCH, ON THIS SHEET, ADJUST SCALES ACCORDINGLY
1"

DSN. DSN
DRN. DRWN
CKD. CHCK
DATE: JUN 2026

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REGISTERED PROFESSIONAL ENGINEER
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MAY 08, 2012
BENJAMIN E. PERRY
EXPIRES: 12-31-2026

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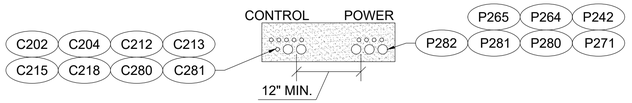
CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

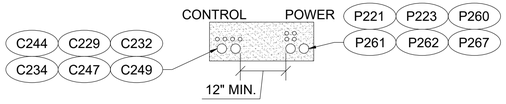
SBR PANEL SCHEDULES

DRAWING
E204
167 OF 223

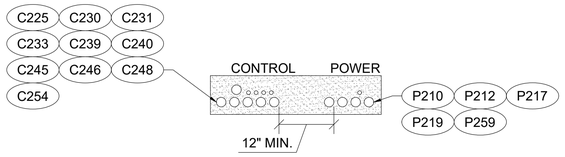
JOB NUMBER
2599.3220.0



2 CONDUIT DUCTBANK FROM PJB/CJB-201 TO AERATION BASIN
SCALE: NTS



3 CONDUIT DUCTBANK FROM PJB/CJB-202 TO AERATION BASIN
SCALE: NTS



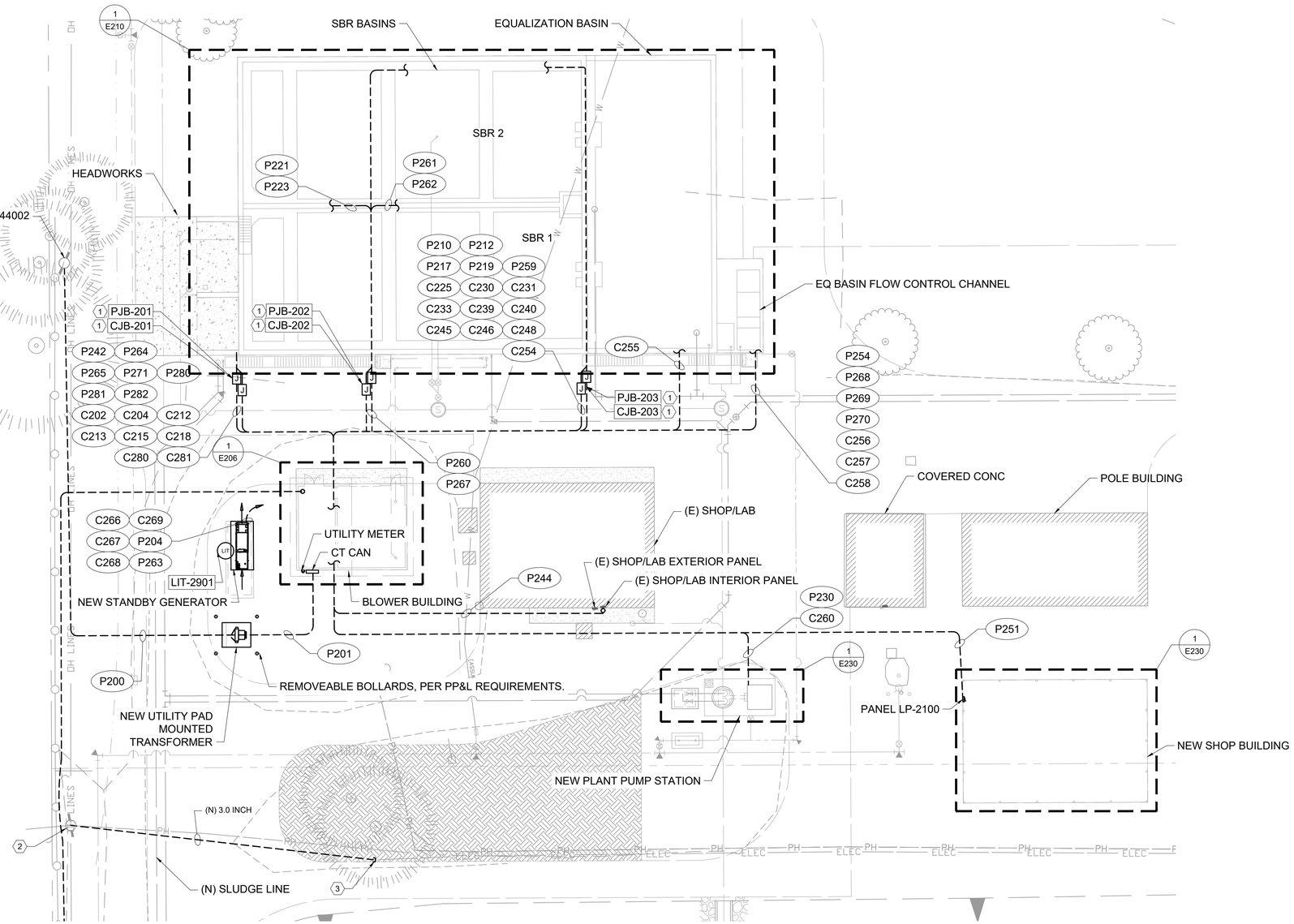
4 CONDUIT DUCTBANK FROM PJB/CJB-203 TO AERATION BASIN
SCALE: NTS

GENERAL SHEET NOTES

1. ALL UNDERGROUND CONDUITS ON THIS SHEET SHALL BE INSTALLED UNDERNEATH A CONCRETE SLURRY. REFER TO DETAIL 402 ON SHEET E004. THE EXCEPTION SHALL BE THE UTILITY POWER CONDUITS.
2. INSTALL UTILITY CONDUITS PER PP&L REQUIREMENTS.

SHEET KEY NOTES

1. PROVIDE IN-GROUND VAULTS FOR JUNCTION BOXES. REFERENCE KEYNOTE 16131.V10.
2. COORDINATE WITH PP&L TO INTERCEPT AND EXTEND THE EXISTING 3.0 INCH PRIMARY CONDUIT FOR THE VERIZON CELL TOWER. EXTEND THE RISER GOING UP TO THE POLE AN ADDITIONAL 20-FT PER PP&L'S REQUIREMENTS. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING WITH VERIZON AND PP&L THE SHUTDOWN AND SEQUENCING AS SPECIFIED IN SECTION 16050.
3. INTERCEPT AND EXTEND EXISTING 3.0 INCH CONDUIT AN ADDITIONAL 2.5-FT DEPTH BELOW THE NEW SLUDGE LINE. CONTRACTOR SHALL COORDINATE WITH OWNER, CIVIL ENGINEER, PP&L, AND VERIZON AS SPECIFIED.



1 SBR BUILDING & BASINS ELECTRICAL SITE PLAN
SCALE: 1" = 20'

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING 0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

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DRN. DRWN
CKD. CHCK
DATE: JUN 2026

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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

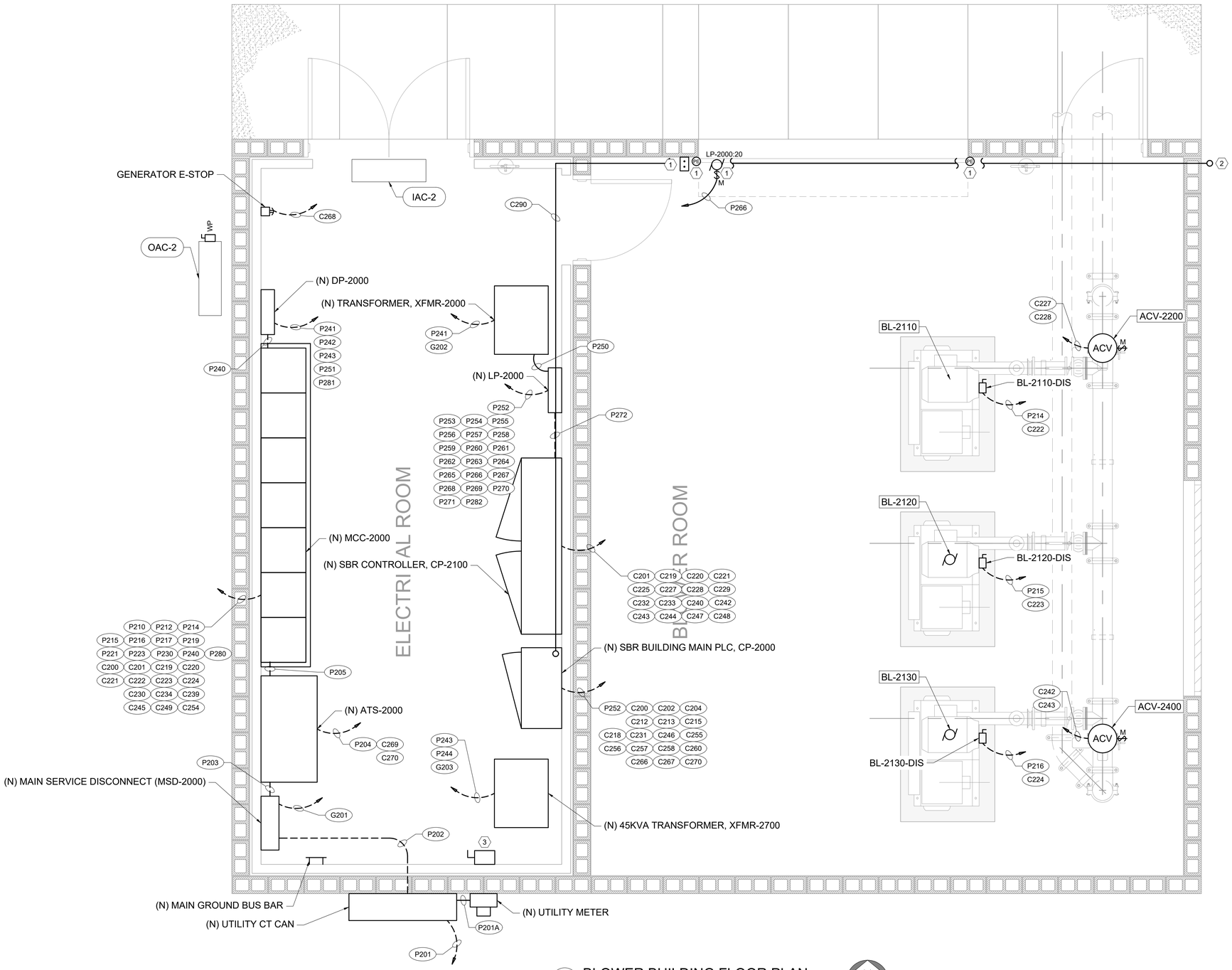
SBR BUILDING & BASINS ELECTRICAL SITE PLAN

DRAWING
E205
168 OF 223

JOB NUMBER
2599.3220.0

SHEET KEY NOTES

1. MOTORIZED OVERHEAD COILING DOOR. INSTALL POWER CONNECTION PER MANUFACTURER'S INSTRUCTIONS. PROVIDE CONDUIT AND WIRE INSTALLATION TO CONTROL SWITCH AND PHOTOEYES PER THE APPROVED SUBMITTALS. COORDINATE CONTROL SWITCH LOCATION WITH ARCHITECT.
2. WIRELESS ETHERNET BRIDGE FOR CP-2000 TO CP-3000. ROUTE CONDUIT OVERHEAD TO THE EXTERIOR OF THE BUILDING. INSTALL JUNCTION BOX ON THE WALL. COORDINATE FINAL HEIGHT OF THE ANTENNA WITH THE OWNER'S SYSTEM INTEGRATOR.
3. CIRCUIT BREAKER CB-XFMR-2700.



1 BLOWER BUILDING FLOOR PLAN
SCALE: 1/2" = 1'-0"

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING
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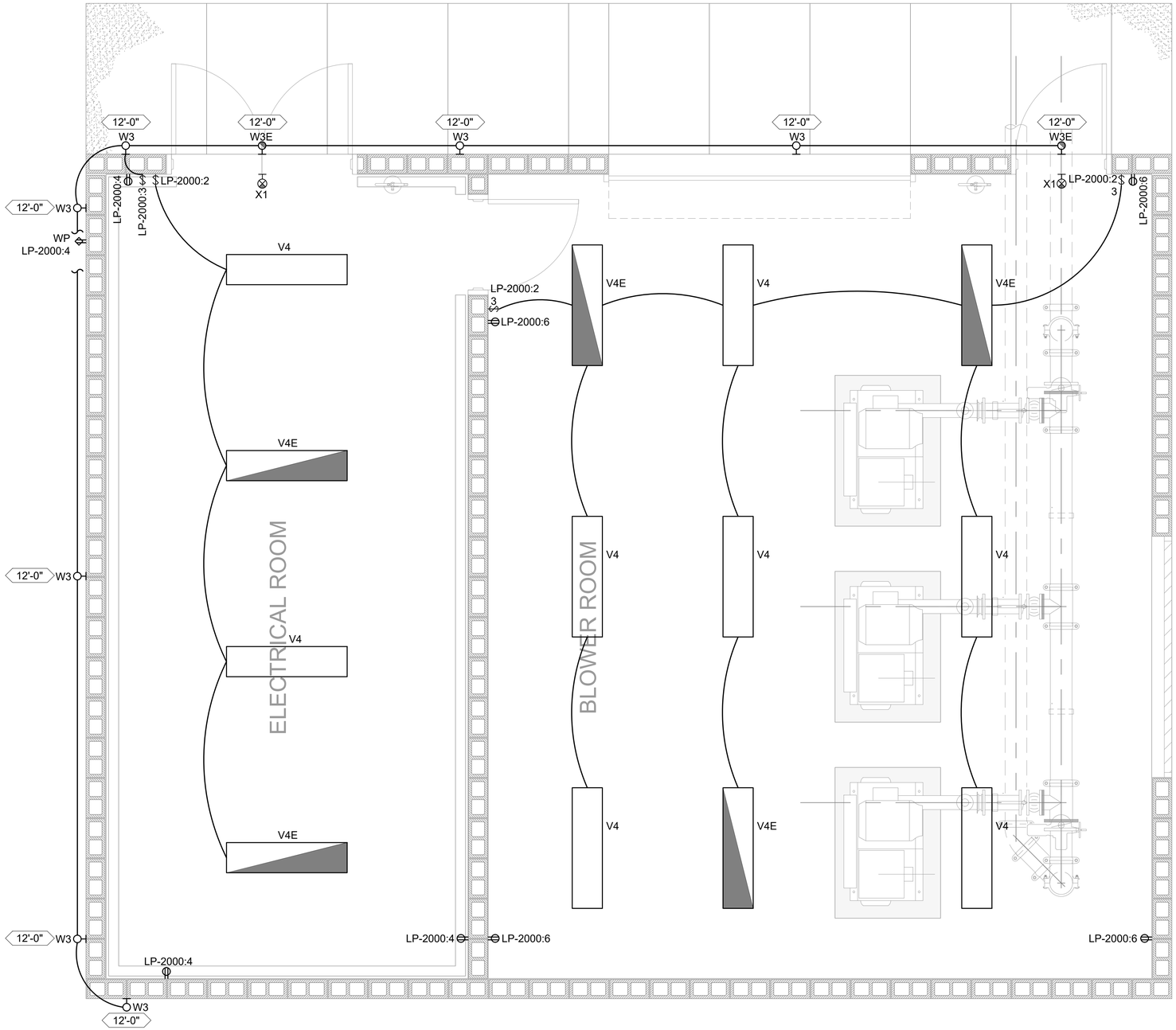
CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS
BLOWER BUILDING FLOOR PLAN

DRAWING
E206
169 OF 223

JOB NUMBER
2599.3220.0

GENERAL SHEET NOTES

1. ALL LIGHTING AND RECEPTACLE BRANCH CIRCUITS SHALL BE WIRED TO PANEL LP-2000, UNLESS OTHERWISE NOTED. THE CIRCUIT NUMBER SHOWN ON THIS FLOOR PLAN.
2. ALL INTERIOR LUMINAIRES SHALL BE MOUNTED AT 10'-0" ABOVE FINISHED FLOOR.
3. WIRE EXIT SIGNS AHEAD OF LOCAL LIGHTING BRANCH CIRCUIT, AHEAD OF ALL SWITCHING.



1 BLOWER BUILDING LIGHTING & RECEPTACLE PLAN
SCALE: 1/2" = 1'-0"

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

VERIFY SCALE
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0 1"
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DRN. DRWN
CKD. CHCK
DATE: JUN 2026

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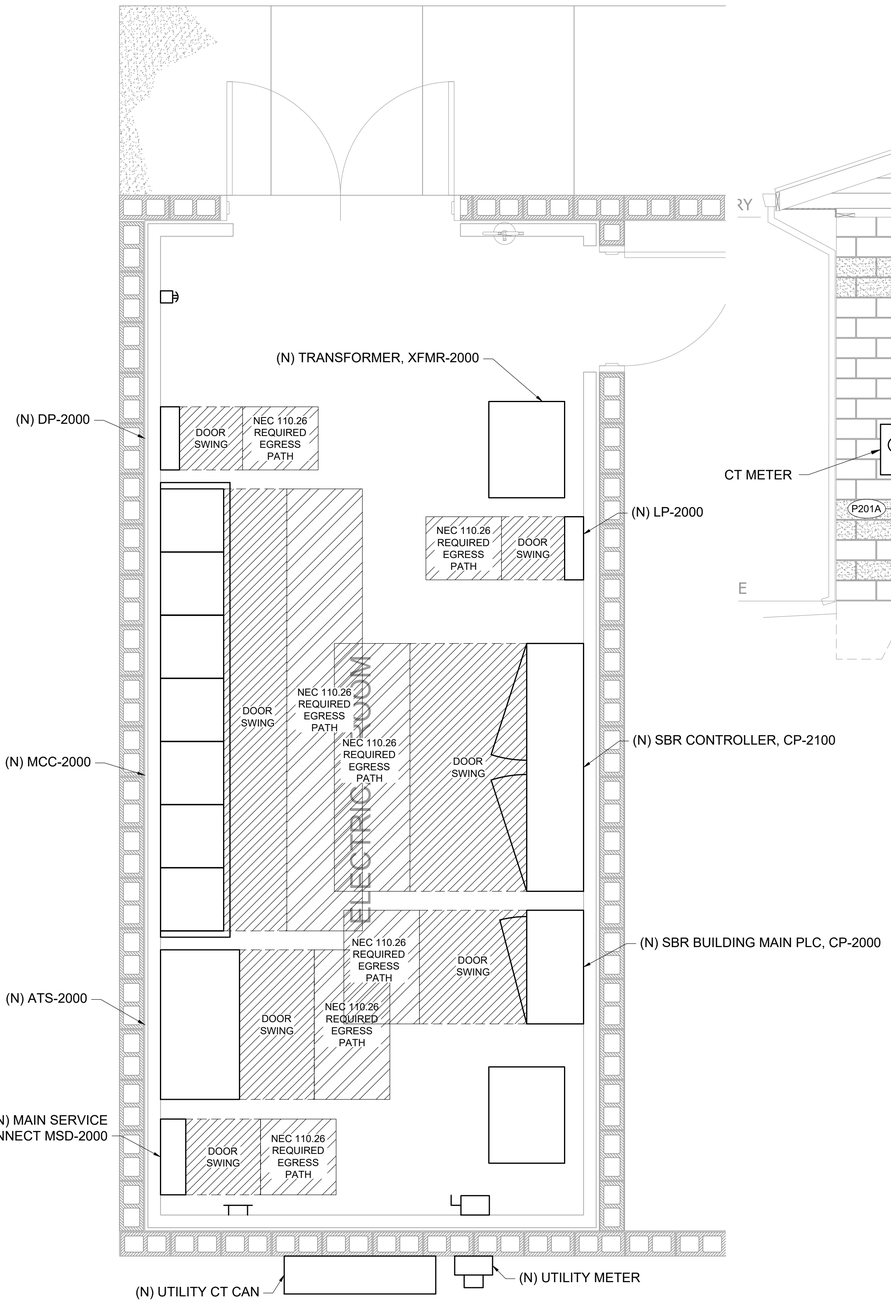
CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

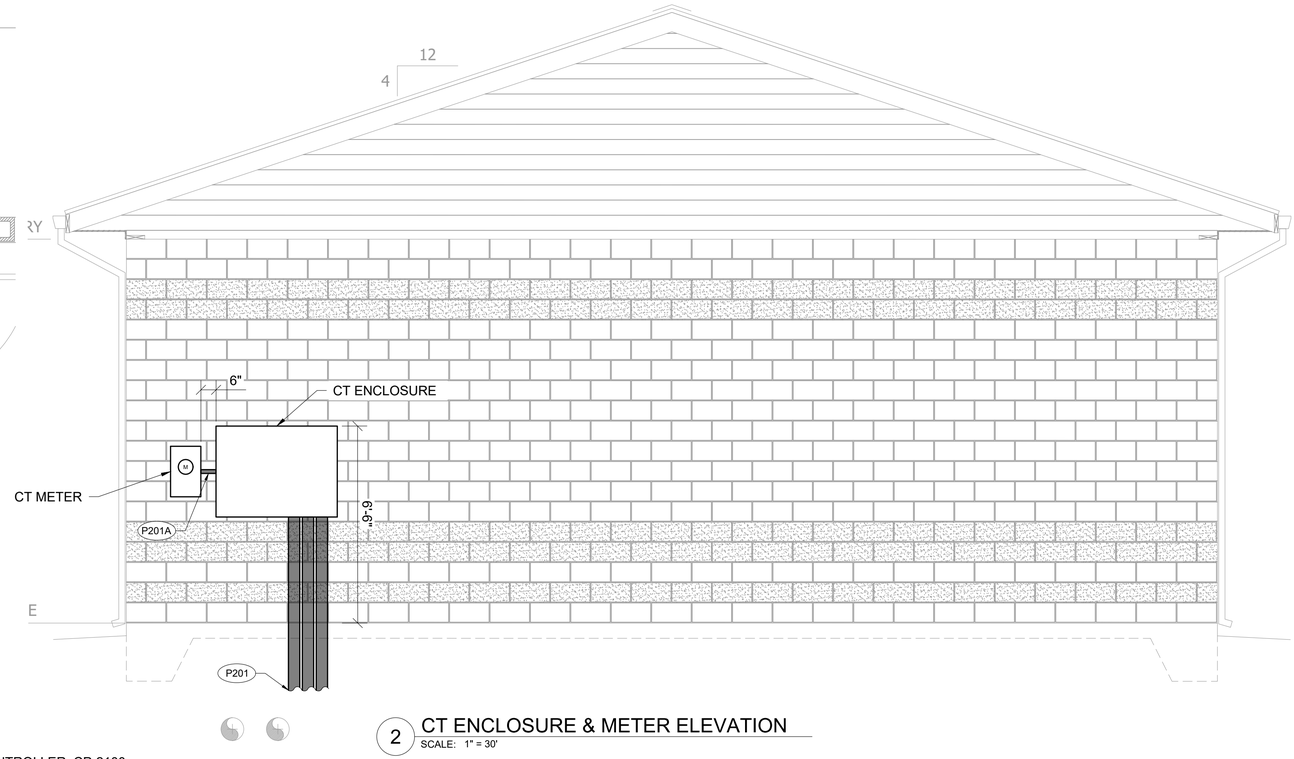
BLOWER BUILDING LIGHTING & RECEPTACLE PLAN

DRAWING
E207
170 OF 223

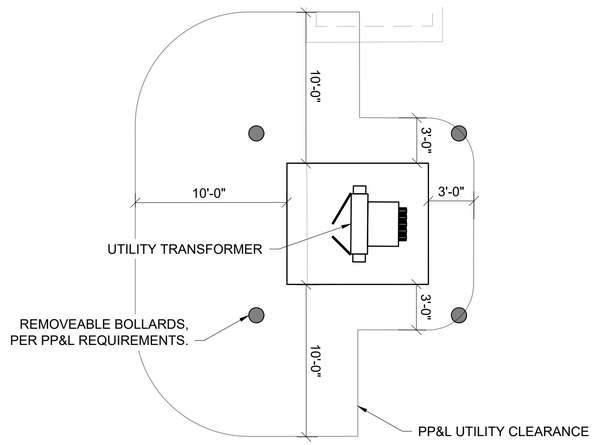
JOB NUMBER
2599.3220.0



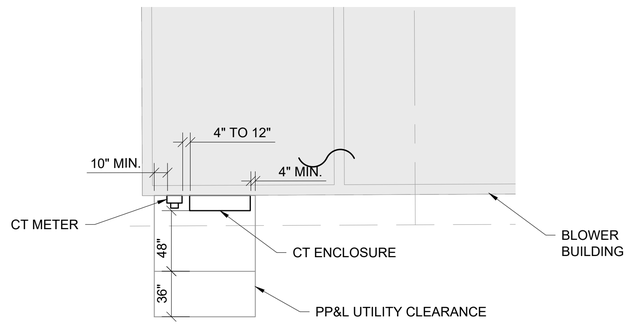
1 CLEARANCE PLAN
ENLARGED HEADWORKS BLOWER BUILDING
SCALE: 1/2" = 1'-0"



2 CT ENCLOSURE & METER ELEVATION
SCALE: 1" = 30'



3 UTILITY TRANSFORMER CLEARANCE
SCALE: 1" = 5'



4 UTILITY METER CLEARANCE
SCALE: 1" = 5'

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

VERIFY SCALE
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0 1"
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CKD. CHCK
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MAY 08, 2012
BENJAMIN E. PERRY
EXPIRES: 12-31-2026

WESTECH ENGINEERING, INC.
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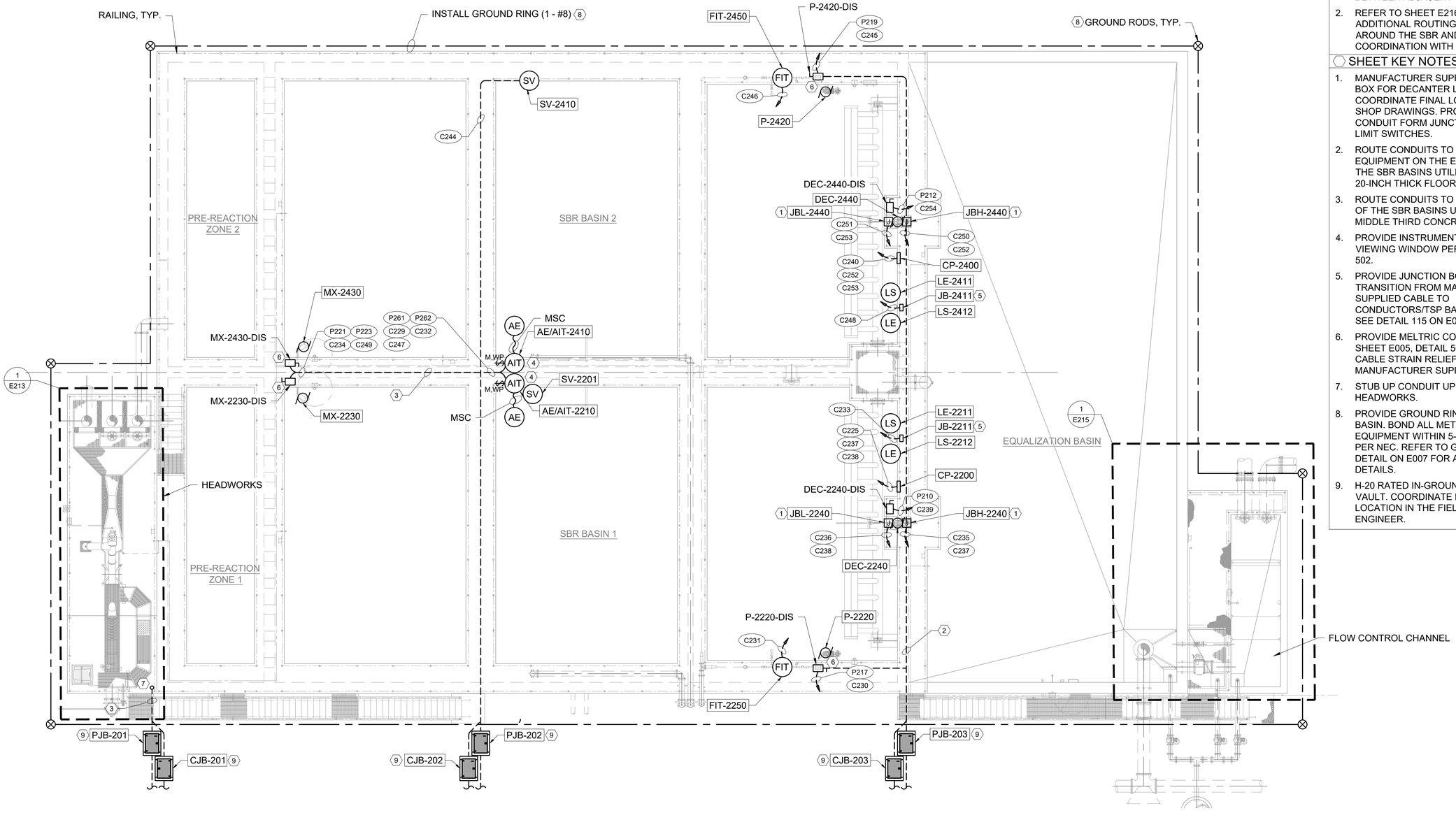
CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

BLOWER BUILDING ELECTRICAL ROOM ENLARGED PLANS

DRAWING
E208
171 OF 223

JOB NUMBER
2599.3220.0



1 SBR BASINS ELECTRICAL PLAN
SCALE: 1/8" = 1'-0"

GENERAL SHEET NOTES

1. CONDUITS SHOWN ON THIS DRAWING SHALL BE CONCEALED BY ROUTING UNDERGROUND OR WITHIN THE CONCRETE SLAB. COORDINATE WITH STRUCTURAL DRAWINGS TO AVOID INTERFERENCE WITH REBAR OR ANY REINFORCING STEEL. FIELD VERIFY CONDUIT LOCATIONS WITH OWNER PRIOR TO CONCRETE PLACEMENT. MAINTAIN A MINIMUM SEPARATION OF TWO (2) CONDUIT DIAMETERS BETWEEN ADJACENT CONDUITS.
2. REFER TO SHEET E216 FOR ADDITIONAL ROUTING DETAILS AROUND THE SBR AND COORDINATION WITH STRUCTURAL.

SHEET KEY NOTES

1. MANUFACTURER SUPPLIED JUNCTION BOX FOR DECANTER LIMIT SWITCHES. COORDINATE FINAL LOCATION WITH SHOP DRAWINGS. PROVIDE FLEXIBLE CONDUIT FORM JUNCTION BOX TO LIMIT SWITCHES.
2. ROUTE CONDUITS TO THE EQUIPMENT ON THE EAST SIDE OF THE SBR BASINS UTILIZING THE 20-INCH THICK FLOOR SLAB.
3. ROUTE CONDUITS TO THE CENTER OF THE SBR BASINS UTILIZING THE MIDDLE THIRD CONCRETE SLAB.
4. PROVIDE INSTRUMENT PANEL WITH VIEWING WINDOW PER E005, DETAIL 502.
5. PROVIDE JUNCTION BOX TO TRANSITION FROM MANUFACTURER SUPPLIED CABLE TO CONDUCTORS/TSP BACK TO PANEL. SEE DETAIL 115 ON E004.
6. PROVIDE MELTRIC CORD & PLUG PER SHEET E005, DETAIL 501. INSTALL CABLE STRAIN RELIEF FOR MANUFACTURER SUPPLIED CABLE.
7. STUB UP CONDUIT UP TO HEADWORKS.
8. PROVIDE GROUND RING FOR SBR BASIN. BOND ALL METALLIC EQUIPMENT WITHIN 5-FT OF BASINS. PER NEC. REFER TO GROUNDING DETAIL ON E007 FOR ADDITIONAL DETAILS.
9. H-20 RATED IN-GROUND PULLING VAULT. COORDINATE FINAL VAULT LOCATION IN THE FIELD WITH THE ENGINEER.

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

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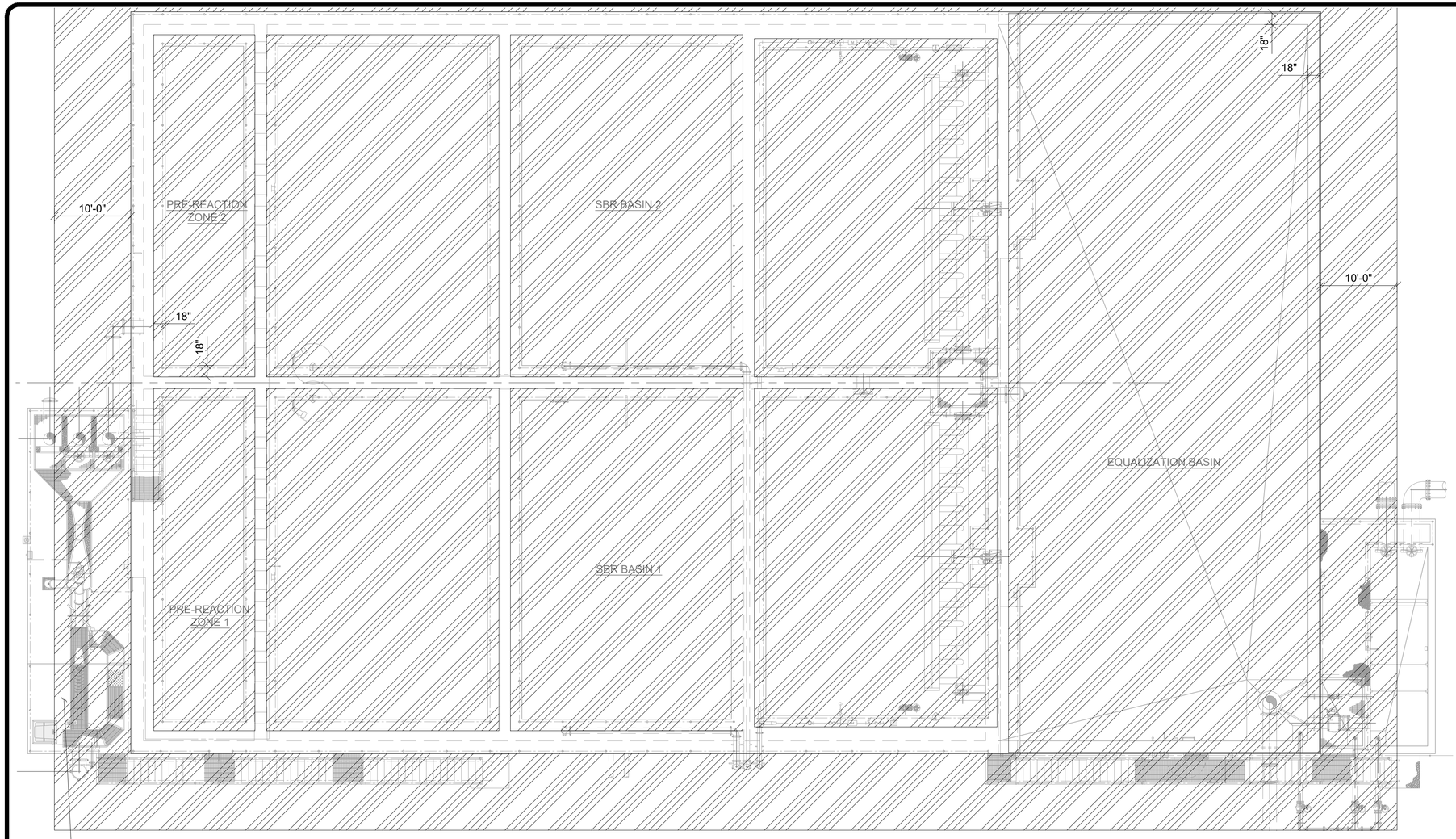
CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

SBR BASINS ELECTRICAL PLAN

DRAWING
E210
172 OF 223

JOB NUMBER
2599.3220.0



1 SBR BASINS HAZARDOUS ZONE PLAN
SCALE: 1/8" = 1'-0"

GENERAL SHEET NOTES

1. ANY ELECTRICAL WORK IN HAZARDOUS AREA SHALL MEET NEC ARTICLE 500.

CLASSIFICATION LEGEND:

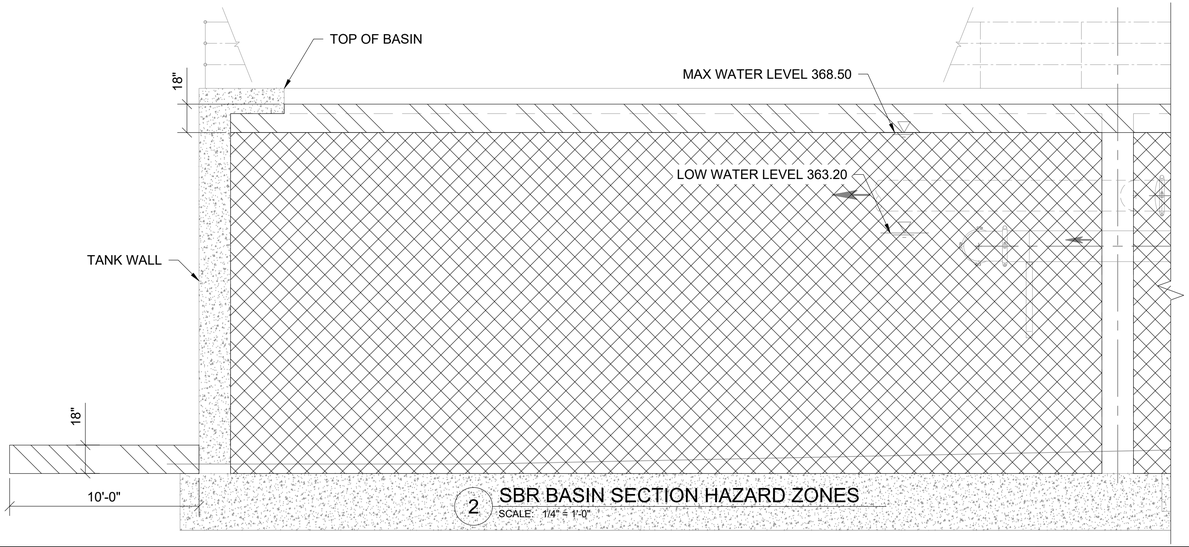
HAZARDOUS CLASSIFICATION CLASS 1 DIVISIONS 1 BOUNDARY. NONE.

HAZARDOUS CLASSIFICATION CLASS 1 DIVISION 2 BOUNDARY.
SBR INTERIOR OF TANK:
FROM THE MINIMUM OPERATING WATER SURFACE TO THE TOP OF THE TANK WALL.
SBR EXTERIOR OF TANK:
18-INCH ENVELOPE EXTENDING 18-INCHES HORIZONTALLY BEYOND THE EXTERIOR TANK OF THE WALLS ON ALL SIDES.
18-INCH ABOVE-GRADE ENVELOPE EXTENDING 10-FT HORIZONTALLY FROM THE EXTERIOR TANK WALLS ON ALL SIDES.

NOTE: SEQUENCING BATCH REACTORS, CLASSIFIED IF PROCESS IS NOT PRECEDED BY PRIMARY SEDIMENTATION.

EQUALIZATION BASIN:
18-INCH ENVELOPE EXTENDING 18-INCHES HORIZONTALLY BEYOND THE EXTERIOR TANK OF THE WALLS ON ALL SIDES.
18-INCH ABOVE-GRADE ENVELOPE EXTENDING 10-FT HORIZONTALLY FROM THE EXTERIOR TANK WALLS ON ALL SIDES.

NOTE: LIQUID TURBULENCE IS NOT INDUCED BY AERATION OR OTHER FACTORS IN THIS APPLICATION.



2 SBR BASIN SECTION HAZARD ZONES
SCALE: 1/4" = 1'-0"

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

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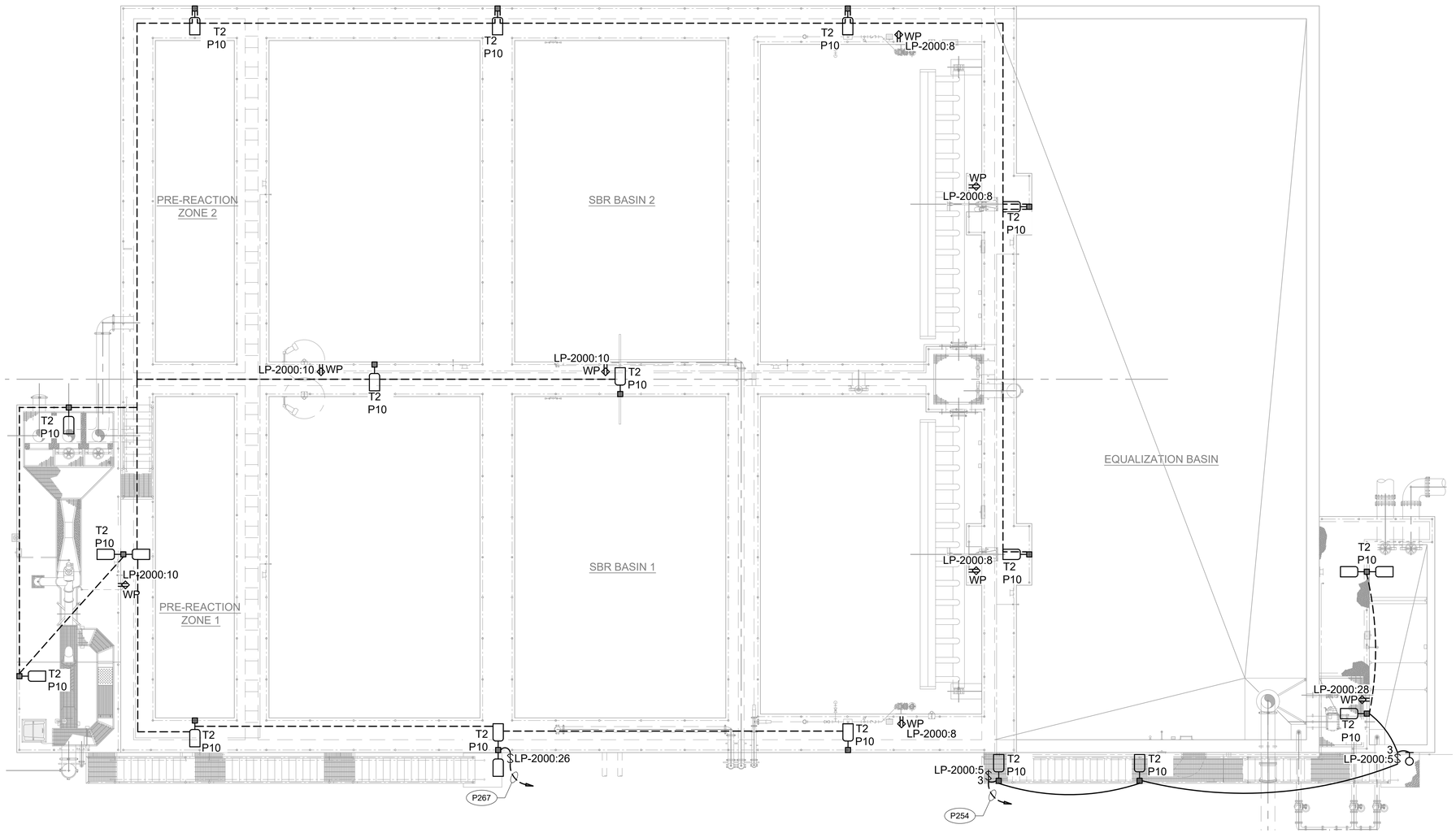
CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS
SBR BASINS HAZARDOUS ZONE PLAN

DRAWING
E211
173 OF 223

JOB NUMBER
2599.3220.0

GENERAL SHEET NOTES

1. CONDUITS SHOWN ON THIS DRAWING SHALL BE CONCEALED BY THE ROUTING SLAB. COORDINATE WITH STRUCTURAL DRAWINGS TO AVOID INTERFERENCE WITH REBAR OR ANY REINFORCING STEEL. FIELD VERIFY CONDUIT LOCATIONS WITH OWNER PRIOR TO CONCRETE PLACEMENT. MAINTAIN A MINIMUM SEPARATION OF TWO (2) CONDUIT DIAMETERS BETWEEN ADJACENT CONDUITS.
2. REFER TO DRAWING E005, DETAIL 101 FOR SWIVEL POLE INSTALLATION ON RAILING. THE T2 LIGHT FIXTURES SHALL BE MOUNTED ON SWIVEL POLE MOUNTED ON THE RAILING.
3. REFER TO DRAWING E005, DETAIL 102 FOR MOUNTING RECEPTACLE ON RAILING.



1 SBR BASIN LIGHTING & RECEPTACLE PLAN
SCALE: 1/8" = 1'-0"

NO.	DATE	DESCRIPTION	BY
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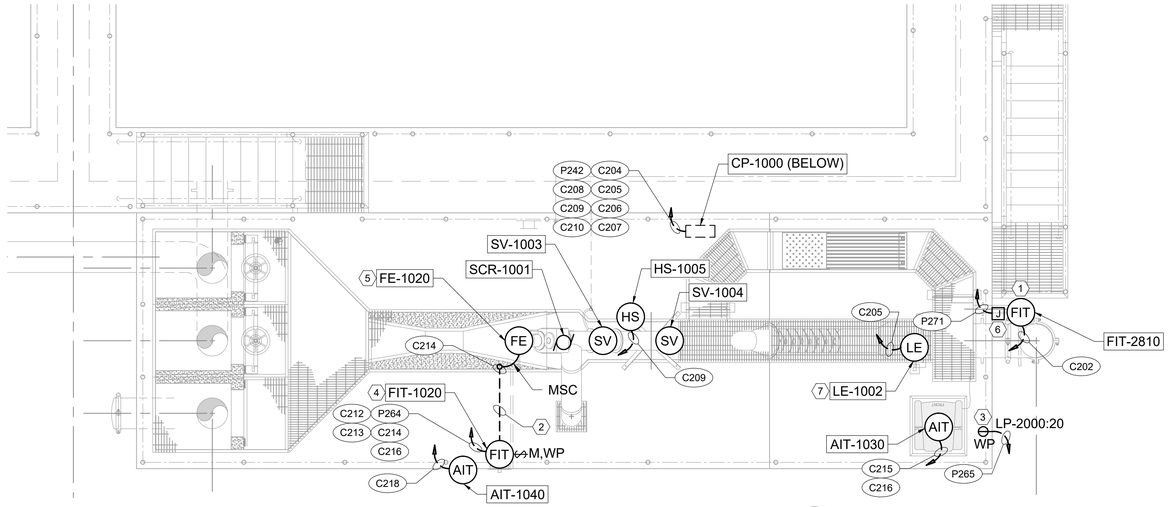
CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

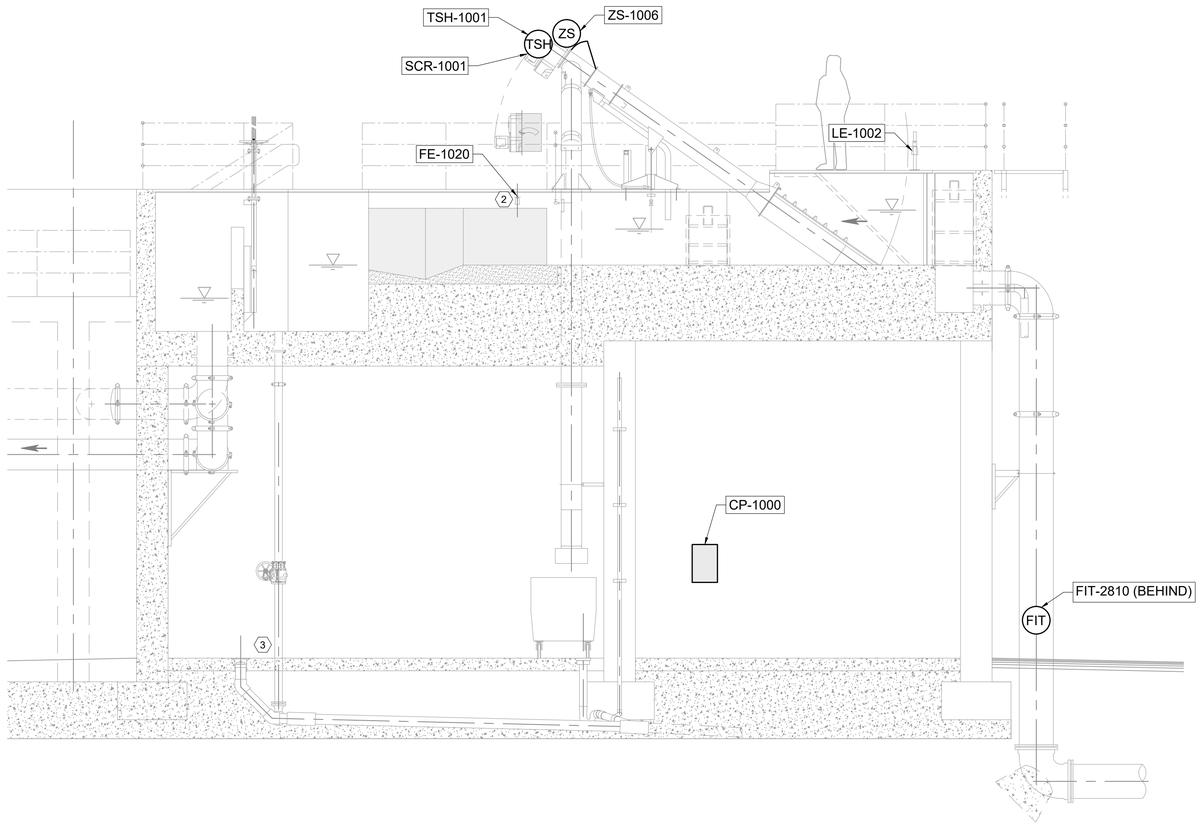
SBR BASIN LIGHTING & RECEPTACLE PLAN

DRAWING
E212
174 OF 223

JOB NUMBER
2599.3220.0



1 HEADWORKS ENLARGED PLAN
SCALE: 1/4" = 1'-0"



2 HEADWORKS SECTION VIEW
SCALE: 1/4" = 1'-0"

GENERAL SHEET NOTES

1. HEADWORKS SCREEN IS A PACKAGED SYSTEM, PER MECHANICAL DRAWINGS. COORDINATE WITH APPROVED HEADWORKS SCREEN SUBMITTALS FOR FINAL LOCATIONS OF INSTRUMENTS OF PACKAGED SYSTEM.

SHEET KEY NOTES

1. APPROXIMATE LOCATION OF FLOWMETER. COORDINATE FINAL LOCATION WITH OWNER.
2. ROUTE CONDUIT THROUGH CONCRETE PER M220, DETAIL6. COORDINATE FINAL LOCATION WITH APPROVED HEADWORKS SCREEN SUBMITTALS AND OWNER PRIOR TO INSTALLATION OF FLOWMETER OR CONDUIT.
3. PROVIDE GFCI RECEPTACLE WITH WP, IN-USE COVER PLATE. MUST BE 20" TO BOTTOM OF RECEPTACLE MINIMUM.
4. PROVIDE INSTRUMENT PANEL WITH VIEWING WINDOW PER E005, DETAIL 502.
5. REFER TO M220, DETAIL 6 FOR INSTALLATION OF TRANSDUCER IN PARSHALL FLUME.
6. PROVIDE HEAT TRACE FOR 4-INCH PLANT WATER PIPING. SEE MECHANICAL DETAILS ON INSULATION. REFER TO SECTION 16128 FOR HEAT TRACE REQUIREMENTS. EXPOSED PIPE LENGTH APPROXIMATELY 10-FT, 4-INCH CL53 DUCTILE IRON.
7. MANUFACTURER SUPPLIED INSTRUMENT. INSTALL PER MANUFACTURERS RECOMMENDATIONS AND APPROVED SUBMITTALS.

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DRN. DRWN
CKD. CHCK
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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

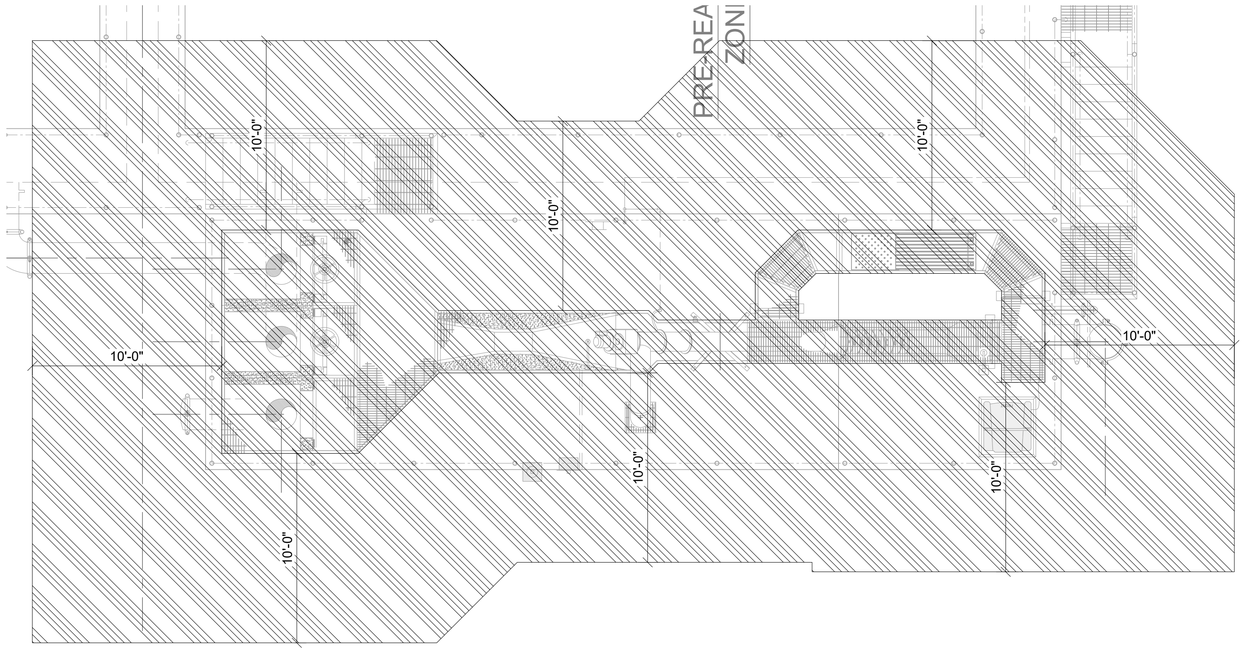
HEADWORKS ENLARGED PLAN

DRAWING
E213
175 OF 223

JOB NUMBER
2599.3220.0

GENERAL SHEET NOTES

1. ANY ELECTRICAL WORK IN HAZARDOUS AREA SHALL MEET NEC ARTICLE 500.

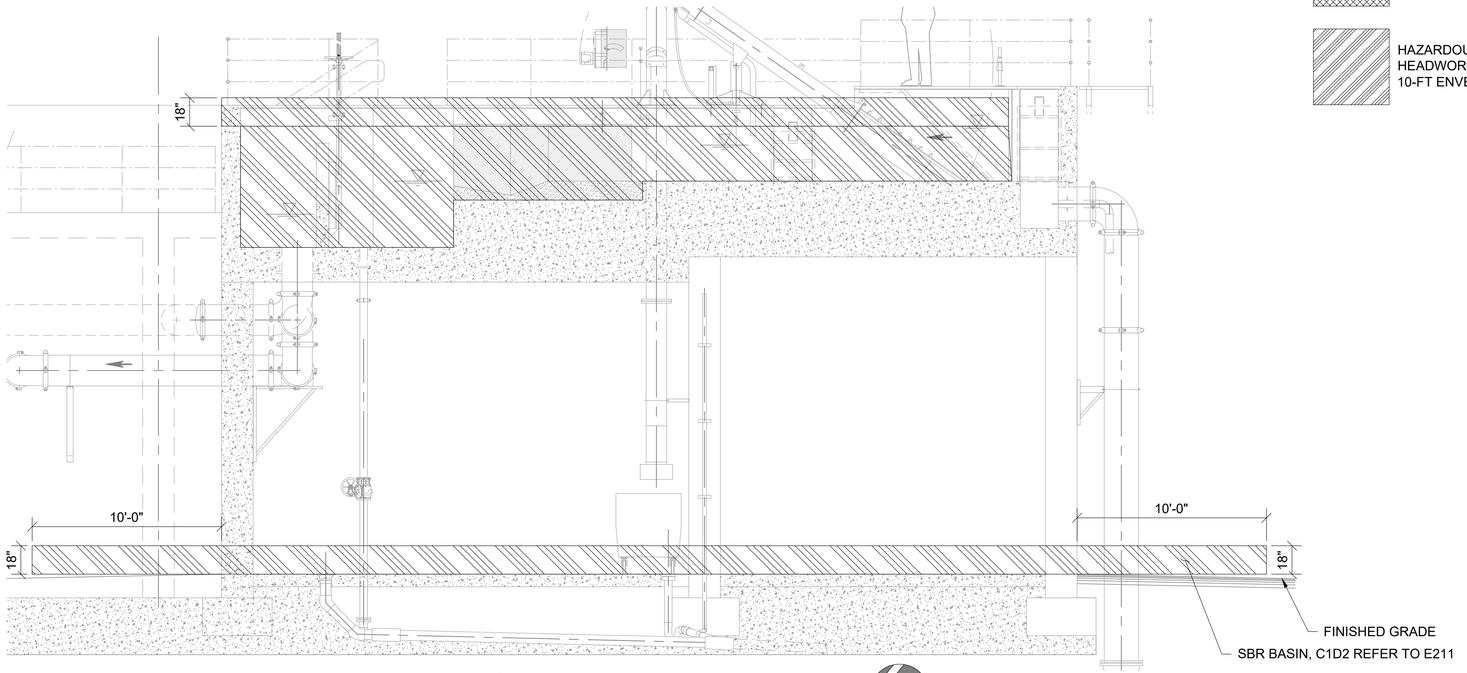


1 HEADWORKS HAZARDOUS ZONE PLAN
SCALE: 1/4" = 1'-0"

CLASSIFICATION LEGEND:

HAZARDOUS CLASSIFICATION CLASS 1 DIVISIONS 1 BOUNDARY. NONE.

HAZARDOUS CLASSIFICATION CLASS 1 DIVISION 2 BOUNDARY.
HEADWORKS (COARSE & FINE SCREEN FACILITY):
10-FT ENVELOPE AROUND EQUIPMENT AND OPEN CHANNEL, 18-INCHES HIGH.



2 HEADWORKS SECTION VIEW
SCALE: 1/4" = 1'-0"

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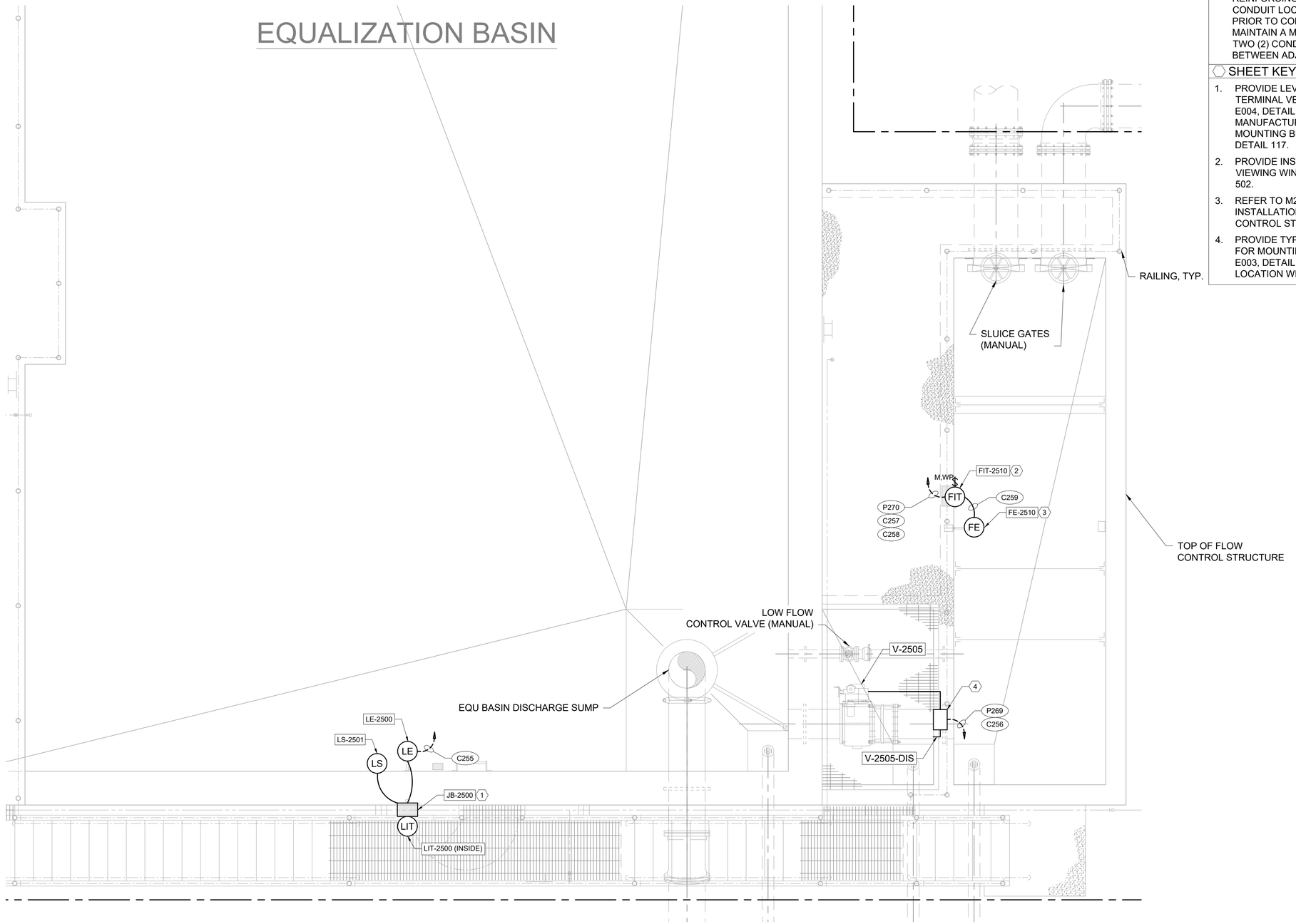
CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

HEADWORKS HAZARDOUS ZONE PLAN

DRAWING
E214
176 OF 223

JOB NUMBER
2599.3220.0

EQUALIZATION BASIN



1 EQ BASIN FLOW CONTROL CHANNEL ELECTRICAL PLAN
SCALE: 3/8" = 1'-0"

GENERAL SHEET NOTES

1. CONDUITS SHOWN ON THIS DRAWING SHALL BE CONCEALED BY THE ROUTING SLAB. COORDINATE WITH STRUCTURAL DRAWINGS TO AVOID INTERFERENCE WITH REBAR OR ANY REINFORCING STEEL. FIELD VERIFY CONDUIT LOCATIONS WITH OWNER PRIOR TO CONCRETE PLACEMENT. MAINTAIN A MINIMUM SEPARATION OF TWO (2) CONDUIT DIAMETERS BETWEEN ADJACENT CONDUITS.

SHEET KEY NOTES

1. PROVIDE LEVEL TRANSMITTER WITH TERMINAL VENT ENCLOSURE PER E004, DETAIL 113. INSTALL THE MANUFACTURER SUPPLIED MOUNTING BRACKET PER E005, DETAIL 117.
2. PROVIDE INSTRUMENT PANEL WITH VIEWING WINDOW PER E005, DETAIL 502.
3. REFER TO M222, DETAIL 9 FOR INSTALLATION OF TRANSDUCER IN CONTROL STRUCTURE.
4. PROVIDE TYPICAL EQUIPMENT STAND FOR MOUNTING DISCONNECT PER E003, DETAIL 103. COORDINATE FINAL LOCATION WITH OWNER.

NO.	DATE	DESCRIPTION	BY
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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

EQ BASIN & FLOW CONTROL CHANNEL ENLARGED PLAN

DRAWING
E215
177 OF 223

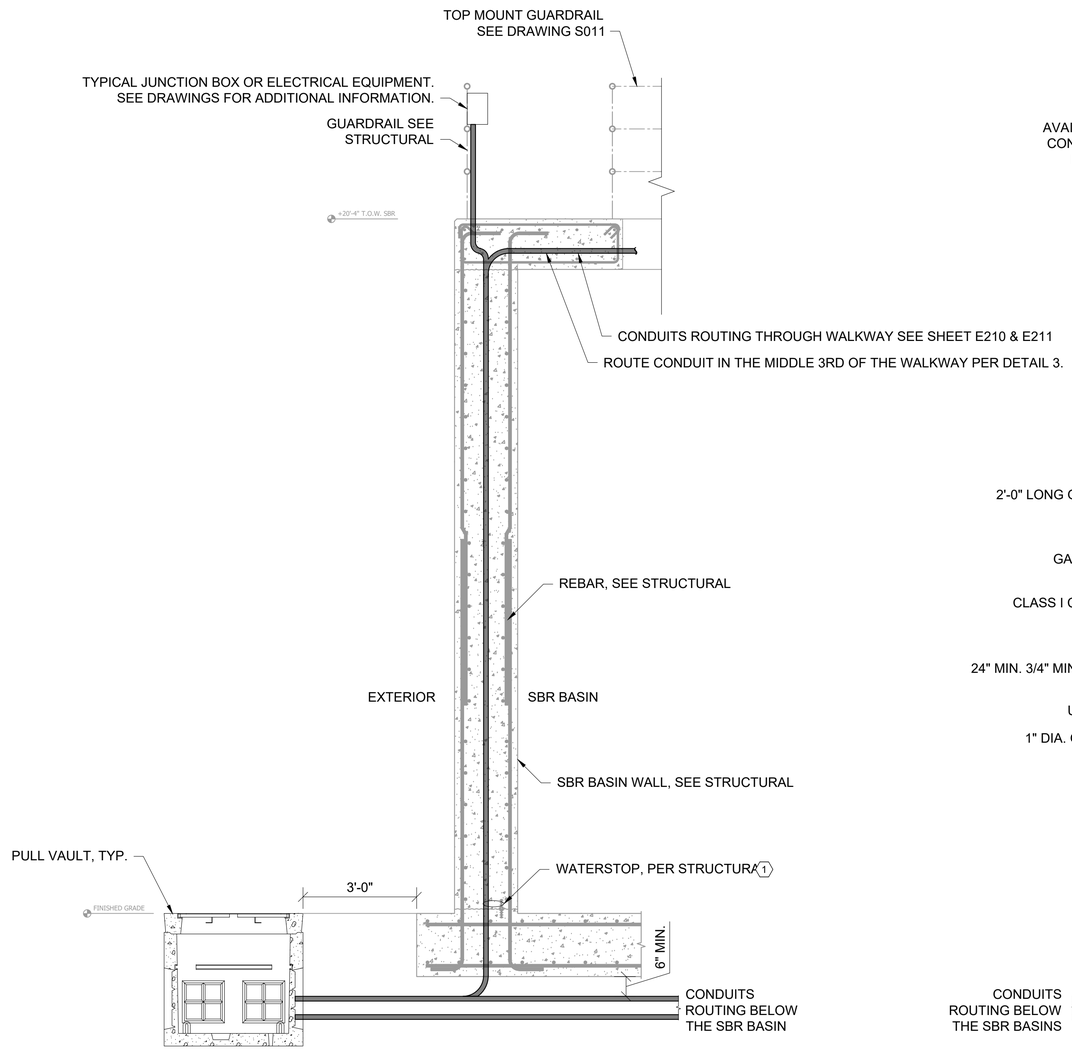
JOB NUMBER
2599.3220.0

GENERAL SHEET NOTES

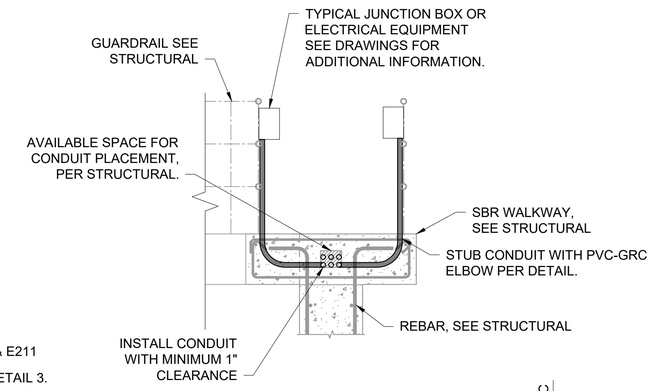
1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH CIVIL, MECHANICAL, STRUCTURAL, AS SPECIFIED IN SECTION 16050.
2. THE CONTRACTOR SHALL COORDINATE THE ROUTING OF CONDUIT THROUGH THE SBR BASIN WITH THE OWNER & STRUCTURAL TEAM PRIOR TO INSTALLATION.
3. THE DETAILS ON THIS DRAWING CLARIFIES ROUTING AVILABLE THROUGH THE CONCRETE OF THE SBR BASIN. THE CONDUITS ARE SHOWN SCHEMATICALLY AND THE CONTRACTOR IS RESPONSIBLE WITH VERIFYING FINAL ROUTING AND COUNT WITH THE CONDUIT/CONDUCTOR SCHEDULE. THE INTENT OF THIS DETAIL IS TO SHOW CONDUIT ROUTING THROUGH THE SBR STRUCTURE WHILE ENSURING THE MAXIMUM NUMBER OF CONDUIT BENDS DOES NOT EXCEED 360.

SHEET KEY NOTES

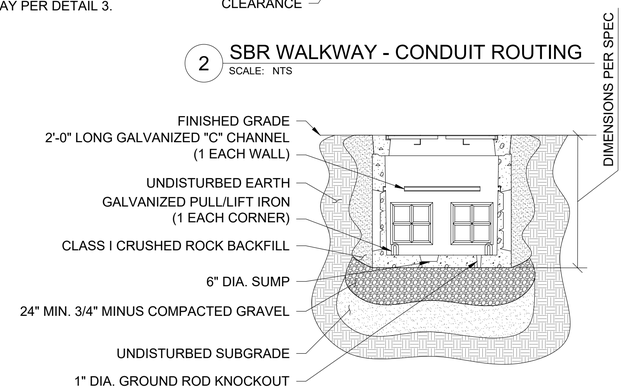
1. SHIFT WATERSTOP AROUND CONDUIT, PROVIDE 3 INCH MINIMUM SEPARATION BETWEEN WATERSTOP AND REBAR AND BETWEEN WATERSTOP AND CONDUIT. CONDUITS SHALL BE SPREAD OUT LATERALLY WITHIN THE CONCRETE TO MAINTAIN THE SEPARATION. COORDINATE WITH STRUCTURAL ENGINEER PRIOR TO CONCRETE POUR. REFERENCE STRUCTURAL DRAWINGS.



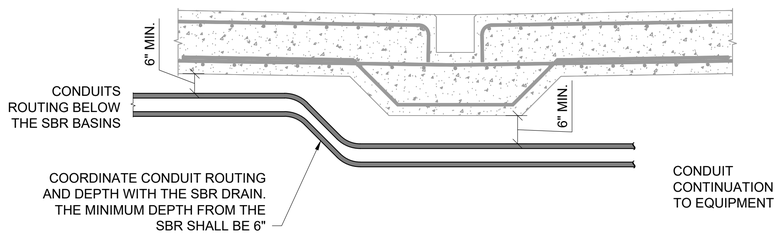
1 SBR WALL SECTION - CONDUIT ROUTING
SCALE: NTS



2 SBR WALKWAY - CONDUIT ROUTING
SCALE: NTS



3 POWER / CONTROL VAULT DETAIL
SCALE: NTS



4 SBR DRAIN - CONDUIT ROUTING
SCALE: NTS

NO.	DATE	DESCRIPTION	BY
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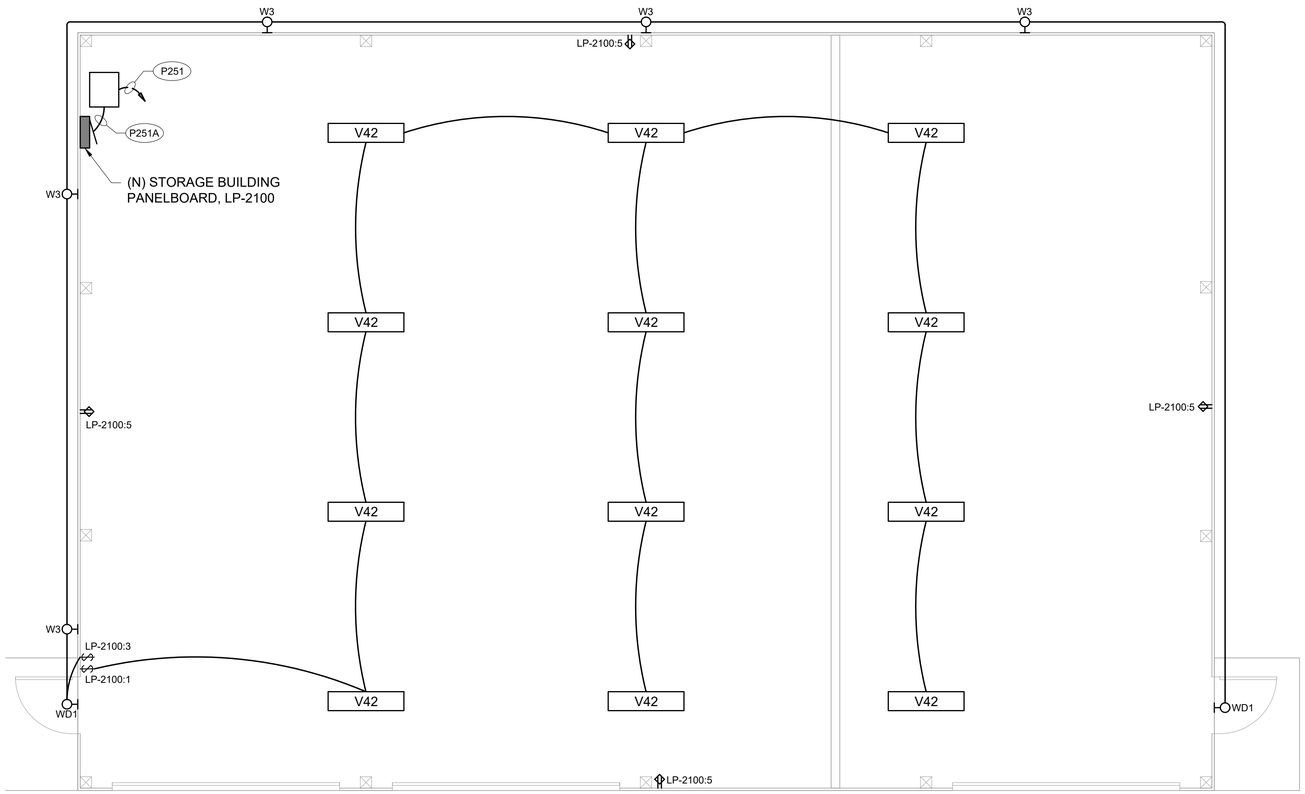
CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

SBR CONDUIT ROUTING

DRAWING
E216
178 OF 223

JOB NUMBER
2599.3220.0



1 STORAGE BUILDING LIGHTING & RECEPTACLE PLAN
SCALE: 1/4" = 1'-0"

VERIFY SCALE
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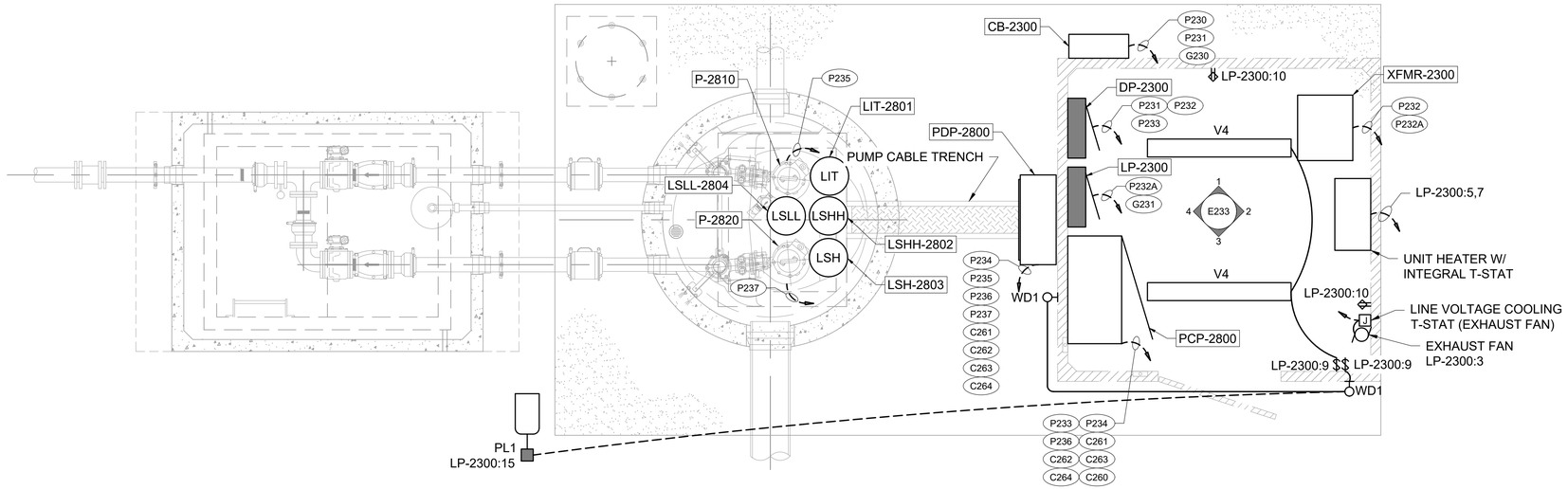
CITY OF AUMSVILLE, OREGON

WASTEWATER TREATMENT PLANT IMPROVEMENTS

STORAGE BUILDING LIGHTING & RECEPTACLE PLAN

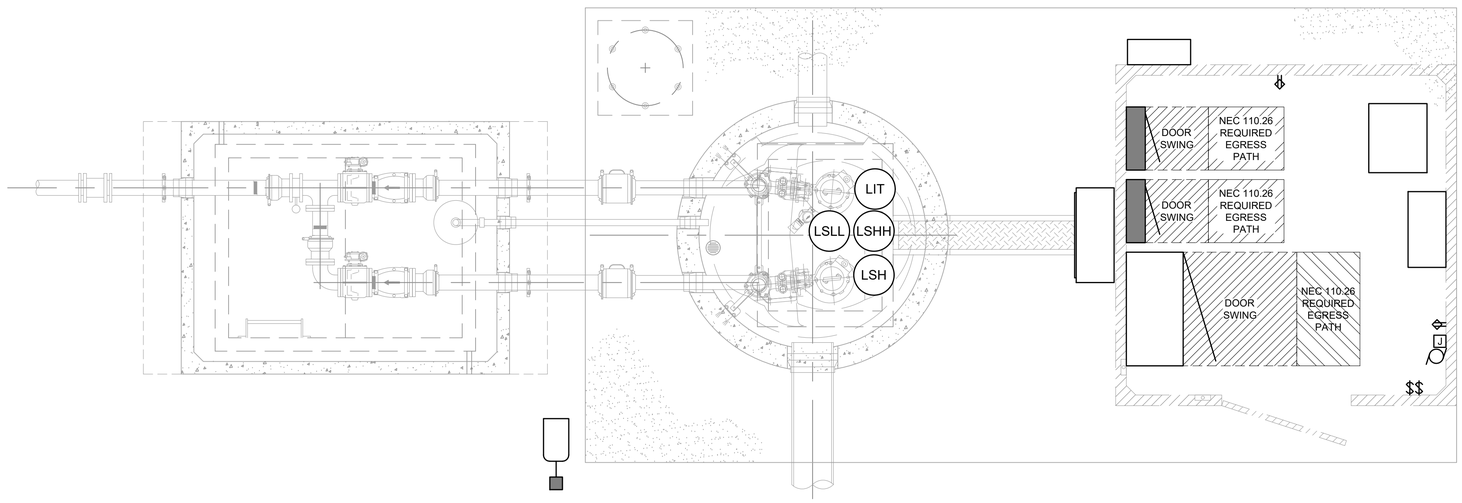
DRAWING
E220
179 OF 223

JOB NUMBER
2599.3220.0



1 PLANT PUMP STATION

SCALE: 1/2" = 1'-0"



2 CLEARANCE PLAN PLANT PUMP STATION

SCALE: 1/2" = 1'-0"

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

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CKD. CHCK
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MAY 08, 2012
BENJAMIN E. PERRY
EXPIRES: 12-31-2026

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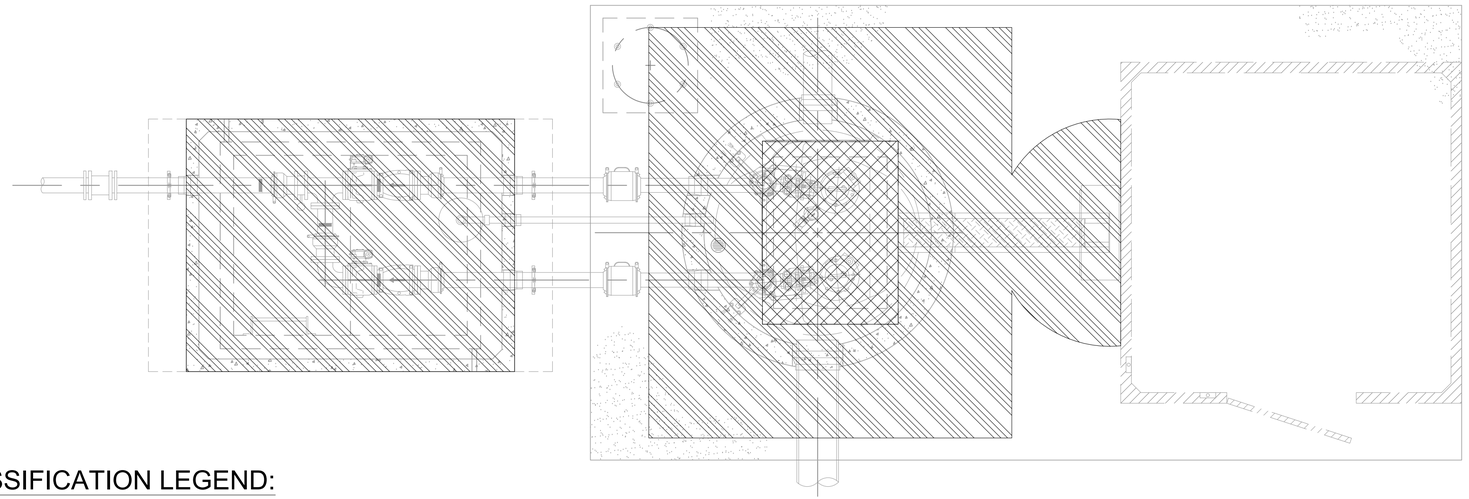
CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

PLANT PUMP STATION

DRAWING
E230
180 OF 223

JOB NUMBER
2599.3220.0



1 PLANT PUMP STATION HAZARDOUS LOCATION
SCALE: 1/2" = 1'-0"

CLASSIFICATION LEGEND:

HAZARDOUS CLASSIFICATION CLASS 1 DIVISIONS 1 BOUNDARY. INSIDE WET WELL.

HAZARDOUS CLASSIFICATION CLASS 1 DIVISION 2 BOUNDARY. INSIDE VALVE VAULT & METER VAULT. WET WELL OPENING: INCLUDES 3'-0" ENVELOP BEYOND WET WELL HATCH AND VERTICALLY 1'-6", AND 3'-0" RADIUS AROUND OPENING OF THE CABLE TRENCH BENEATH PDP.

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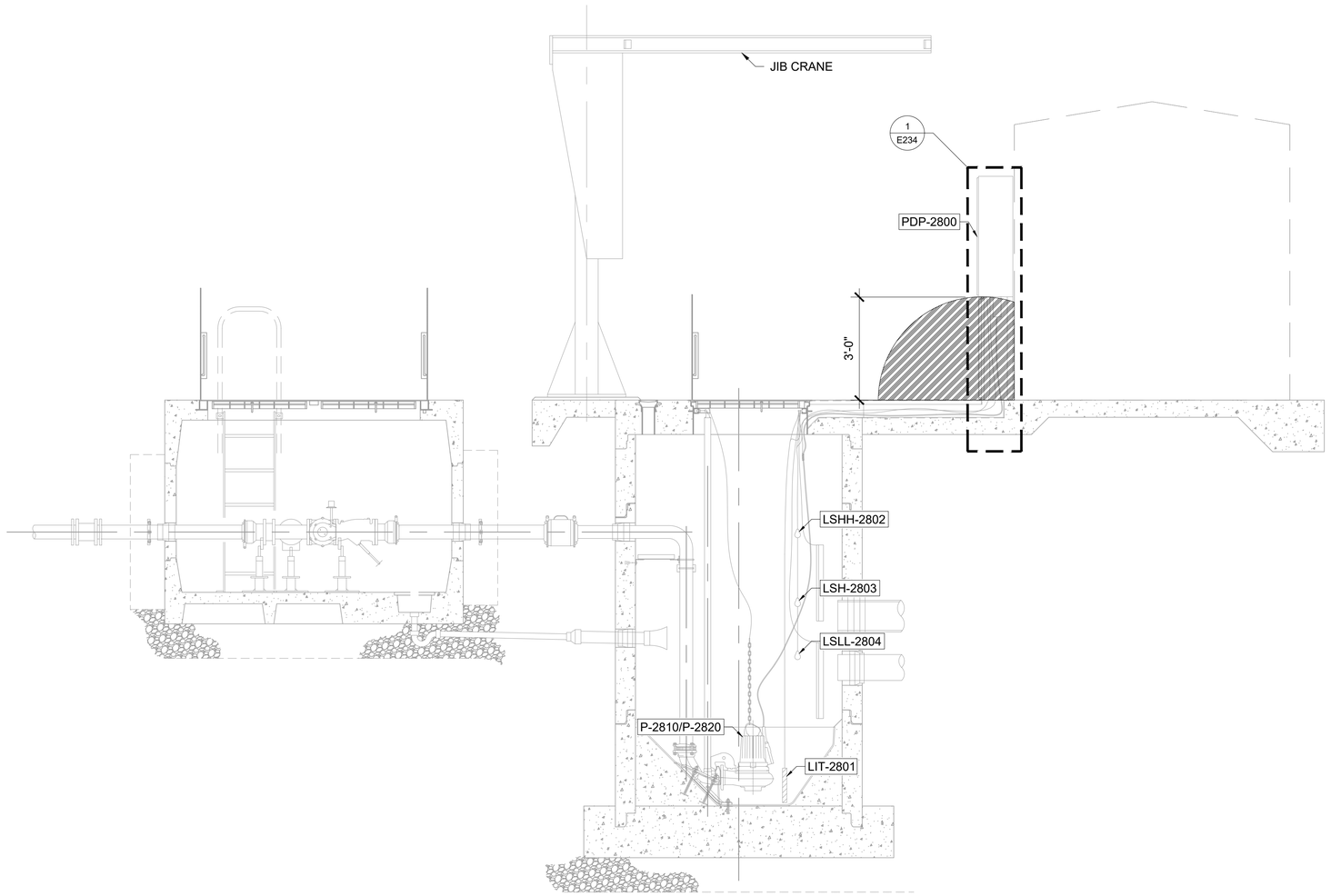
CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS
PLANT PUMP STATION HAZARDOUS LOCATION

DRAWING
E231
181 OF 223

JOB NUMBER
2599.3220.0



1 PLANT PUMP STATION SECTION PLAN
SCALE: 1/2" = 1'-0"

CLASSIFICATION LEGEND:

HAZARDOUS CLASSIFICATION CLASS 1 DIVISION 2 BOUNDARY.
INSIDE VALVE VAULT & METER VAULT. WET WELL OPENING: INCLUDES 3'-0" ENVELOP BEYOND WET WELL HATCH AND VERTICALLY 1'-6", AND 3'-0" RADIUS AROUND OPENING OF THE CABLE TRENCH BENEATH PDP.

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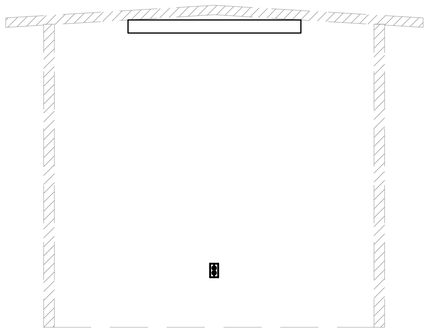
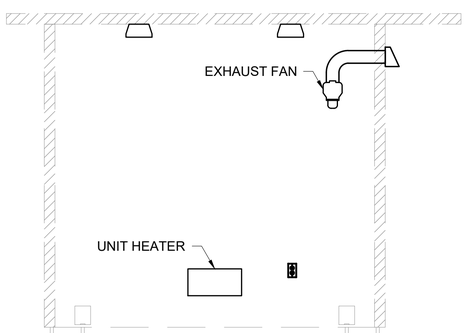
CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS
PLANT PUMP STATION SECTION PLAN

DRAWING
E232
182 OF 223

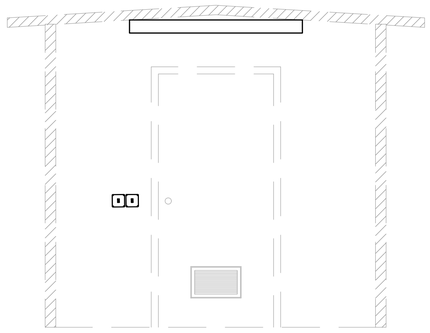
JOB NUMBER
2599.3220.0



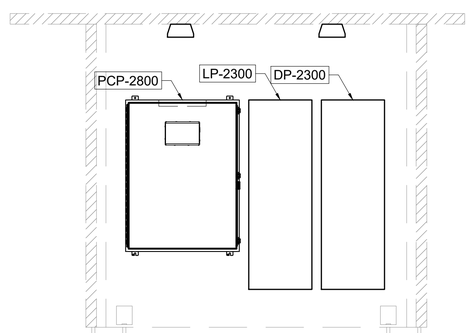
1 PLANT PUMP ELEVATION PLAN
SCALE: 1/2" = 1'-0"



2 PLANT PUMP ELEVATION PLAN
SCALE: 1/2" = 1'-0"



3 PLANT PUMP ELEVATION PLAN
SCALE: 1/2" = 1'-0"



4 PLANT PUMP ELEVATION PLAN
SCALE: 1/2" = 1'-0"

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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

PLANT PUMP ELEVATION PLAN

DRAWING
E233
183 OF 223

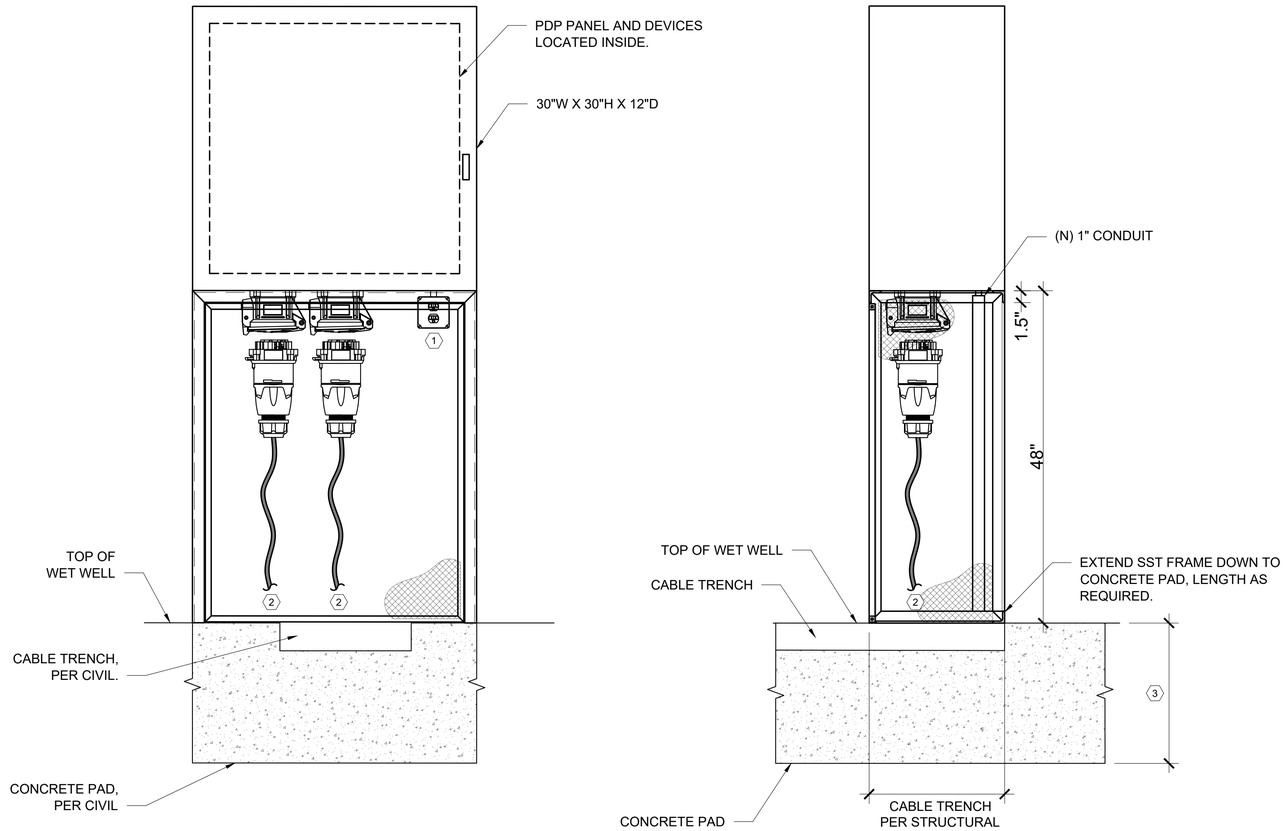
JOB NUMBER
2599.3220.0

GENERAL SHEET NOTES

1. THE DISCONNECT PANEL STAND SHALL BE A DELEGATED DESIGN BUILD BY THE CONTRACTOR. REFER TO SECTION 16410.
2. THE PUMP DISCONNECT PANEL MOUNTED ON TOP IS OWNER FURNISHED, CONTRACTOR INSTALLED BY THE SYSTEM INTEGRATOR (OSI). CONTRACTOR SHALL COORDINATE DELIVERY WITH THE OSI.

SHEET KEY NOTES

1. CONVENIENCE RECEPTACLE WITH WP COVER. THE RECEPTACLE SHALL BE MOUNTED DIRECTLY BELOW THE PUMP DISCONNECT PANEL (PDP) VIA A CLOSE NIPPLE. THE DEVICE BOX AND COVER SHALL BE PVC COATED GRC TYP. THE RECEPTACLE COVER SHALL BE IN-USE TYPE.
2. CABLES ROUTE TO WET WELL VIA CABLE TRENCH.
3. DIMENSIONS PER CIVIL / MECHANICAL.



1 PUMP DISCONNECT PANEL ELEVATION DETAIL
SCALE: NTS

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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

PLANT PUMP STATION PDP ELEVATION

DRAWING
E234
184 OF 223

JOB NUMBER
2599.3220.0

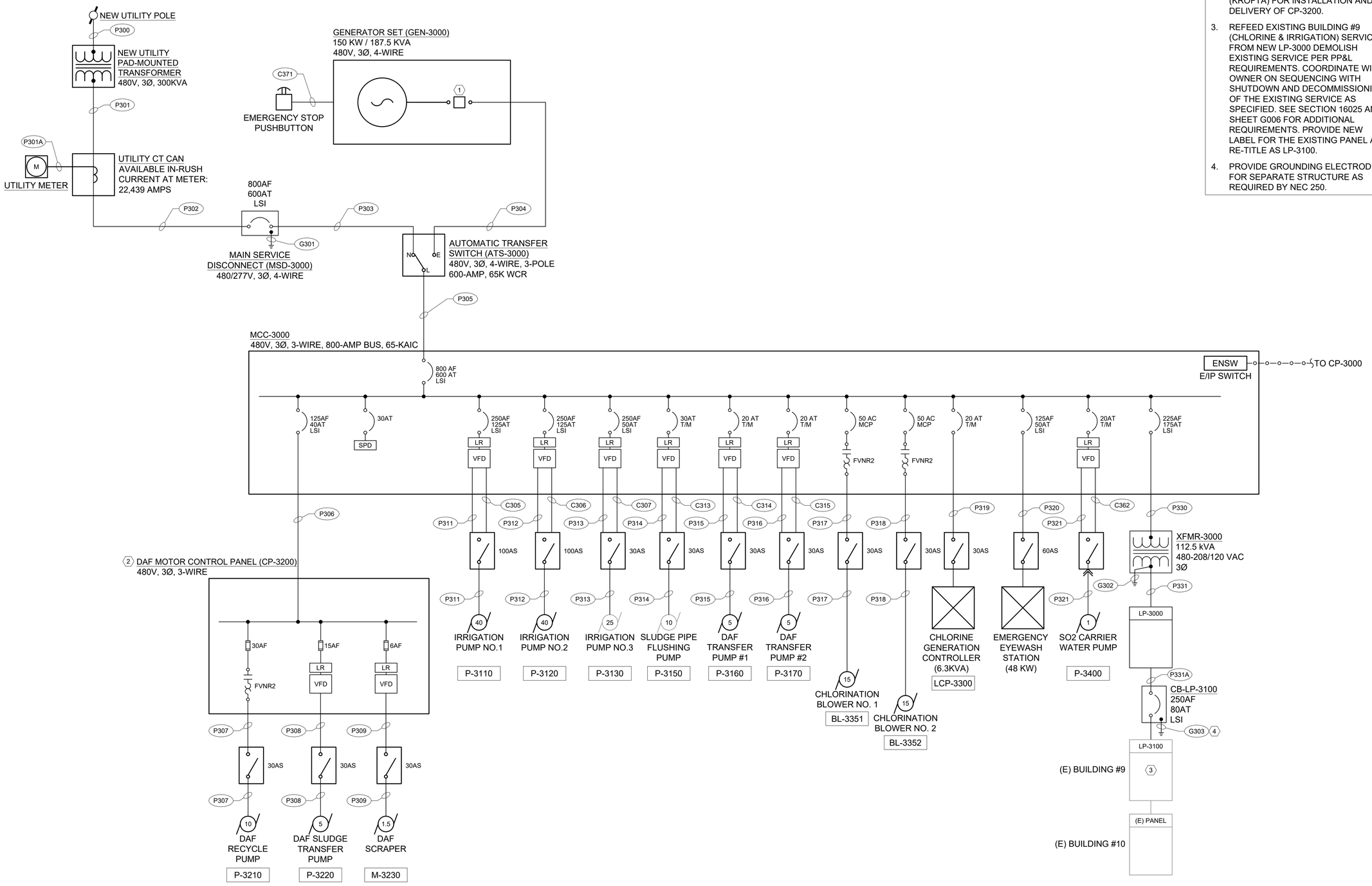
DAF CLARIFIER GROUNDING CONDUIT / CONDUCTOR SCHEDULE

CONDUIT ID NO.	CONDUIT		CONDUCTORS PER CONDUIT					FROM	TO	DESCRIPTION	NOTES
	QUANTITY	SIZE	UNGROUNDED	GROUNDED	GROUNDING	CABLE	SPARE				
G301	1	1.0 INCH	-	-	1 - #2/0	-	-	MSD-3000	GROUNDING ELECTRODE SYSTEM	ROUTE IN PVC, SCHEDULE 40.	-
G302	1	1.0 INCH	-	-	1 - #2	-	-	XFMR-3000	GROUNDING ELECTRODE SYSTEM	ROUTE IN PVC, SCHEDULE 40.	-
G303	1	0.75 INCH	-	-	1 - #8	-	-	CB-LP-3000	GROUNDING ELECTRODE SYSTEM	ROUTE IN PVC, SCHEDULE 40.	-

NOTES:

SHEET KEY NOTES

1. AMP SENTRY RELAY. SET OVERCURRENT DEVICE TO 300-AMPS.
2. CP-3200 IS FURNISHED BY THE DAF CLARIFIER SYSTEM SUPPLIER. CONTRACTOR SHALL COORDINATE WITH THE OWNER AND DAF CLARIFIER SYSTEM SUPPLIER (KROFTA) FOR INSTALLATION AND DELIVERY OF CP-3200.
3. REFEED EXISTING BUILDING #9 (CHLORINE & IRRIGATION) SERVICE FROM NEW LP-3000 DEMOLISH EXISTING SERVICE PER PP&L REQUIREMENTS. COORDINATE WITH OWNER ON SEQUENCING WITH SHUTDOWN AND DECOMMISSIONING OF THE EXISTING SERVICE AS SPECIFIED. SEE SECTION 16025 AND SHEET G006 FOR ADDITIONAL REQUIREMENTS. PROVIDE NEW LABEL FOR THE EXISTING PANEL AND RE-TITLE AS LP-3100.
4. PROVIDE GROUNDING ELECTRODE FOR SEPARATE STRUCTURE AS REQUIRED BY NEC 250.



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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

DAF BUILDING ONE-LINE DIAGRAM

DRAWING
E300
185 OF 223

JOB NUMBER
2599.3220.0

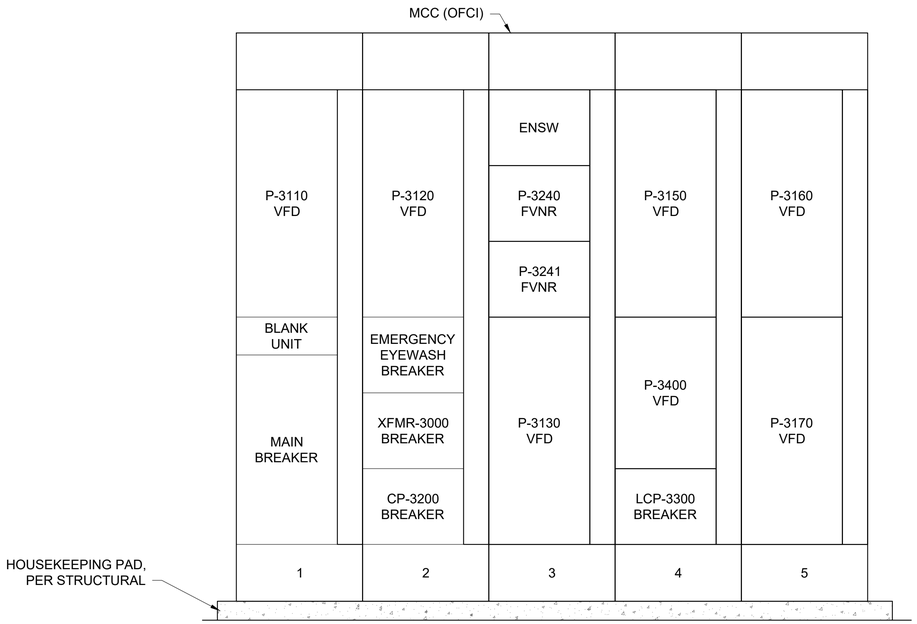
GENERAL SHEET NOTES

1. MCC-3000 IS FURNISHED BY THE OWNER'S SYSTEM INTEGRATOR, CONTRACTOR INSTALLED. COORDINATE WITH THE OWNER FOR INSTALLATION AND DELIVERY OF THE MCC.

DAF BUILDING LOAD CALCULATIONS

DESCRIPTION	LOAD TYPE	VOLTAGE	PHASE	XFMR KVA	MCA	HP	KW	AMPS	DEMAND FACTOR	CONNECTED LOAD (KW)	DEMAND LOAD (KW)
MCC-3000											
DAF MOTOR CONTROL PANEL (CP-3200)	Equipment	480	3	-	-	-	-	-	-	20.5 KW	20.5 KW
IRRIGATION PUMP NO. 1	Largest Motor, Pump, Fan	480	3	-	-	40	-	-	-	43.2 KW	54.0 KW
IRRIGATION PUMP NO. 2	Motor, Pump, Fan	480	3	-	-	40	-	-	-	43.2 KW	43.2 KW
IRRGATION PUMP NO. 3	Motor, Pump, Fan	480	3	-	-	25	-	-	-	28.2 KW	28.2 KW
SLUDGE PIPE FLUSHING PUMP	Motor, Pump, Fan	480	3	-	-	10	-	-	-	11.6 KW	11.6 KW
DAF TRANSFER PUMP #1	Motor, Pump, Fan	480	3	-	-	5	-	-	-	6.3 KW	6.3 KW
DAF TRANSFER PUMP #2	Motor, Pump, Fan	480	3	-	-	5	-	-	-	6.3 KW	6.3 KW
CHLORINATION BLOWER NO. 1	Motor, Pump, Fan	480	3	-	-	15	-	-	-	17.5 KW	17.5 KW
CHLORINATION BLOWER NO. 2	Motor, Pump, Fan	480	3	-	-	15	-	-	-	17.5 KW	17.5 KW
CHLORINE GENERATION CONTROLLER	Equipment	480	3	-	-	-	6.3	-	-	6.3 KW	6.3 KW
EMERGENCY EYEWASH STATION	Equipment	480	3	-	-	-	48	-	-	48.0 KW	48.0 KW
SO2 CARRIER WATER PUMP	Motor, Pump, Fan	480	3	-	-	1	-	-	-	1.7 KW	1.7 KW
XMFR-3000 (LP-3000, 120VAC)	Transformer	-	-	112.5	-	-	-	-	-	112.5 KW	112.5 KW
FUTURE LOADS [NOTE 1]	Equipment	480	3	-	-	-	-	100	-	83.1 KW	83.1 KW
									TOTALS (KW):	446.0 KW	456.8 KW
									TOTALS (A):	536.5 A	549.5 A

NOTES:
[1] FUTURE LOADS ACCOUNT FOR APPROXIMATELY 25% SPARE CAPACITY (~83-AMPS), AS WELL AS FUTURE SBR EXPANSION.



1 DAF MCC ELEVATION
SCALE: NTS

REVISIONS

NO.	DATE	DESCRIPTION	BY

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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

DAF MCC ELEVATION

DRAWING
E301
186 OF 223

JOB NUMBER
2599.3220.0

DAF POWER CONDUIT / CONDUCTOR SCHEDULE

CONDUIT ID NO.	CONDUIT		CONDUCTORS PER CONDUIT					FROM	TO	DESCRIPTION	NOTES
	QUANTITY	SIZE	UNGROUNDED	GROUNDED	GROUNDING	CABLE	SPARE				
P300	1	6.0 INCH	-	-	-	-	-	EXISTING UTILITY POLE #244101	NEW UTILITY PAD-MOUNTED TRANSFORMER	INSTALL CONDUIT PER PP&L REQUIREMENTS.	1
P301	3	4.0 INCH	-	-	-	-	-	NEW UTILITY PAD-MOUNTED TRANSFORMER	UTILITY CT CAN	INSTALL CONDUIT PER PP&L REQUIREMENTS.	1
P301A	1	1.25 INCH	-	-	-	-	-	UTILITY CT CAN	UTILITY METER	INSTALL CONDUIT PER PP&L REQUIREMENTS.	1
P302	4	3.0 INCH	3 - #250	1 - #250	-	-	-	UTILITY CT CAN	MAIN SERVICE DISCONNECT (MSD-3000)	-	-
P303	3	2.5 INCH	3 - #3/0	1 - #3/0	1 - #1	-	-	MAIN SERVICE DISCONNECT (MSD-3000)	AUTOMATIC TRANSFER SWITCH (ATS-3000)	-	-
P304	3	2.5 INCH	3 - #3/0	-	1 - #1	-	-	AUTOMATIC TRANSFER SWITCH (ATS-3000)	GENERATOR SET (GEN-3000)	-	-
P305	3	2.5 INCH	3 - #3/0	-	1 - #1	-	-	AUTOMATIC TRANSFER SWITCH (ATS-3000)	MCC-3000	-	-
P306	1	1.0 INCH	3 - #8	-	1 - #10	-	-	MCC-3000	DAF MOTOR CONTROL PANEL (CP-3200)	-	-
P307	1	0.75 INCH	3 - #10	-	1 - #10	-	-	DAF MOTOR CONTROL PANEL (CP-3200)	DAF RECYCLE PUMP P-3210	VIA DISCONNECT SWITCH	-
P308	1	0.75 INCH	3 - #12	-	1 - #12	-	-	DAF MOTOR CONTROL PANEL (CP-3200)	DAF SLUDGE TRANSFER PUMP P-3220	VIA DISCONNECT SWITCH	-
P309	1	0.75 INCH	3 - #12	-	1 - #12	-	-	DAF MOTOR CONTROL PANEL (CP-3200)	DAF SCRAPER M-3230	VIA DISCONNECT SWITCH	-
P311	1	1.5 INCH	3 - #6	-	3 - #12	VFD	-	MCC-3000	IRRIGATION PUMP NO. 1 P-3110	PROVIDE VFD CABLE (16121.V01), ROUTE VIA DISCONNECT SWITCH	-
P312	1	1.5 INCH	3 - #6	-	3 - #12	VFD	-	MCC-3000	IRRIGATION PUMP NO. 2 P-3120	PROVIDE VFD CABLE (16121.V01), ROUTE VIA DISCONNECT SWITCH	-
P313	1	1.5 INCH	3 - #6	-	3 - #12	VFD	-	MCC-3000	IRRIGATION PUMP NO. 3 P-3130	PROVIDE VFD CABLE (16121.V01), ROUTE VIA DISCONNECT SWITCH	-
P314	1	0.75 INCH	3 - #12	-	1 - #10	-	-	MCC-3000	SLUDGE FLUSHING PUMP P-3150	VIA DISCONNECT SWITCH	-
P315	1	0.75 INCH	3 - #12	-	1 - #12	-	-	MCC-3000	DAF TRANSFER PUMP NO. 1 P-3160	VIA DISCONNECT SWITCH	-
P316	1	0.75 INCH	3 - #12	-	1 - #12	-	-	MCC-3000	DAF TRANSFER PUMP NO. 2 P-3170	VIA DISCONNECT SWITCH	-
P317	1	0.75 INCH	3 - #10	-	1 - #10	-	-	MCC-3000	CHLORINATION BLOWER NO. 1 (BL-3351)	VIA DISCONNECT SWITCH	-
P318	1	0.75 INCH	3 - #10	-	1 - #10	-	-	MCC-3000	CHLORINATION BLOWER NO. 2 (BL-3352)	VIA DISCONNECT SWITCH	-
P319	1	0.75 INCH	3 - #12	-	1 - #12	-	-	MCC-3000	CHLORINE GENERATION CONTROLLER (LCP-3300)	VIA DISCONNECT SWITCH	-
P320	1	1.25 INCH	3 - #6	-	1 - #10	-	-	MCC-3000	EMERGENCY EYEWASH STATION	VIA DISCONNECT SWITCH	-
P321	1	0.75 INCH	3 - #12	-	1 - #12	-	-	MCC-3000	SO2 CARRIER WATER PUMP (P-3400)	VIA DISCONNECT SWITCH	3, 4
P330	1	2.5 INCH	3 - #3/0	-	1 - #6	-	-	MCC-3000	XMFR-3000	-	-
P331	2	2.5 INCH	3 - #2/0	1 - #2/0	1 - #2	-	-	XMFR-3000	LP-3000	-	-
P331A	1	1.25 INCH	2 - #4	1 - #4	1 - #10	-	-	LP-3000	LP-3100	-	-
P332	1	0.75 INCH	1 - #12	1 - #12	1 - #12	-	-	LP-3000	EFFLUENT TURBIDIMETER (AIT-3240)	CIRCUIT #15	-
P333	1	0.75 INCH	1 - #12	1 - #12	1 - #12	-	-	LP-3000	SALT TANK LEVEL (LIT-3311)	CIRCUIT #17	-
P334	1	0.75 INCH	1 - #12	1 - #12	1 - #12	-	-	LP-3000	CHLORINE GAS SENSOR (AIT-3340)	CIRCUIT #19	-
P335	1	0.75 INCH	1 - #12	1 - #12	1 - #12	-	-	LP-3000	NACLO STORAGE TANK LEVEL (LIT-3361)	CIRCUIT #20	-
P336	1	1.0 INCH	1 - #12 2 - #12	1 - #12	1 - #12	-	-	LP-3000	GENERATOR SET (GEN-3000)	GENERATOR BLOCK HEATER & BATTERY CHARGER CIRCUITS #22 & #32,34	-
P337	1	0.75 INCH	1 - #10	1 - #10	1 - #10	-	-	LP-3000	EFFLUENT FLOWMETER (FIT-3401)	CIRCUIT #21	5, 6
P338	1	0.75 INCH	1 - #10	1 - #10	1 - #10	-	-	LP-3000	DRAIN PUMP (P-3410)	CIRCUIT #27	5
P339	1	0.75 INCH	1 - #10	1 - #10	1 - #10	-	-	LP-3000	EFFLUENT SAMPLER (AIT-3600)	CIRCUIT #25	5
P340	1	0.75 INCH	2 - #10	-	1 - #10	-	-	LP-3000	BEAVER CREEK BRIDGE SLUDGE PIPE HEAT TAPE	CIRCUIT #24,26	5
P341	1	0.75 INCH	1 - #12	1 - #12	1 - #12	-	-	LP-3000	DAF INTERIOR LUMINAIRES	CIRCUIT #1	-
P342	1	0.75 INCH	1 - #12	1 - #12	1 - #12	-	-	LP-3000	DAF EXTERIOR LUMINAIRES	CIRCUIT #3	-
P343	1	0.75 INCH	2 - #8	-	1 - #10	-	-	LP-3000	UNIT HEATER (UH-1)	CIRCUIT #5, 7	-
P344	1	0.75 INCH	2 - #8	-	1 - #10	-	-	LP-3000	UNIT HEATER (UH-2)	CIRCUIT #9, 11	-
P345	1	0.75 INCH	1 - #12	1 - #12	1 - #12	-	-	LP-3000	EXHAUST FAN (EF-1)	CIRCUIT #13	-
P346	1	0.75 INCH	1 - #12	1 - #12	1 - #12	-	-	LP-3000	DAF RECEPTACLES	CIRCUIT #2	-
P347	1	0.75 INCH	1 - #12	1 - #12	1 - #12	-	-	LP-3000	DAF RECEPTACLES	CIRCUIT #37	-
P348	1	0.75 INCH	2 - #8	-	1 - #12	-	-	LP-3000	UNIT HEATER (UH-3)	CIRCUIT #6, 8	-
P349	1	0.75 INCH	2 - #8	-	1 - #12	-	-	LP-3000	UNIT HEATER (UH-4)	CIRCUIT #10, 12	-
P350	1	0.75 INCH	2 - #12	-	1 - #12	-	-	LP-3000	AIR CONDITIONING UNIT (OAC-1)	CIRCUIT #14, 16	-
P351	1	0.75 INCH	1 - #12	1 - #12	1 - #12	-	-	LP-3000	CHLORINE METERING PUMP #1, P-3371	CIRCUIT #28	-
P352	1	0.75 INCH	1 - #12	1 - #12	1 - #12	-	-	LP-3000	DAF BUILDING MAIN PLC (CP-3000)	CIRCUIT #31	-
P353	1	0.75 INCH	1 - #8	1 - #8	1 - #10	-	-	LP-3000	DAF CLARIFIER SYSTEM PLC (CP-3205)	CIRCUIT #33	-
P354	1	0.75 INCH	3 - #8	-	1 - #10	-	-	LP-3000	DAF SYSTEM COMPRESSOR #1 (CMP-3240)	CIRCUIT #36, 38, 40	-
P355	1	0.75 INCH	3 - #8	-	1 - #10	-	-	LP-3000	DAF SYSTEM COMPRESSOR #2 (CMP-3241)	CIRCUIT #39, 41, 43	-
P356	1	0.75 INCH	1 - #12	1 - #12	1 - #12	-	-	LP-3000	ROLL UP DOOR (EAST)	CIRCUIT #4	-
P357	1	0.75 INCH	1 - #12	1 - #12	1 - #12	-	-	LP-3000	ROLL UP DOOR (SOUTH)	CIRCUIT #23	-
P358	1	0.75 INCH	1 - #12	1 - #12	1 - #12	-	-	LP-3000	CHLORINE METERING PUMP #2, P-3372	CIRCUIT #29	-
P359	1	0.75 INCH	1 - #12	1 - #12	1 - #12	-	-	LP-3000	CHLORINE METERING PUMP #3, P-3373	CIRCUIT #30	-
P360	1	0.75 INCH	1 - #12	1 - #12	1 - #12	-	-	CP-3205	POLYMER FEED PUMP #1 (P-3250)	VIA RECEPTACLE	-
P361	1	0.75 INCH	1 - #12	1 - #12	1 - #12	-	-	CP-3205	POLYMER FEED PUMP #2 (P-3260)	VIA RECEPTACLE	-
P362	1	0.75 INCH	1 - #12	1 - #12	1 - #12	-	-	CP-3205	COAGULANT FEED PUMP #1 (P-3270)	VIA RECEPTACLE	-
P363	1	0.75 INCH	1 - #12	1 - #12	1 - #12	-	-	CP-3205	COAGULANT FEED PUMP #2 (P-3280)	VIA RECEPTACLE	-
P364	1	0.75 INCH	1 - #12	1 - #12	1 - #12	-	-	LP-3000	DAF SYSTEM COMPRESSOR #1 DRAIN VALVE	CIRCUIT #45	-
P365	1	0.75 INCH	1 - #12	1 - #12	1 - #12	-	-	LP-3000	DAF SYSTEM COMPRESSOR #2 DRAIN VALVE	CIRCUIT #46	-
P380	1	1.5 INCH	-	-	-	-	-	MCC-3000	EXISTING IRRIGATION CHLORINE BUILDING	SPARE CONDUIT	7
P381	1	1.5 INCH	-	-	-	-	-	LP-3000	EXISTING IRRIGATION CHLORINE BUILDING	SPARE CONDUIT	7
P382	1	1.5 INCH	-	-	-	-	-	LP-3000	EXISTING DE-CHLORINATION BUILDING	SPARE CONDUIT	7

NOTES:
[1] CONTRACTOR SHALL COORDINATE WITH THE ELECTRIC UTILITY (PP&L) FOR THE ROUTING, INSTALLATION, INSPECTION, AND APPROVAL OF THE SERVICE CONDUITS. REFERENCE SECTION 16121 FOR ADDITIONAL REQUIREMENTS. PROVIDE PULL STRING IN CONDUITS.
[2] NOT USED.
[3] PROVIDE CABLE STRAIN RELIEF PER DRAWING E004, DETAIL 112.
[4] PROVIDE MELTRIC CORD & PLUG PER DRAWING E005, DETAIL 501.
[5] CONDUCTORS ARE OVERSIZED DUE TO VOLTAGE DROP.
[6] PROVIDE INSTRUMENT JUNCTION BOX WITH VIEWING WINDOW, PER DRAWING E005, DETAIL 502.
[7] REFERENCE SPECIFICATIONS FOR REQUIREMENTS FOR SPARE CONDUITS.

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING
0 1"
IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY

DSN. DSN
DRN. DRWN
CKD. CHCK
DATE: JUN 2026

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Salem
503-584-1576
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REGISTERED PROFESSIONAL ENGINEER
86683
Digitally Signed
OREGON
MAY 08, 2012
BENJAMIN E. PERRY
EXPIRES: 12-31-2026

WESTECH ENGINEERING, INC.
CONSULTING ENGINEERS AND PLANNERS
3841 Fairview Industrial Dr. S.E., Suite 100, Salem, OR 97302
Phone: (503) 585-2474 Fax: (503) 585-3986
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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

DAF POWER CONDUIT SCHEDULE

DRAWING
E302
187 OF 223

JOB NUMBER
2599.3220.0

DAF CONTROL CONDUIT / CONDUCTOR SCHEDULE

CONDUIT ID NO.	CONDUIT		CONDUCTORS PER CONDUIT					FROM	TO	DESCRIPTION	NOTES
	QUANTITY	SIZE	UNGROUNDED	GROUNDED	GROUNDING	CABLE	SPARE				
C300	1	1.0 INCH	-	-	1 - #14	1 - CAT6	-	DAF BUILDING MAIN PLC (CP-3000)	MCC-3000	ETHERNET / IP COMMUNICATION	-
C301	1	1.0 INCH	-	-	-	-	-	CP-3000	DAF MOTOR CONTROL PANEL (CP-3200)	SPARE CONDUIT	1
C302	1	1.0 INCH	-	-	1 - #14	1 - CAT6	-	CP-3000	DAF CLARIFIER SYSTEM PLC (CP-3205)	ETHERNET / IP COMMUNICATION	-
C303	1	1.0 INCH	-	-	1 - #14	1 - CAT6	-	CP-3200	CP-3205	ETHERNET / IP COMMUNICATION	-
C304	-	-	-	-	-	-	-	-	-	-	-
C305	1	0.75 INCH	2 - #14	-	1 - #14	-	-	MCC-3000	IRRIGATION PUMP NO. 1 DISCONNECT (P-3110-DIS)	DISCONNECT AUX. CONTACT	3
C306	1	0.75 INCH	2 - #14	-	1 - #14	-	-	MCC-3000	IRRIGATION PUMP NO. 2 DISCONNECT (P-3120-DIS)	DISCONNECT AUX. CONTACT	3
C307	1	0.75 INCH	2 - #14	-	1 - #14	-	-	MCC-3000	EXISTING IRRIGATION PUMP NO. 3 DISCONNECT (P-3130-DIS)	DISCONNECT AUX. CONTACT	3
C308	1	0.75 INCH	-	-	1 - #14	1 - TSP	-	CP-3000	IRRIGATION PUMP NO. 1 PRESSURE XMTR (PIT-3111)	ANALOG: PRESSURE	2
C309	1	0.75 INCH	-	-	1 - #14	1 - TSP	-	CP-3000	IRRIGATION PUMP NO. 2 PRESSURE XMTR (PIT-3112)	ANALOG: PRESSURE	2
C310	1	1.0 INCH	2 - #14	-	1 - #14	1 - TSP	-	CP-3000	EXISTING IRRIGATION PUMP NO. 3 FLOWMETER (FIT-3131)	24VDC POWER & ANALOG: FLOW	2
C311	1	1.0 INCH	2 - #14	-	1 - #14	1 - CAT6	-	CP-3000	IRRIGATION HEADER FLOWMETER (FIT-3140)	24VDC POWER & E/IP COMMUNICATION	-
C312	1	1.0 INCH	4 - #14	-	1 - #14	-	-	CP-3000	SLUDGE FLUSHING PIPE PRESSURE SWITCHES (PSH-3151, PSL-3152)	DISCRETE: HIGH PRESSURE, LOW PRESSURE ALARM	-
C313	1	0.75 INCH	2 - #14	-	1 - #14	-	-	MCC-3000	SLUDGE FLUSHING PUMP DISCONNECT (P-3150-DIS)	DISCONNECT AUX. CONTACT	3
C314	1	0.75 INCH	2 - #14	-	1 - #14	-	-	MCC-3000	DAF TRANSFER PUMP NO. 1 DISCONNECT (P-3160-DIS)	DISCONNECT AUX. CONTACT	3
C315	1	0.75 INCH	2 - #14	-	1 - #14	-	-	MCC-3000	DAF TRANSFER PUMP NO. 2 DISCONNECT (P-3170-DIS)	DISCONNECT AUX. CONTACT	3
C320	1	0.75 INCH	6 - #14	-	1 - #14	-	-	CP-3205	DAF COMPRESSOR (CMP-3240)	DISCRETE: RUNNING	-
C321	1	0.75 INCH	6 - #14	-	1 - #14	-	-	CP-3205	DAF COMPRESSOR (CMP-3241)	DISCRETE: RUNNING	-
C322	1	0.75 INCH	6 - #14	-	1 - #14	-	-	CP-3205	DAF CLARIFIER FLOATED SLUDGE VALVE (V-3233)	DISCRETE: OPEN CMD, OPENED/CLOSED STATUS	-
C323	1	0.75 INCH	6 - #14	-	1 - #14	-	-	CP-3205	DAF CLARIFIER SEDIMENT PURGE VALVE #1 (V-3221)	DISCRETE: OPEN CMD, OPENED/CLOSED STATUS	-
C324	1	0.75 INCH	4 - #14	-	1 - #14	-	-	CP-3205	DAF CLARIFIER LEVEL SWITCH (LSH-3232)	DISCRETE: FLOOD LEVEL ALARM	-
C325	1	0.75 INCH	-	-	1 - #14	1 - TSP	-	CP-3205	DAF CLARIFIER LEVEL SENSOR (LIT-3231)	ANALOG: LEVEL	-
C326	1	0.75 INCH	-	-	1 - #14	1 - TSP	-	CP-3205	DAF RECYCLE FLOWMETER (FIT-3211)	ANALOG: FLOW	-
C327	1	0.75 INCH	-	-	1 - #14	2 - TSP	-	CP-3205	DAF INFLUENT FLOW CONTROL VALVE (FCV-3200)	ANALOG: % OPEN/CLOSE CMD, % FEEDBACK	-
C328	1	0.75 INCH	2 - #14	-	1 - #14	1 - TSP	-	CP-3205	DAF INFLUENT (FIT-3201)	ANALOG: FLOW & 24VDC POWER	-
C329	1	0.75 INCH	-	-	1 - #14	2 - MSC	-	FIT-3201	FE-3201	DAF INFLUENT FLOWMETER	-
C330	1	0.5 INCH	2 - #14	-	1 - #14	-	-	CP-3205	DAF CLARIFIER EMERGENCY E-STOP (HS-3201)	DISCRETE: E-STOP SHUTDOWN	-
C331	1	0.5 INCH	2 - #14	-	1 - #14	-	-	CP-3205	PNEUMATIC CONTROLLER ADT AIR VALVE SOLENOID (SV-3243)	DISCRETE: OPEN CMD	-
C332	1	0.5 INCH	2 - #14	-	1 - #14	-	-	CP-3205	PNEUMATIC CONTROLLER APGV SOLENOID (SV-3244)	DISCRETE: OPEN CMD	-
C333	1	0.5 INCH	2 - #14	-	1 - #14	-	-	CP-3205	PNEUMATIC CONTROLLER ADT LOW PRESSURE SWITCH (PSL-3242)	DISCRETE: LOW PRESSURE	-
C334	1	0.75 INCH	6 - #14	-	1 - #14	-	-	CP-3205	DAF CLARIFIER SEDIMENT PURGE VALVE #2 (V-3222)	DISCRETE: OPEN CMD, OPENED/CLOSED STATUS	-
C335	1	1.0 INCH	10 - #14	-	1 - #14	-	-	CP-3205	CP-3200	DAF SCRAPER I/O: START CMD, FAIL, RUNNING, HOA IN-AUTO VOLTAGE PRESENCE STATUS	-
C336	1	0.5 INCH	2 - #14	-	1 - #14	-	-	CP-3205	SLUDGE TRANSFER PUMP ALTERNATE SOLENOID (SV-3219)	DISCRETE: OPEN CMD	-
C337	1	0.75 INCH	-	-	1 - #14	2 - TSP	-	CP-3205	DAF EFFLUENT FLOW CONTROL VALVE (FCV-3245)	ANALOG: % OPEN/CLOSE CMD, % FEEDBACK	-
C338	1	0.5 INCH	2 - #14	-	1 - #14	-	-	CP-3200	P-3220 (TSH-3220)	SLUDGE PUMP TEMPERATURE SWITCH	-
C339	1	0.75 INCH	-	-	1 - #14	1 - TSP	-	CP-3205	DAF CLARIFIER TURBIDITMETER (AIT-3240)	DAF CLARIFIER TURBIDITMETER	-
C340	1	0.75 INCH	2 - #14	-	1 - #14	-	-	CP-3000	EMERGENCY SHOWER FLOW SWITCH (FS-3290)	DISCRETE: SHOWER IN-USE ALARM	-
C341	1	0.75 INCH	-	-	1 - #14	2 - TSP	-	CP-3205	POLYMER DOSING PUMP #1 (P-3250)	ANALOG: FLOW DOSING CMD	7
C342	1	0.75 INCH	-	-	1 - #14	2 - TSP	-	CP-3205	POLYMER DOSING PUMP #2 (P-3260)	ANALOG FLOW DOSING CMD	7
C343	1	0.75 INCH	6 - #14	-	1 - #14	-	-	CP-3205	POLYMER DOSING PUMP #1 (P-3250)	DISCRETE: RUN CMD, RUNNING, LOW FLOW (120VAC)	7
C344	1	0.75 INCH	6 - #14	-	1 - #14	-	-	CP-3205	POLYMER DOSING PUMP #2 (P-3260)	DISCRETE: RUN CMD, RUNNING, LOW FLOW (120VAC)	7
C345	1	0.75 INCH	-	-	1 - #14	1 - TSP	-	CP-3205	COAGULATION PUMP #1 (P-3270)	ANALOG: FLOW DOSING CMD	7
C346	1	0.75 INCH	-	-	1 - #14	1 - TSP	-	CP-3205	COAGULATION PUMP #2 (P-3280)	ANALOG FLOW DOSING CMD	7
C347	1	0.5 INCH	2 - #14	-	1 - #14	-	-	CP-3205	COAGULATION PUMP #1 (P-3270)	DISCRETE: RUN CMD	7
C348	1	0.5 INCH	2 - #14	-	1 - #14	-	-	CP-3205	COAGULATION PUMP #2 (P-3280)	DISCRETE: RUN CMD	7
C350	1	0.75 INCH	-	-	1 - #14	1 - CAT6	-	CP-3000	CHLORINATION CONTROLLER (LCP-3300)	ETHERNET / IP COMMUNICATION	-
C351	1	0.75 INCH	-	-	1 - #14	1 - TSP	-	CP-3300	CHLORINE SENSOR (AIT-3340)	DISCRETE: CHLORINE LEAK ALARM	-
C352	1	0.75 INCH	-	-	1 - #14	1 - TSP	-	CP-3300	NACLO TANK LEVEL SENSOR (LIT-3361)	ANALOG: LEVEL	-
C353	1	0.75 INCH	2 - #14	-	1 - #14	-	-	CP-3300	NACLO TANK LEAK SENSOR (FSL-3362)	DISCRETE: LEAK ALARM	-
C354	1	0.75 INCH	-	-	1 - #14	1 - TSP	-	CP-3300	SALT DISSOLVING TANK LEVEL SENSOR (LIT-3311)	ANALOG: LEVEL	-
C355	1	1.0 INCH	2 - #14	-	1 - #14	1 - TSP	-	CP-3300	CL2 DOSING PUMP #1 (P-3371)	ANALOG: DOSING FLOW DISCRETE: FAIL ALARM (24VDC)	7
C356	1	1.0 INCH	2 - #14	-	1 - #14	1 - TSP	-	CP-3300	CL2 DOSING PUMP #2 (P-3372)	ANALOG: DOSING FLOW DISCRETE: FAIL ALARM (24VDC)	7
C357	1	1.0 INCH	2 - #14	-	1 - #14	1 - TSP	-	CP-3300	CL2 DOSING PUMP #3 (P-3373)	ANALOG: DOSING FLOW DISCRETE: FAIL ALARM (24VDC)	7
C360	1	1.0 INCH	-	-	1 - #14	1 - TSP	-	CP-3000	EFFLUENT FLOWMETER (FIT-3410)	ANALOG: FLOW	6
C361	1	1.0 INCH	2 - #14	-	1 - #14	-	-	CP-3000	EFFLUENT FLOWMETER (FIT-3410)	DISCRETE: TOTALIZED FLOW	6
C362	1	1.0 INCH	2 - #14	-	1 - #14	-	-	MCC-3000	CARRIER WATER PUMP DISCONNECT (P-3400-DIS)	DISCONNECT AUX. CONTACT	3
C363	1	0.75 INCH	2 - #14	-	1 - #14	-	-	CP-3000	CARRIER WATER FLOW SWITCH (FS-3500)	DISCRETE: FLOW DETECTED	-
C364	1	0.75 INCH	4 - #14	-	1 - #14	-	-	SULFUNATOR (LCP-3510)	SO2 TANK SOLENOIDS (SV-3520 & SV-3540)	DISCRETE: OPEN/CLOSE CMD	-
C365	1	1.0 INCH	-	-	1 - #14	2 - TSP	-	CP-3000	SO2 TANK SCALE TRANSMITTER (WIT-3530)	ANALOG: TANK #1 & #2 WEIGHT	-
C366	1	1.0 INCH	-	-	1 - #14	1 - TSP	-	CP-3000	SO2 GAS MONITOR (AIT-3531)	DISCRETE: SO2 GAS DETECTED	-
C367	1	1.0 INCH	2 - #14	-	1 - #14	-	-	CP-3000	EFFLUENT SAMPLER (AIT-3600)	FUTURE DISCRETE: SAMPLE CMD	1
C368	1	1.0 INCH	-	-	1 - #14	2 - TSP	-	CP-3000	AIT-3600	FUTURE ANALOG: PH LEVEL & TEMPERATURE	1
C369	1	0.75 INCH	-	-	1 - #14	1 - TSP	-	CP-3000	GENERATOR SET, GEN-3000	ANALOG: FUEL LEVEL	5
C370	1	0.75 INCH	8 - #14	-	1 - #14	-	-	CP-3000	GENERATOR SET, GEN-3000	DISCRETE: LOW FUEL, RUNNING, FAIL, NOT-IN-AUTO SIGNALS	5
C371	1	0.75 INCH	2 - #14	-	1 - #14	-	-	GENERATOR E-STOP (HS-3901)	GENERATOR SET, GEN-3000	DISCRETE: EMERGENCY STOP, LOCATED IN DAF BUILDING	5
C372	1	0.75 INCH	2 - #14	-	1 - #14	-	-	ATS-3000	GENERATOR SET, GEN-3000	DISCRETE: REMOTE START COMMAND	5
C373	1	0.75 INCH	8 - #14	-	1 - #14	-	-	CP-3000	ATS-3000	DISCRETE: ATS ON UTILITY, GENERATOR, NORMAL POWER AVAILABLE, GENERATOR POWER AVAILABLE	5
C374	-	-	-	-	-	-	-	-	-	-	-
C380	1	2.0 INCH	-	-	-	-	-	CP-3000	EXISTING IRRIGATION CHLORINE BUILDING	SPARE CONDUIT	1
C381	1	2.0 INCH	-	-	-	-	-	CP-3000	EXISTING DE-CHLORINATION BUILDING	SPARE CONDUIT	1

NOTES:
[1] REFERENCE SPECIFICATIONS FOR REQUIREMENTS FOR SPARE CONDUITS.
[2] PROVIDE JUNCTION BOXES ADJACENT TO THE EQUIPMENT / INSTRUMENT TO TRANSITION FROM CONDUIT TO CABLE/CORD. PROVIDE NAMEPLATES FOR J-BOXES AS LABELED ON THE DRAWINGS.
[3] PROVIDE DISCONNECTS AUXILIARY CONTACTS WHICH SHALL BE INTERLOCKED WITH THE VFDS INPUT AS A 'RUN ENABLE' PERMISSIVE.
[4] REFER TO PROCESS & INSTRUMENTATION DIAGRAMS (P&IDS) FOR LIST OF INPUTS/OUTPUTS TO DEVICES. COORDINATE FINAL I/O WITH APPROVED SHOP DRAWINGS.
[5] COORDINATE FINAL LOCATION OF CONDUIT STUB UPS WITH APPROVED GENERATOR SUBMITTALS PRIOR TO POURING CONCRETE SLAB.
[6] PROVIDE INSTRUMENT JUNCTION BOX WITH VIEWING WINDOW, PER DRAWING E005, DETAIL 502.
[7] PROVIDE TERMINAL BOX TRANSITION FROM MANUFACTURER SUPPLIED CABLE INTO CONDUCTOR/CABLE. SEE DRAWING E004, DETAIL 116.

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

VERIFY SCALE
BAR IS ONE INCH ON ORIGINAL DRAWING
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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

DAF CONTROL CONDUIT SCHEDULE

DRAWING
E303
188 OF 223

JOB NUMBER
2599.3220.0

SHEET KEY NOTES

1. PROVIDE ELECTRONIC TRIP (LSI) MAIN BREAKER.

PANEL NAME: LP-3000 — LOCATION: DAF ELECTRICAL ROOM

VOLT/PHASE: 208/120V, 3Ø — FED FROM: XFMR-3000

NUM. POLES: 54 — BREAKER MOUNTING: BOLTED

AIC RATING: 42,000 — MAIN BREAKER AMPS: 350 (1)

NOTES: NEW PANEL — BUS RATING AMPS: 400

REF. KEY NOTE #: — SPD: NO

NOTES	LOAD DESCRIPTION	LOAD TYPE	VA L1	VA L2	VA L3	TRIP RATING AMPS	CIRCUIT NUMBER	CIRCUIT NUMBER	TRIP RATING AMPS	VA L1	VA L2	VA L3	LOAD TYPE	LOAD DESCRIPTION	NOTES
	DAF INTERIOR LUMINAIRES	L	784			20	1	2	20	720			R	DAF RECEPTACLES	
	DAF EXTERIOR LUMINAIRES	L		260		20	3	4	20		500		M	ROLL UP DOOR (EAST)	
	UNIT HEATER UH-1	H			3,750	50	5	6	50			3,750	H	UNIT HEATER UH-3	
		H	3,750				7	8		3,750			H		
	UNIT HEATER UH-2	H		3,750		50	9	10	50		3,750		H	UNIT HEATER UH-4	
		H			3,750		11	12				3,750	H		
	EXHAUST FAN EF-1	M	1,500			20	13	14	20	1,695			M	AIR CONDITIONING UNIT OAC-1	
	EFFLUENT TURBIDITY, AIT-3240	E		50		20	15	16			1,695		M		
	SALT DISSOLVING TANK LEVEL, LIT-3311	E			50	20	17	18	20			-		SPARE	
	HYDROGEN LEAK DETECTOR, AIT-3340	E	50			20	19	20	20	50			E	NACLO STORAGE TANK, LIT-3361	
	EFFLUENT FLOWMETER, FIT-3401	E		50		20	21	22	20		600		E	GENERATOR BATTERY CHARGER	
	ROLL UP DOOR (SOUTH)	M			500	20	23	24	20			740	H	BEAVER CREEK BRIDGE SLUDGE PIPE HEAT TAPE	
	EFFLUENT SAMPLER, AIT-3600	E	50			20	25	26		740			H		
	DRAIN PUMP, P-3410	M		1,920		20	27	28	20		300		E	CHLORINE METERING PUMP #1 P-3371	
	CHLORINE METERING PUMP #2 P-3372	E			300	20	29	30	20			300	E	CHLORINE METERING PUMP #3 P-3373	
	DAF BUILDING MAIN PLC, CP-3000	E	1,500			20	31	32	20	1,000			E	GENERATOR BLOCK HEATER	
	DAF SYSTEM CONTROLLER, CP-3205	E		3,500		40	33	34			1,000		E		
	DAF RECEPTACLES	R			540	20	35	36	40			3,600	M1	DAF COMPRESSOR #1, CMP-3240	
	DAF RECEPTACLES	R	540			20	37	38		3,600			M1		
	DAF COMPRESSOR #2, CMP-3241	M		3,600		40	39	40			3,600		M1		
		M			3,600		41	42	60			6,000	E	PANEL LP-3100 (EXISTING BUILDING #9)	
		M	3,600				43	44		6,000			E		
	DAF COMPRESSOR #1 DRAIN VALVE	E		50		20	45	46	20		50		E	DAF COMPRESSOR #2 DRAIN VALVE	
	SPARE				-	20	47	48	20			-		SPARE	
	SPARE		-			20	49	50	20	-				SPARE	
	SPARE			-		20	51	52	20		-			SPARE	
	SPARE				-	20	53	54	20			-		SPARE	

TOTAL LOAD:	11,774	13,180	12,490
COMBINED LOAD:	29,329	24,675	30,630

CONNECTED LOAD: 84,634

TOTAL LOAD:	17,555	11,495	18,140

DEMAND LOAD: 87,595

DEMAND AMPS: 243

Load Type Key		Demand Factor	Connected Load	Demand Load	
R	General Purpose Receptacle	100% First 10kVA, 50% thereafter	1,800	1,800	
L	Lighting	125% Load	1,044	1,305	
M1	Largest Motor	125% Load	10,800	13,500	
M	Motor	100% Load	18,610	18,610	
A	Appliance	100% Load	0	0	
H	HVAC	100% Load	31,480	31,480	
K	Kitchen	100% Load	0	0	XX - Units of Equipment - See NEC Table 220.56
E	Equipment	100% Load	20,900	20,900	
T	Transformer	100% Load	0	0	
W	Welder	100% Load	0	0	
RV	Recreational Vehicle	100% Load	0	0	XX - RV Sites - See NEC Table 551.71 (A)

NO.	DESCRIPTION	DATE	BY
	REVISIONS		

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BENJAMIN E. PERRY
MAY 08, 2012
EXPIRES: 12-31-2026

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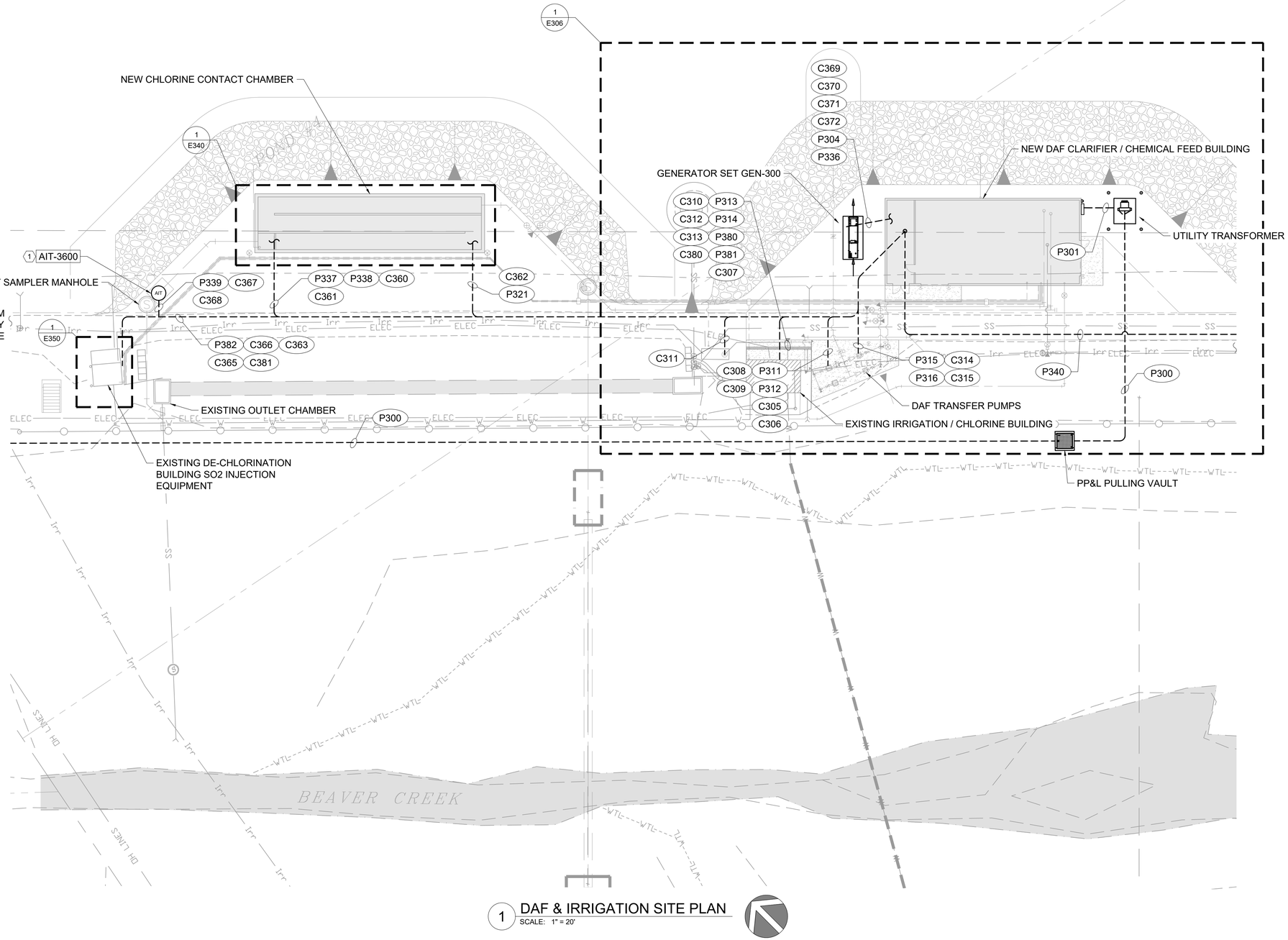
CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

DAF PANEL SCHEDULES

DRAWING
E304
189 OF 223

JOB NUMBER
2599.3220.0



1 DAF & IRRIGATION SITE PLAN
SCALE: 1" = 20'

GENERAL SHEET NOTES

1. INSTALL UTILITY CONDUITS PER UTILITY (PP&L) REQUIREMENTS. PROVIDE AT MINIMUM 12-INCH SEPARATION BETWEEN UTILITY CONDUIT AND ELECTRICAL CONDUITS.
2. CONTRACTOR SHALL COORDINATE WITH CIVIL AND MECHANICAL PIPING LAYOUTS TO MAINTAIN ADEQUATE SEPARATION BETWEEN ELECTRICAL CONDUITS AND PROCESS PIPING.

SHEET KEY NOTES

1. PROVIDE DEDICATED WEATHERPROOF SIMPLEX RECEPTACLE FOR CORD AND PLUG CONNECTION TO SAMPLER.

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

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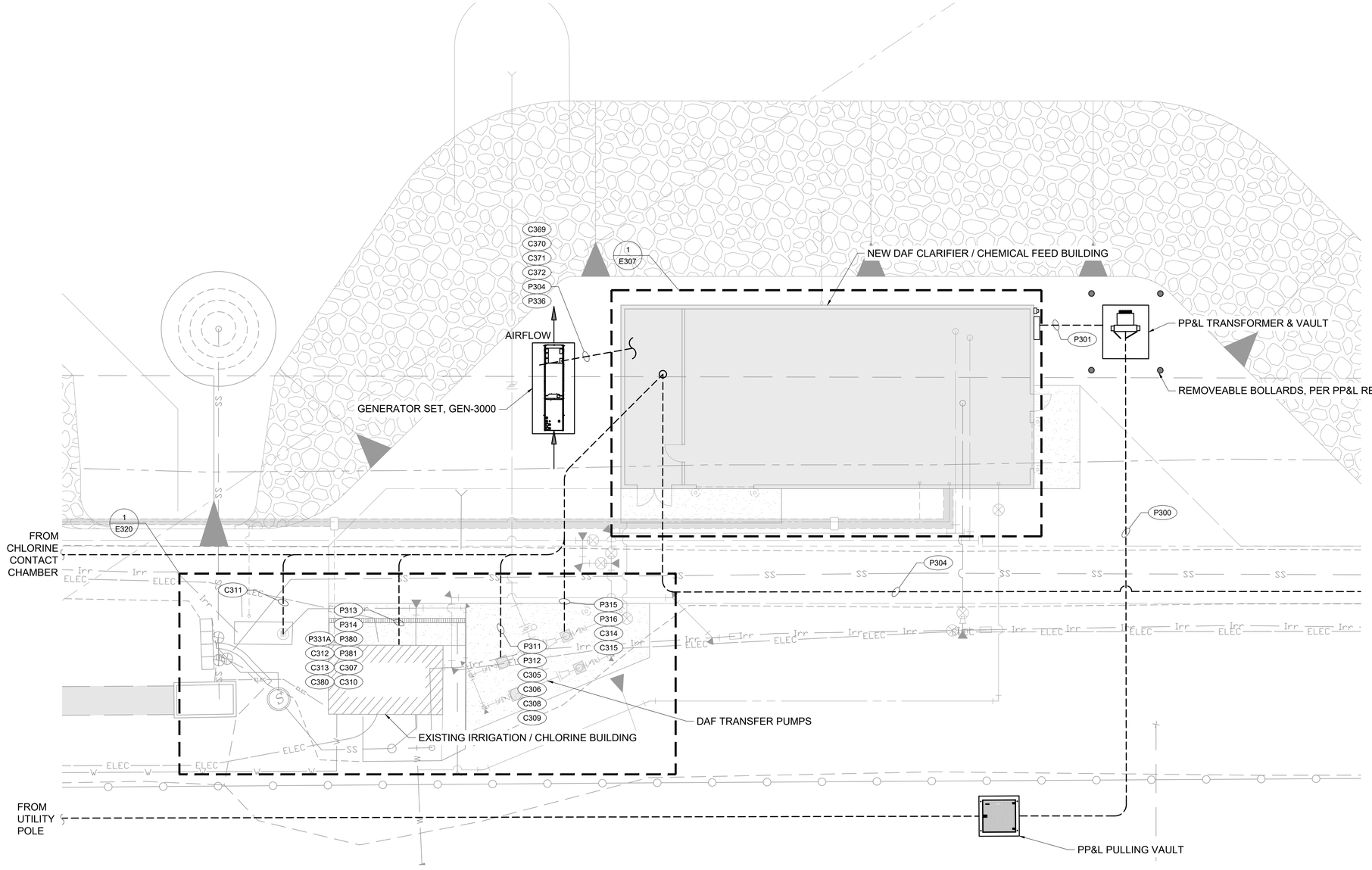
CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

DAF & IRRIGATION SITE PLAN

DRAWING
E305
190 OF 223

JOB NUMBER
2599.3220.0



1 DAF AREA ELECTRICAL SITE PLAN
SCALE: 1" = 10'

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

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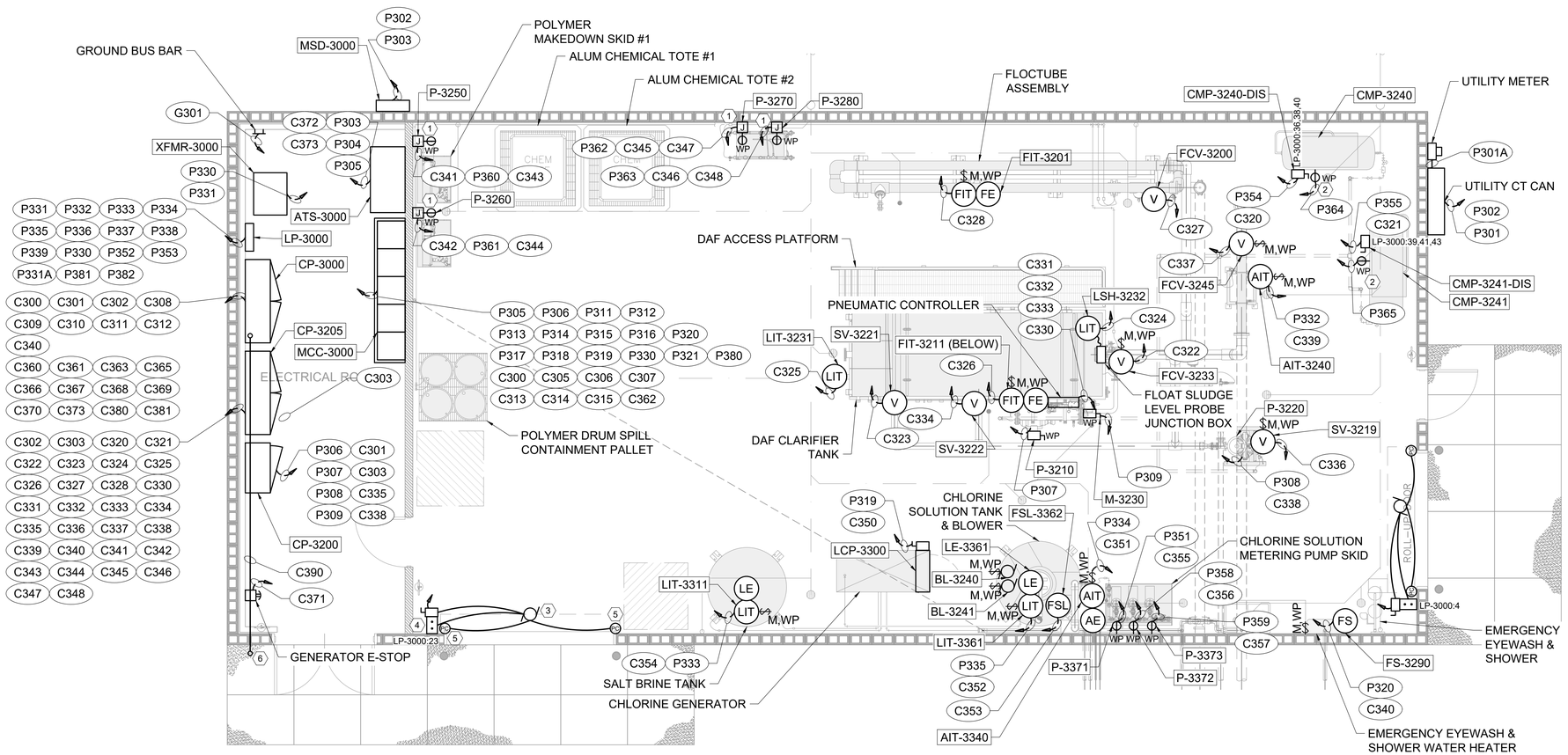
CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

DAF AREA ELECTRICAL SITE PLAN

DRAWING
E306
191 OF 223

JOB NUMBER
2599.3220.0



SHEET KEY NOTES

1. PROVIDE JUNCTION BOX WITH TERMINAL BLOCKS TO TRANSITION FROM CONDUCTORS TO MANUFACTURER SUPPLIED CABLE. SEE DRAWING E004, DETAIL 116.
2. PROVIDE DEDICATED SIMPLEX RECEPTACLE FOR AUTOMATIC DRAIN UNIT. COORDINATE WITH MECHANICAL FOR FINAL LOCATION.
3. OVERHEAD ROLL-UP DOOR MOTOR. PROVIDE 2 - #12, 1 - #12G IN 3/4"C. INSTALL PER MANUFACTURER'S INSTRUCTIONS.
4. OVERHEAD ROLL-UP DOOR CONTROLLER PROVIDE 3/4"C FROM OVERHEAD DOOR MOTOR TO CONTROLLER. INSTALL PER MANUFACTURER'S INSTRUCTIONS.
5. OVERHEAD DOOR PHOTO EYE. PROVIDE 3/4"C FROM OVERHEAD DOOR MOTOR TO PHOTO EYE. INSTALL PER MANUFACTURER'S INSTRUCTIONS.
6. WIRELESS ETHERNET BRIDGE FOR CP-2000 TO CP-3000. ROUTE CONDUIT OVERHEAD TO THE EXTERIOR OF THE BUILDING. INSTALL JUNCTION BOX ON THE WALL. COORDINATE FINAL HEIGHT OF THE ANTENNA WITH THE OWNER'S SYSTEM INTEGRATOR.

1 DAF CLARIFIER BUILDING FLOOR PLAN
SCALE: 1/4" = 1'-0"

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS
DAF CLARIFIER BUILDING FLOOR PLAN

DRAWING
E307
192 OF 223

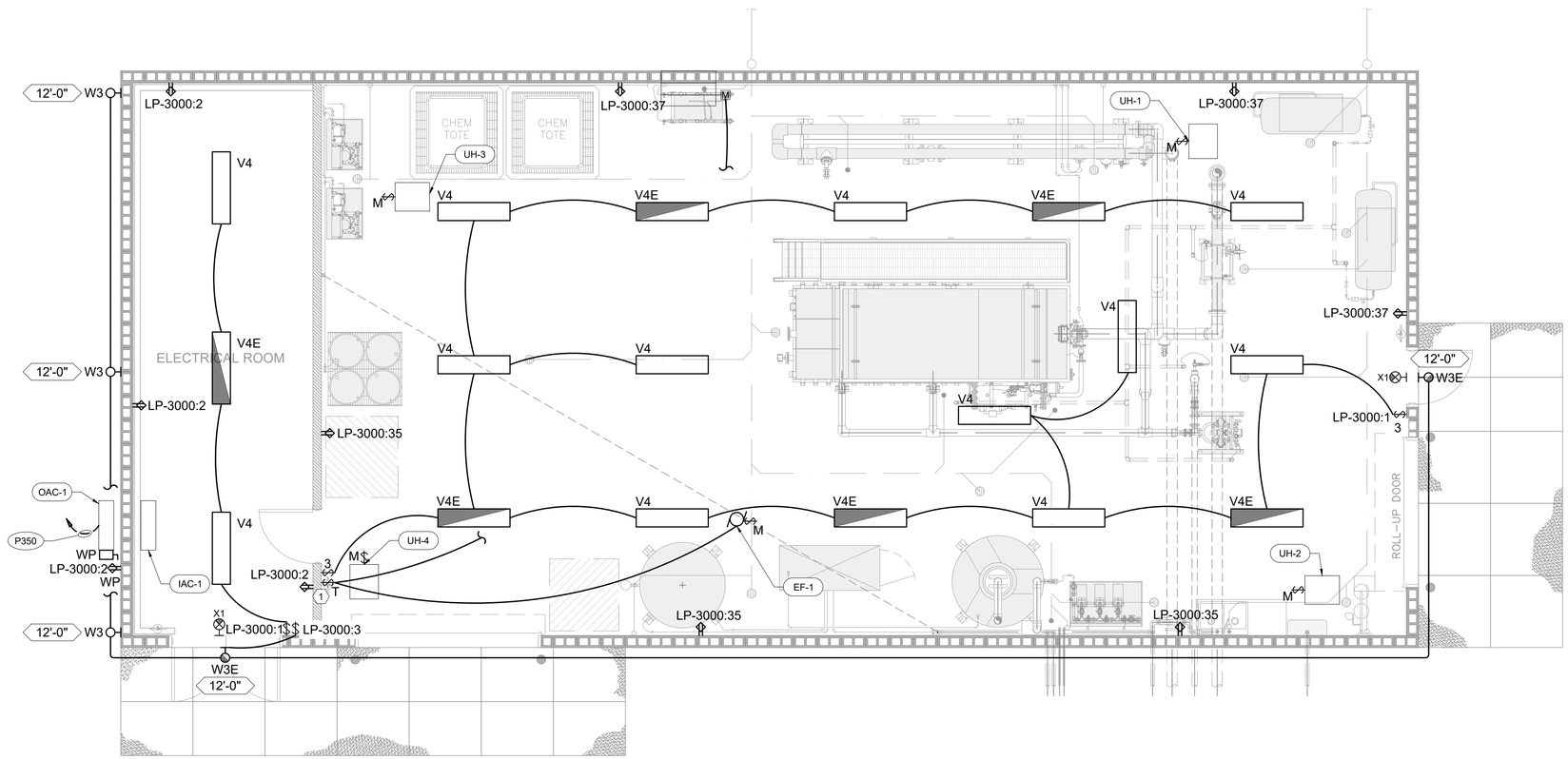
JOB NUMBER
2599.3220.0

GENERAL SHEET NOTES

1. ALL LIGHTING AND RECEPTACLE BRANCH CIRCUITS SHALL BE WIRED TO PANEL LP-3000, UNLESS OTHERWISE NOTED. THE CIRCUIT NUMBER SHOWN ON THIS FLOOR PLAN.
2. ALL INTERIOR LUMINAIRES SHALL BE MOUNTED AT 12'-0" ABOVE FINISHED FLOOR.
3. WIRE EXIT SIGNS AHEAD OF LOCAL LIGHTING BRANCH CIRCUIT, AHEAD OF ALL SWITCHING.

SHEET KEY NOTES

1. PROVIDE TIMER SWITCH (12-HR INTERVALS, 1-HR INCREMENTS) FOR EF-1 AND THE DAMPER. PROVIDE WITH A TIME DELAY RELAY (10-SEC ON-DELAY). EF-1 SHALL BE PERMITTED TO START ONLY AFTER THE DAMPER HAS BEEN OPENED.



1 DAF CLARIFIER BUILDING LIGHTING & RECEPTACLE PLAN
SCALE: 1/4" = 1'-0"

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

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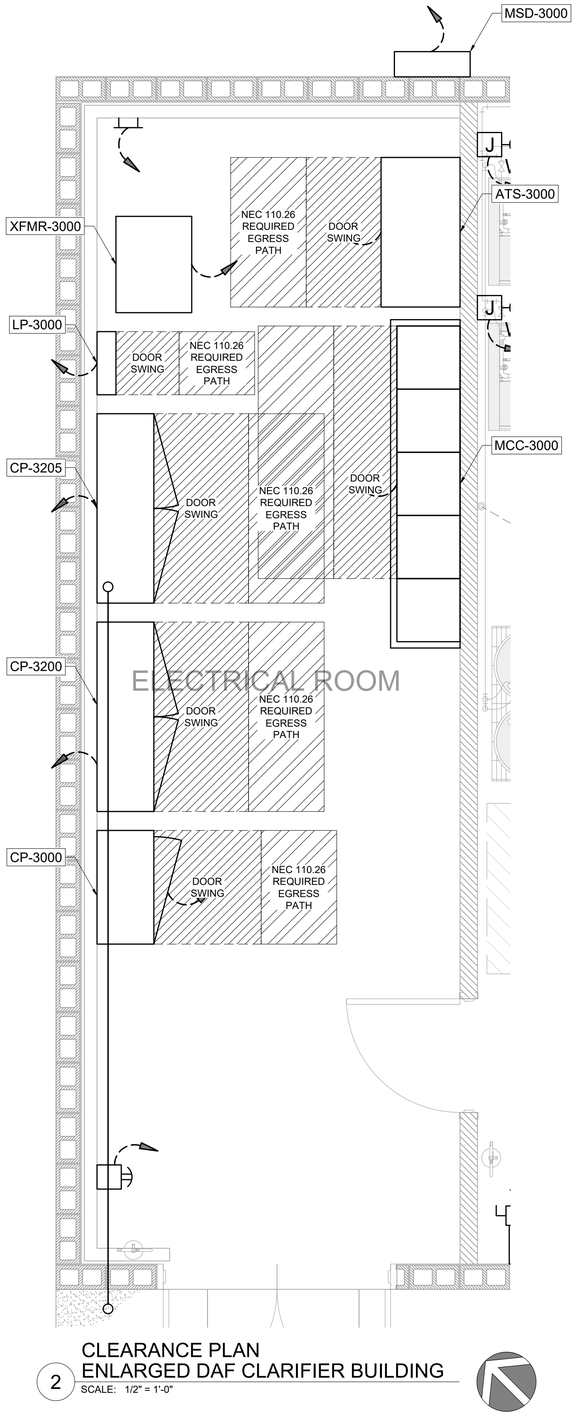
CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

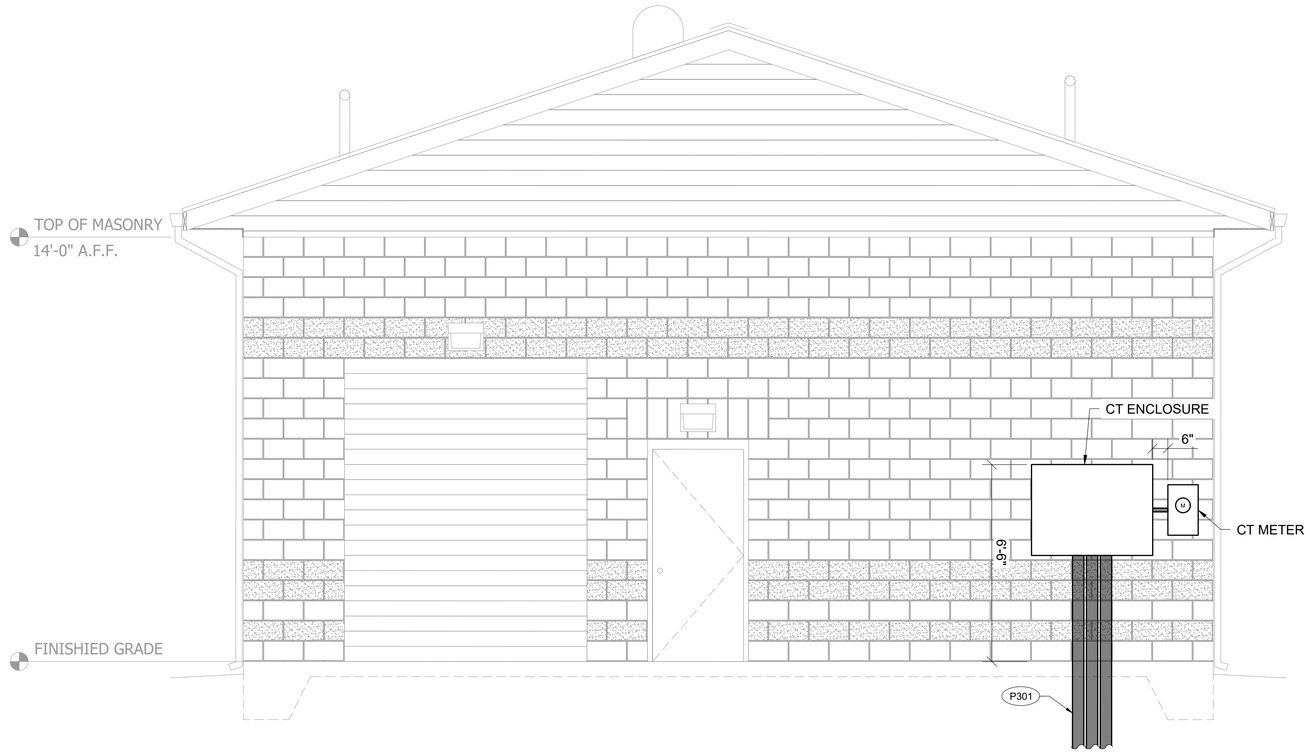
DAF CLARIFIER BUILDING LIGHTING & RECEPTACLE PLAN

DRAWING
E308
193 OF 223

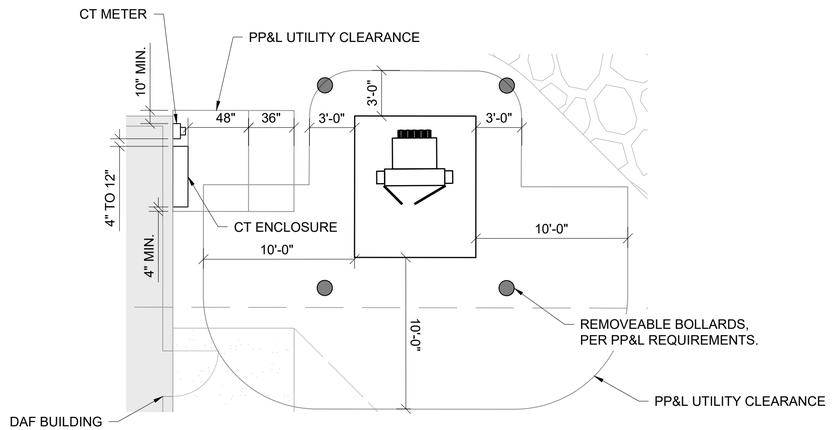
JOB NUMBER
2599.3220.0



2 CLEARANCE PLAN
ENLARGED DAF CLARIFIER BUILDING
SCALE: 1/2" = 1'-0"



2 CT ENCLOSURE & METER ELEVATION
SCALE: 1" = 30'



3 UTILITY TRANSFORMER & METER CLEARANCE
SCALE: 1" = 5'

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

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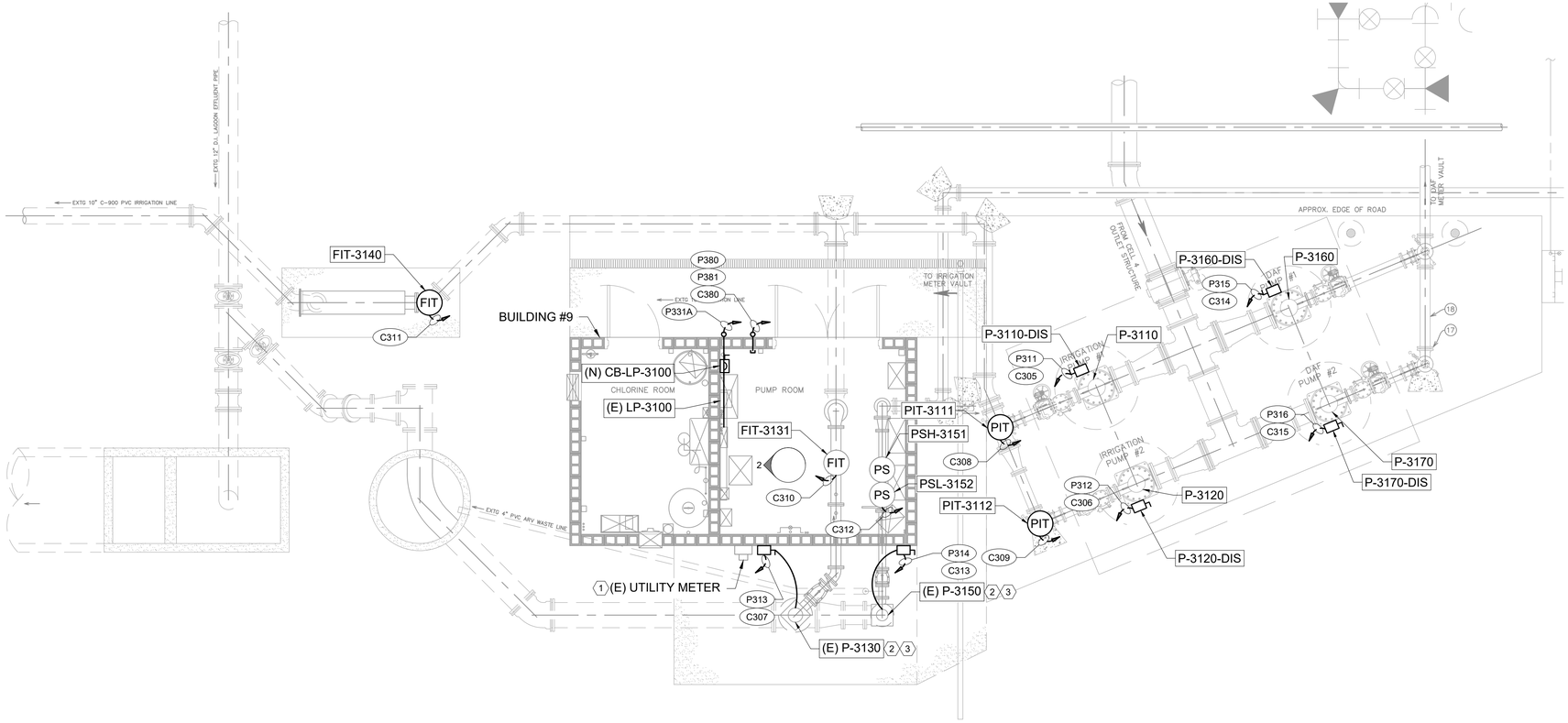
CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS
DAF CLARIFIER BUILDING ELECTRICAL ROOM ENLARGED PLANS

DRAWING
E309
194 OF 223

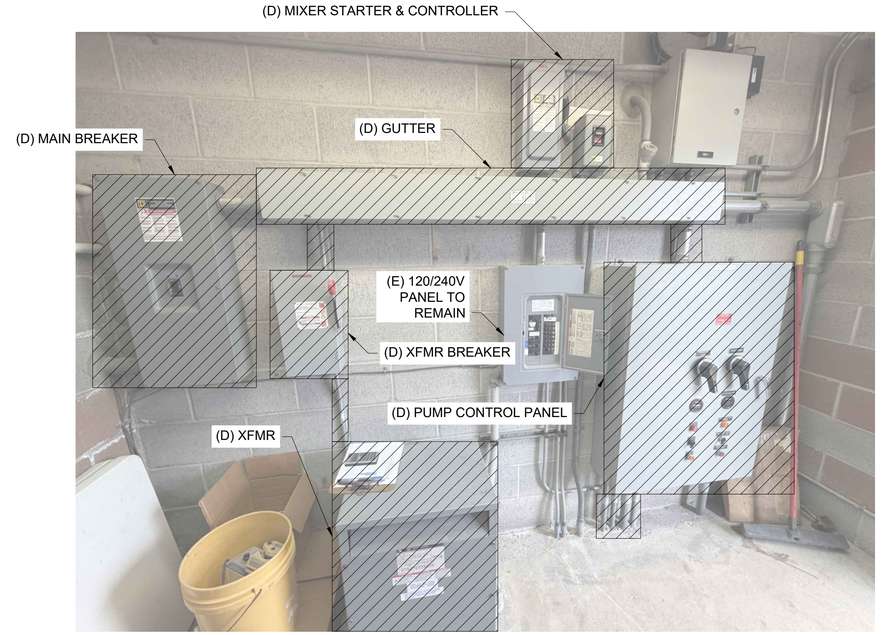
JOB NUMBER
2599.3220.0



1 IRRIGATION PUMP STATION ENLARGED PLAN
SCALE: 1/4" = 1'-0"

SHEET KEY NOTES

1. EXISTING SERVICE SHALL BE DEMOLISHED. THE ELECTRICAL EQUIPMENT LOCATED IN THE PUMP ROOM SHALL BE REFED FROM THE DAF CLARIFIER BUILDING. COORDINATE DECOMMISSIONING OF BUILDING WITH PP&L AND THE OWNER PER DRAWING G006. PROVIDE TEMPORARY POWER AS REQUIRED PER SECTION 16025.
2. THE EXISTING IRRIGATION PUMPS SHALL BE REUSED AS PART OF THE NEW SYSTEM. DEMOLISH CONDUCTORS FROM THE MOTORS BACK TO THEIR SOURCE. DEMOLISH EXISTING MOTOR STARTERS AND DISCONNECTS. DEMOLISH ANY EXPOSED CONDUIT AND ABANDON EXISTING. PROVIDE REVISED PANEL SCHEDULE INDICATING THE EXISTING MOTORS ARE EXISTING TO REMAIN.
3. COORDINATE DECOMISSIONING OF THE EXISTING IRRIGATION PUMPS WITH THE OWNER PRIOR TO ANY DEMOLITION OF ELECTRICAL EQUIPMENT. PROVIDE TEMPORARY POWER AS REQUIRED PER SECTION 16025.



2 BUILDING #9 PUMP ROOM ELEVATION
SCALE: NTS

NO.	DESCRIPTION	DATE	BY
	REVISIONS		

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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

IRRIGATION PUMP STATION ENLARGED PLAN

DRAWING
E320
195 OF 223

JOB NUMBER
2599.3220.0

SHEET KEY NOTES

1. PROVIDE DEDICATED SIMPLEX RECEPTACLE WITH WEATHERPROOF COVER FOR SUMP PUMP.
2. PROVIDE INSTRUMENT PANEL WITH VIEW WINDOW PER E005, DETAIL X. INSTALL MOUNTING BRACKET PER M344, DETAIL 2.
3. PROVIDE GROUND RING FOR SBR BASIN. BOND ALL METALLIC EQUIPMENT WITHIN 5-FT OF BASINS, PER NEC. REFER TO GROUNDING DETAIL ON E007 FOR ADDITIONAL DETAILS.

1 CHLORINE CONTACT CHAMBER ENLARGED PLAN
SCALE: 1/4" = 1'-0"

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

CHLORINE CONTACT CHAMBER ENLARGED PLAN

DRAWING
E340
196 OF 223

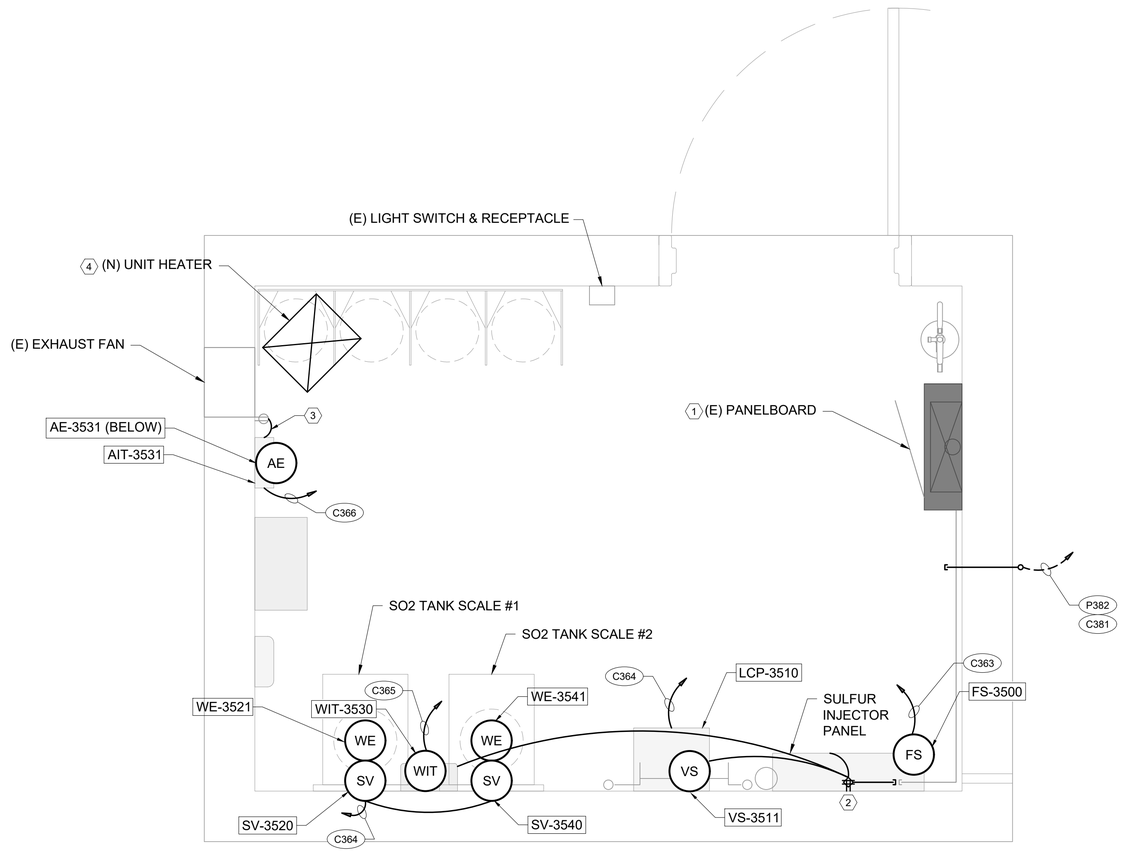
JOB NUMBER
2599.3220.0

GENERAL SHEET NOTES

1. EXISTING POWER AND ELECTRICAL EQUIPMENT INSIDE THE BUILDING SHALL REMAIN, INCLUDING BUT NOT LIMITED TO: LIGHTING, EXHAUST FAN, UNIT HEATER, RECEPTACLES, AND CONDUIT.
2. REFERENCE DRAWING M351 FOR ADDITIONAL REQUIREMENTS AND INTERIOR ELEVATIONS OF EXISTING BUILDING.

⬡ SHEET KEY NOTES

1. EXISTING PANELBOARD TO REMAIN.
2. DEMOLISH EXISTING DUPLEX RECEPTACLE AND REPLACE WITH NEW. EXTEND EXISTING CONDUIT TO NEW LOCATION. PROVIDE NEW CONDUCTORS. COORDINATE FINAL LOCATION OF RECEPTACLE WITH OWNER UPON APPROVED SULFONATOR & SULFUR INJECTOR PANEL SUBMITTALS.
3. PROVIDE COR D& PLUG FOR GAS ANALYZER AND FEED FROM EXISTING RECEPTACLE.
4. DEMOLISH EXISTING UNIT HEATER AND REPLACE WITH 208V, 1Ø, 2,200W HEATER. BASIS OF DESIGN IS QMARK MUH0321 WITH INTEGRAL THERMOSTAT, OR EQUAL.



1 DE-CHLORINATION BUILDING FLOOR PLAN & SECTION
SCALE: 1" = 1'-0"

VERIFY SCALE
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0 1"

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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

DE-CHLORINATION BUILDING FLOOR PLAN & SECTION

DRAWING
E350
197 OF 223

JOB NUMBER
2599.3220.0

Instrumentation & Control Symbol Legend & Abbreviations

Abbreviations

A	AMPERE
AC	ALTERNATING CURRENT, AIR CONDITIONING UNIT
AHJ	AUTHORITY HAVING JURISDICTION
AI	ANALOG INPUT
AIC	AVAILABLE INTERRUPTING CAPACITY
AF	AMPERE FRAME / AMPERE FUSED
AFC	ABOVE FINISHED CEILING
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AL	ALUMINUM
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
AO	ANALOG OUTPUT
ARMS	ARC FLASH REDUCTION MAINTENANCE SYSTEM
AT	AMPERE TRIP
AV	AUDIO / VIDEO
AWG	AMERICAN WIRE GAUGE
BAS	BUILDING AUTOMATION SYSTEM
BFG	BELOW FINISHED GRADE
BLDG	BUILDING
C	CONDUIT
CAT#	CATEGORY #
CB	CIRCUIT BREAKER
CFM	CUBIC FEET PET MINUTE
CFCI	CONTRACTOR FURNISHED, CONTRACTOR INSTALLED
CFOI	CONTRACTOR FURNISHED, OWNER INSTALLED
CKT	CIRCUIT
CP	CONTROL PANEL
CPT	CONTROL POWER TRANSFORMER
CR	CONTROL RELAY
CSC	CONTRACTOR SUPPLIED CABLE
CU	COPPER
dB	DECIBEL
DC	DIRECT CURRENT
DI	DIGITAL INPUT
DIM	DIMENSION
DIV	DIVISION
DO	DIGITAL OUTPUT
DTL	DETAIL
DWG	DRAWING
E/IP	ETHERNET IP
EF	EXHAUST FAN
EL	ELEVATION
EMT	ELECTRICAL METALLIC TUBING
EOLR	END OF LINE RESISTOR
FACP	FIRE ALARM CONTROL PANEL
FE	FLOWMETER ELEMENT
FF	FINISH FLOOR
FIT	FLOWMETER TRANSMITTER
FLA	FULL LOAD AMPERES
FT	FOOT, FEET
FBO	FURNISHED BY OTHERS
G, GND	GROUND
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
HH	HAND HOLE
HP	HORSEPOWER
HRG	HIGH RESISTANCE GROUND
H2S	HYDROGEN SULFIDE
ID	IDENTIFICATION
IDC	INITIATING DEVICE CIRCUIT
IDF	INTERMEDIATE DISTRIBUTION FRAME
IEEE	INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS
IG	ISOLATED GROUND
IT	INFORMATION TECHNOLOGY
I/O	INPUT / OUTPUT
JB	JUNCTION BOX
KAIC	THOUSAND AMPS INTERRUPTING CURRENT
KCMIL	THOUSAND CIRCULAR MILS
KVA	KILOVOLT-AMPERE
KW	KILOWATT
LAN	LOCAL AREA NETWORK
LCP	LOCAL CONTROL PANEL
LCS	LOCAL CONTROL STATION
LED	LIGHT EMITTING DIODE
LEL	LOWER EXPLOSIVE LEVEL
LRG	LOW RESISTANCE GROUND
LS	LIMIT SWITCH
LSI	ELECTRONIC TRIP UNIT ADJUSTABLE LONG TIME DELAY, SHORT TIME DELAY, INSTANTANEOUS TRIP
LSIG	ELECTRONIC TRIP UNIT WITH ADJUSTABLE LONG TIME DELAY, SHORT TIME DELAY, INSTANTANEOUS TRIP, AND GROUND FAULT
LV	LOW VOLTAGE
MCA	MINIMUM CIRCUIT AMPACITY
MCC	MOTOR CONTROL CENTER
MCP	MOTOR CIRCUIT PROTECTOR
MDF	MAIN DISTRIBUTION FRAME
MHz	MEGAHERTZ
MISC	MISCELLANEOUS
MLO	MAIN LUGS ONLY
MOCP	MAXIMUM OVERCURRENT PROTECTION
MSC	MANUFACTURER SUPPLIED CABLE
MV	MEDIUM VOLTAGE
MVA	MEGAVOLT AMPERES
MW	MEGAWATT
N	NEUTRAL
NAC	NOTIFICATION APPLIANCE CIRCUIT
N/A	NOT APPLICABLE
NC	NORMALLY CLOSED
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NEX	REPLACE EXISTING WIRING DEVICE AND FACEPLATE WITH NEW. BACK BOX AND CONDUIT SHALL REMAIN.
NL	NIGHT LIGHT
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OC	ON CENTER
OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED
OFOI	OWNER FURNISHED, OWNER INSTALLED
Ø	PHASE
PB	PULL BOX, PANIC BUTTON, PUSH BUTTON
PCP	PUMP CONTROL PANEL
PDP	PUMP DISCONNECT PANEL
PE	PHOTO EYE
PLC	PROGRAMMABLE LOGIC CONTROLLER
PNL	PANEL
POE	POWER OVER ETHERNET
PPM	PARTS PER MILLION
PTZ	PAN, TILT, ZOOM
RF	RADIO FREQUENCY
RFI	REQUEST FOR INFORMATION
SCADA	SUPERVISORY CONTROL AND DATA ACQUISTION
SLC	SIGNALING LINE CIRCUIT
SPD	SURGE PROTECTION DEVICE
STD	STANDARD
SW	SWITCH
SWBD	SWITCHBOARD
SWGR	SWITCHGEAR
T/M	THERMAL MAGNETIC CIRCUIT BREAKER
TBD	TO BE DETERMINED
TSP	TWISTED SHIELDED PAIR
TV	TELEVISION / MONITOR OUTLET
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR
TYP	TYPICAL
UH	UNIT HEATER
UG	UNDERGROUND
UL	UNDERWRITERS LABORATORIES
UPS	UNINTERRUPTIBLE POWER SUPPLY
UON	UNLESS OTHERWISE NOTED
USB	UNIVERSAL SERIAL BUS
V	VOLTS, VOLTAGE
VA	VOLT-AMPERE
VFD	VARIABLE FREQUENCY DRIVE
W	WATT, WIRE
WCR	WITHSTAND CURRENT RATING
WAP	WIRELESS ACCESS POINT
WI-FI	WIRELESS FIDELITY
W/	WITH
W/O	WITHOUT
XFMR	TRANSFORMER
XMTR	TRANSMITTER
Y	WYE
1P	ONE POLE
2P	TWO POLE
3P	THREE POLE
4P	FOUR POLE

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS
INSTRUMENTATION & CONTROL ABBREVIATIONS

DRAWING
I001
198 OF 223

JOB NUMBER
2599.3220.0

Instrumentation & Control Symbol Legend

Wiring Diagram Symbols

- CONTROL RELAY, NORMALLY CLOSED CONTACT.
- CONTROL RELAY, NORMALLY OPEN CONTACT.
- THERMOSTAT, CLOSE ON FALLING TEMPERATURE (HEATING).
- THERMOSTAT, NORMALLY OPEN. CLOSE ON TEMPERATURE RISE (COOLING).
- LIMIT SWITCH, NORMALLY CLOSED.
- LIMIT SWITCH, NORMALLY CLOSED, HELD OPEN.
- LIMIT SWITCH, NORMALLY OPEN.
- LIMIT SWITCH, NORMALLY OPEN, HELD CLOSED.
- SWITCH, TYPICAL NORMALLY OPEN SWITCH.
- SWITCH, TYPICAL NORMALLY CLOSED SWITCH.
- FLOAT SWITCH, NORMALLY OPEN.
- FLOAT SWITCH, NORMALLY CLOSED.
- FLOW SWITCH, NORMALLY OPEN.
- FLOW SWITCH, NORMALLY CLOSED.
- PRESSURE SWITCH, NORMALLY OPEN.
- PRESSURE SWITCH, NORMALLY CLOSED.
- TIME OFF-DELAY SWITCH, NORMALLY OPEN.
- TIME OFF-DELAY SWITCH, NORMALLY CLOSED.
- TIME ON-DELAY SWITCH, NORMALLY OPEN.
- TIME ON-DELAY SWITCH, NORMALLY CLOSED.
- MOTOR STARTER OR OVERLOAD, NORMALLY CLOSED.
- MOTOR STARTER, NORMALLY OPEN.
- PUSH BUTTON, NORMALLY CLOSED WITH MUSHROOM HEAD.
- PUSH BUTTON, NORMALLY CLOSED.
- PUSH BUTTON , NORMALLY OPEN.
- HOA SWITCH, NORMALLY OPEN.
- KEYED SWITCH, NORMALLY OPEN.
- 2 POSITION SELECTOR SWITCH.

  CONTACTS ARE CLOSED OR OPEN ONLY AND ARE SHOWN AS SUCH.
- 3 POSITION SELECTOR SWITCH.

  3 OR MORE POSITION SELECTOR SWITCH. X SHOWS CLOSED & 0 SHOWS OPEN FOR EACH SWITCH POSITION SHOWN ABOVE EACH X & O.

	POSITION		
CIRCUIT	1	2	3
1	X	0	0
2	0	0	X

- AUDIBLE HORN.
- FUSE WITH AMP RATING. (#AMPS)
- CONTROL RELAY. (CR)
- ELAPSED TIME METER. (ETM)
- DIFFERENTIAL PRESSURE SWITCH.
- SOLENOID.
- MOTOR STARTER, COIL. (M)
- INDICATOR LIGHT WITH COLOR.
- INDICATOR LIGHT WITH PUSH-TO-TEST.

Terminal Block Layout

- BRIDGE JUMPER.
- COMB JUMPER.
- DATALINE SPD.
- END BRACKETS.
- FUSIBLE TERMINAL BLOCK.
- GROUND BUS BAR.
- GROUNDING TERMINAL BLOCK.
- HC TERMINAL BLOCK.
- HEAVY DUTY END BRACKETS.
- KNIFE DISCONNECT TERMINAL BLOCK.
- LC TERMINAL BLOCK.
- PANEL OUTLET.
- POWER CIRCUIT BREAKER.
- RELAY SWITCH BASE.
- TERMINAL STRIP ID TAG. (TBX)
- RELAY TERMINAL BLOCK.
- SURGE SURPRESSOR.

Panel Layout

- SELECTOR SWITCH.
- PUSH BUTTON SWITCH.
- AUDIBLE ALARM.
- INDICATOR LIGHT WITH COLOR.

  A - AMBER G - GREEN
  B - BLUE R - RED
  C - CLEAR W - WHITE

Control Lines

- FIELD WIRING.
- WIRING.
- TWISTED SHIELDED PAIR.
- CABLE SHIELD.

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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS
INSTRUMENTATION & CONTROL SYMBOL LEGEND

DRAWING
I002
199 OF 223

JOB NUMBER
2599.3220.0

Process & Instrumentation Diagram Symbol Legend

Valves

- GATE.
- K — KNIFE GATE.
- BUTTERFLY.
- GLOBE.
- BALL.
- V — VEE-BALL.
- PLUG.
- SEAT PORT ECCENTRIC PLUG.
- DIAPHRAGM.
- PINCH.
- NEEDLE.
- SWING CHECK.
- BALL CHECK.
- S — SOLENOID.
- PRESSURE RELIEF.
- REGULATED SIDE. PRESSURE CONTROL.
- AIR AND/OR VACUUM RELEASE.
- MULTI-PORT VALVE, GATE VALVE SHOWN. (FOR OTHER VALVE TYPES, APPROPRIATE VALVE SYMBOL SHOWN) ARROWS INDICATE FLOW PATTERN. SEAL PORTS ARE IMPLIED BY INDICATED FLOW PATTERN.

Pumps & Compressors

- SUBMERSIBLE PUMP AND MOTOR.
- SUBMERSIBLE PUMP.
- CENTRIFUGAL PUMP (DRY PIT).
- CENTRIFUGAL.
- COMPRESSOR (CENTRIFUGAL) BLOWER OR TURBINE.
- CHEMICAL FEED PUMP.
- EJECTOR.
- DIAPHRAGM PUMP.
- GEAR PUMP OR BLOWER (POSITIVE DISPLACEMENT).
- SILENCER.
- VERTICAL TURBINE PUMP.
- M — MIXER.

Primary Flow Elements

- SLUICE.
- M — ELECTROMAGNETIC FLOW METER.
- CA — COMPRESSED AIR FLOW METER.
- UV — UV REACTOR.
- PROPELLER OR TURBINE METER.
- ROTAMETER.

Gate Valves

- SLUICE.
- BUTTERFLY.
- FLAP.
- SLIDE.
- SHEAR.
- MANUAL/SLIDE.

Actuators

- E XX — ELECTRIC.
- H XX — HYDRAULIC.
- EH XX — ELECTRIC-HYDRAULIC.
- S XX — SOLENOID.
- P XX — PNEUMATIC.
- MANUAL.
- E Z XX — ELECTRIC W/ POSITIONER.
- P B XX — PNEUMATIC WITH VOLUME BOOSTER.
- P DT — PNEUMATIC, DOUBLE ACTING.
- P S XX — PNEUMATIC W/ SOLENOID.
- P Z XX — PNEUMATIC W/ POSITIONER.

Line Types

- WIRING.
- FIELD WIRING.
- SOFTWIRE LINES. TO BE NETWORK CONNECTION.
- PIPING.
- A — COMPRESSED AIR LINE.

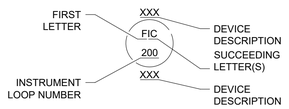
Interface

- NAME | IXX.XX — PROCESS ENTRY/EXIT POINT.
- XY XY / XY XY — I/O ARROW. (X) INDICATES EITHER A FOR ANALOG (4 TO 20 mAdc, ETC.) OR D FOR DIGITAL (ON/OFF, ETC.) Y INDICATES NUMBER OF SIGNALS REPRESENTED.
- 120V — ELECTRICAL POWER SUPPLY VOLTAGE AS NOTED.

INSTRUMENT IDENTIFICATION TAG LETTERS

	FIRST LETTER		SUCCEEDING LETTER(S)		
ID	MEASURED or INITIATING VARIABLE	MODIFIER	READOUT or PASSIVE FUNCTION	OUTPUT FUNCTION	MODIFIER
A	ANALYSIS		ALARM		
B	BURNER FLAME		USER'S CHOICE	USER'S CHOICE	USER'S CHOICE
C	CONDUCTIVITY (ELECTRICAL)			CONTROLLER	
D	DENSITY	DIFFERENTIAL			
E	VOLTAGE (EMF)		PRIMARY ELEMENT		
F	FLOW	RATIO			
G	GAUGING (DIMENSIONAL)		GLASS		
H	HAND (MANUALLY INITIATED)				HIGH and HIGH-HIGH
I	CURRENT (ELECTRICAL)		INDICATE		
J	POWER	SCAN			
K	TIME or TIME SCHEDULE			CONTROL STATION	
L	LEVEL		LIGHT (PILOT)		LOW and LOW-LOW
M	MOISTURE or HUMIDITY				MID./ INTERMEDIATE
N	TORQUE		ISOLATOR		
O	USER'S CHOICE		ORIFICE		
P	PRESSURE or PNEUMATIC		POINT		
Q	QUANTITY	INTEGRATE TOTALIZE			
R	RADIOACTIVITY		RECORD or PRINT		
S	SPEED or FREQUENCY			SWITCH	
T	TEMPERATURE			TRANSMITTER	
U	MULTI-VARIABLE		MULTI-FUNCTION	MULTI-FUNCTION	MULTI-FUNCTION
V	VISCOSITY			VALVE DAMP./ LOUVER	
W	WEIGHT or FORCE		WELL		
X	UNCLASSIFIED		UNCLASSIFIED	UNCLASSIFIED	UNCLASSIFIED
Y	EVENT, STATE or PRESENCE			RELAY or COMPUTE	
Z	POSITION				

Instrument Tag Number



Indicators

- RUN / YR 200 — PANEL FRONT MOUNTED INDICATING LIGHT.
- HS 100 — PANEL FRONT MOUNTED OPERATOR DEVICE.
- ZSO 100 — FIELD (EQUIPMENT) MOUNTED CONTROL DEVICE.
- JA 240 — BACK PANEL MOUNTED CONTROL DEVICE.

Logic

- I — CONTROL LOGIC GENERALIZED TO REPRESENT PLC AND/OR HARDWIRED RELAY LOGIC. REFERENCE LADDER DIAGRAM OR WRITTEN SPECIFICATIONS FOR DETAIL. WITH DIGITAL AND/OR ANALOG SIGNAL INPUTS AND/OR OUTPUTS.
- CONTROL FUNCTION RESIDENT IN SCADA DEVICES. REFERENCE WRITTEN SPECIFICATIONS FOR COMPLETE DESCRIPTION.

Transmitters

- LS 100 — LEVEL FLOAT SWITCH.
- LIT 100 — REMOTE ULTRASONIC LEVEL TRANSMITTER.
- LE 100 — ULTRASONIC LEVEL TRANSDUCER TRANSMITTER.
- PIT 100 — REMOTE PRESSURE LEVEL TRANSMITTER.
- LE 100 — PRESSURE LEVEL TRANSDUCER ELEMENT.
- LIT 100 — REMOTE RADAR LEVEL TRANSMITTER.
- LE 100 — RADAR LEVEL TRANSDUCER ELEMENT.
- FIT 100 — ELECTROMAGNETIC FLOW METER TRANSDUCER TRANSMITTER.
- FE 100 — ELECTROMAGNETIC FLOW METER TRANSDUCER ELEMENT.
- M

REVISIONS

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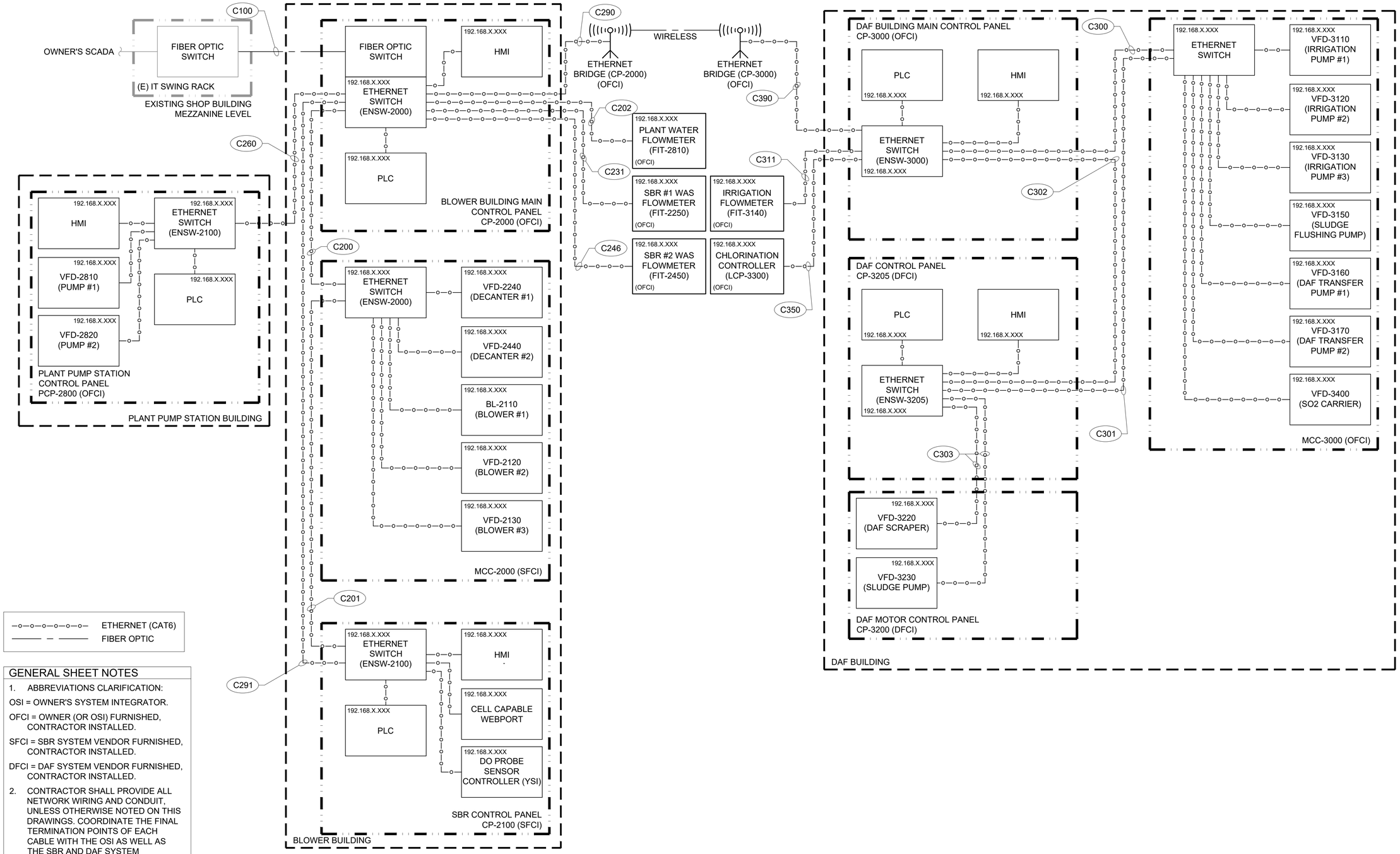
CITY OF AUMSVILLE, OREGON

WASTEWATER TREATMENT PLANT IMPROVEMENTS

PROCESS & INSTRUMENTATION SYMBOL LEGEND

DRAWING
1003
200 OF 223

JOB NUMBER
2599.3220.0



GENERAL SHEET NOTES

1. ABBREVIATIONS CLARIFICATION:

OSI = OWNER'S SYSTEM INTEGRATOR.

OFCI = OWNER (OR OSI) FURNISHED, CONTRACTOR INSTALLED.

SFCI = SBR SYSTEM VENDOR FURNISHED, CONTRACTOR INSTALLED.

DFCI = DAF SYSTEM VENDOR FURNISHED, CONTRACTOR INSTALLED.

2. CONTRACTOR SHALL PROVIDE ALL NETWORK WIRING AND CONDUIT, UNLESS OTHERWISE NOTED ON THIS DRAWINGS. COORDINATE THE FINAL TERMINATION POINTS OF EACH CABLE WITH THE OSI AS WELL AS THE SBR AND DAF SYSTEM SUPPLIERS.
3. NETWORK EQUIPMENT LABELED WITH 192.168.X.X ARE IP ADDRESSES WHERE THE "X" DEMARCATION SHALL BE PROVIDED BY THE OSI.
4. CONTRACTOR SHALL COORDINATE WITH THE VENDORS (SBR AND DAF CLARIFIER EQUIPMENT SUPPLIERS) AS WELL AS THE OSI TO AS-BUILT THIS DRAWING AND PROVIDE EACH IP ADDRESS.

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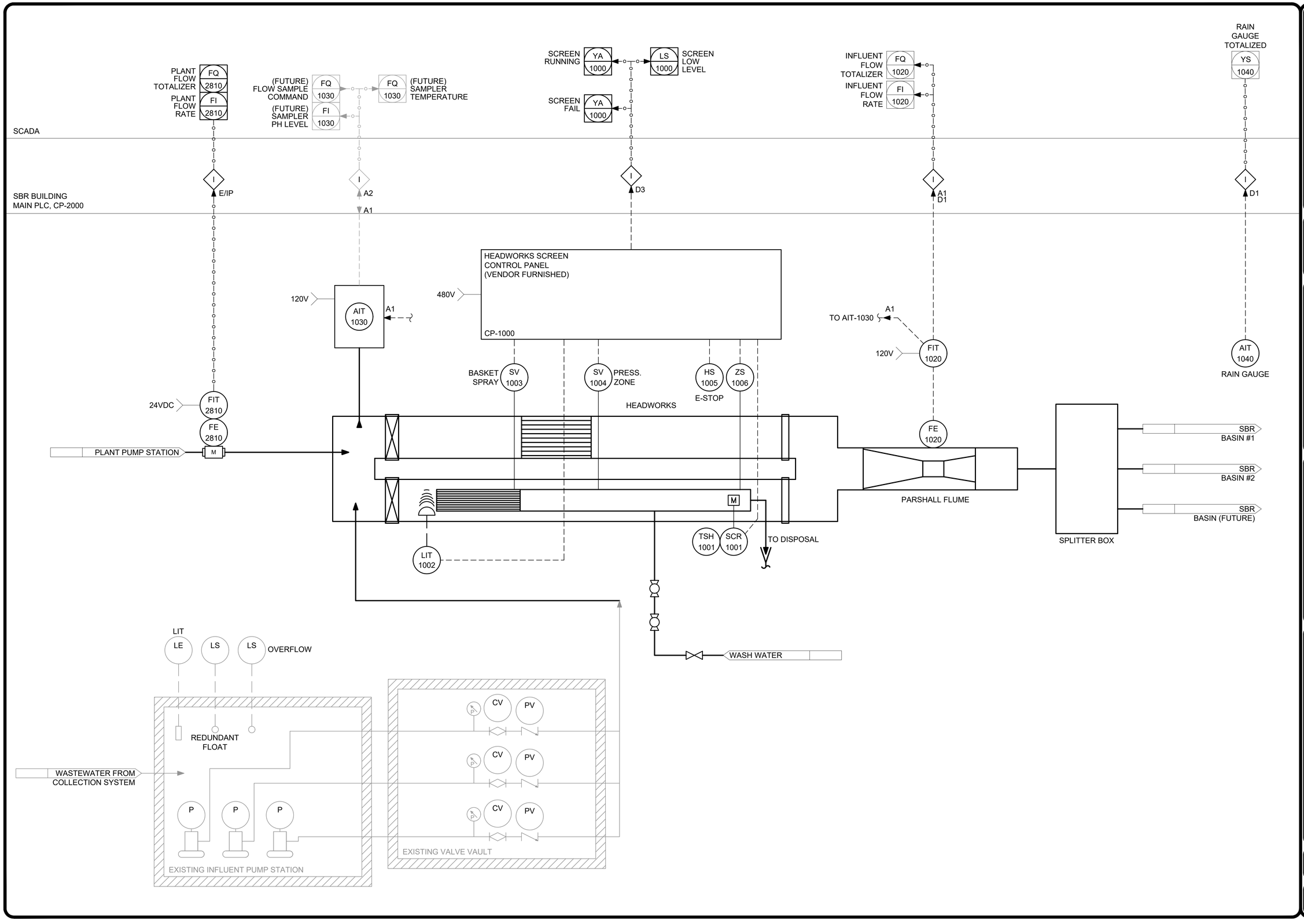
CITY OF AUMSVILLE, OREGON

WASTEWATER TREATMENT PLANT IMPROVEMENTS

SCADA & NETWORK BLOCK DIAGRAM

DRAWING
I010
201 OF 223

JOB NUMBER
2599.3220.0



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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

P&ID INFLUENT VALVE VAULT & HEADWORKS

DRAWING
I011
202 OF 223

JOB NUMBER
2599.3220.0

SCADA

HIGH TEMP TH 2130 — YC 2130 SPEED SELECT
SPEED COMMAND SC 2130 — YA 2130 FAIL
START COMMAND XC 2130 — YL 2130 RUNNING
SPEED FEEDBACK CMD ST 2130 — HS 2130 HOA IN AUTO

HIGH TEMP TH 2120 — YC 2120 SPEED SELECT
SPEED COMMAND SC 2120 — YA 2120 FAIL
START COMMAND XC 2120 — YL 2120 RUNNING
SPEED FEEDBACK CMD ST 2120 — HS 2120 HOA IN AUTO

HIGH TEMP TH 2110 — YC 2110 SPEED SELECT
SPEED COMMAND SC 2110 — YA 2110 FAIL
START COMMAND XC 2110 — YL 2110 RUNNING
SPEED FEEDBACK CMD ST 2110 — HS 2110 HOA IN AUTO

SBR BUILDING
MAIN PLC, CP-2000

I

SBR CONTROLLER
PLC, CP-2100

I — D4 A1 A1 D2

VFD

MCC-2000

CLOSED ZSC 2200 — ZSO 2200 HOA IN-AUTO
CLOSE CMD ZYC 2200 — ZSO 2200 OPENED
ZYO 2200 OPEN CMD

CLOSED ZSC 2400 — ZSO 2400 HOA IN-AUTO
CLOSE CMD ZYC 2400 — ZSO 2400 OPENED
ZYO 2400 OPEN CMD

D2 I D1 D2

D2

CLOSE / OFF / AUTO / OPEN HS 2200
G YL 2200 CLOSED
R YL 2200 OPEN
CP-2200

CLOSE / OFF / AUTO / OPEN HS 2400
G YL 2400 CLOSED
R YL 2400 OPEN
CP-2400

CONTINUED ON SHEET I013

CONTINUED ON SHEET I014

BL 2110 TSH 2110
SBR BLOWER #1
BL-2110

BL 2120 TSH 2120
SBR BLOWER #2
BL-2120

BL 2130 TSH 2130
SBR BLOWER #3
BL-2130

P CV HV

120V FROM CP-2100 ACV 2200 ZS 2200 M
SBR BASIN #1

120V FROM CP-2100 ACV 2400 ZS 2400 M
SBR BASIN #2

BLOWER BUILDING

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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

P&ID BLOWER BUILDING

DRAWING
I012
203 OF 223

JOB NUMBER
2599.3220.0

SCADA

SBR BUILDING
MAIN PLC, CP-2000

SBR CONTROLLER PLC,
CP-2100

HIGH TEMP TH 2220 — MOISTURE ALARM MS 2220 — FAIL YA 2220 — START COMMAND XC 2220 — RUNNING YL 2220 — RUN ENABLE (AUX.) YC 2220 — HOA IN AUTO HS 2220

ZCO 2201 PURGE VALVE OPEN

FI 2250 FLOW — FQ 2250 FLOW TOTALIZER

DO LEVEL AI 2210

LI 2211 BASIN LEVEL — LS 2212 STORM FLOAT

HIGH TEMP TH 2230 — MOISTURE ALARM MS 2230 — FAIL YA 2230 — START COMMAND XC 2230 — RUNNING YL 2230 — RUN ENABLE (AUX.) YC 2230 — HOA IN AUTO HS 2230

SPEED COMMAND SC 2240 — RUNNING YL 2240
RAISE COMMAND ZRC 2240 — HOA IN AUTO HS 2240
LOWER COMMAND ZLC 2240 — DECANTER RAISE LIMIT ZSH 2240
SPEED SELECT SS 2240 — DECANTER SECONDARY RAISE LIMIT ZSHH 2240
VFD FAIL YA 2240 — DECANTER LOWER LIMIT ZSL 2240
DECANTER SECONDARY LOWER LIMIT ZSLL 2240

EIP

D1 A1 D2 D5 A3

ISB-2211 ISB-2212

MCC-2000 FVNR VFD

DISCONNECT AUX. CONTACT

CONTINUED ON SHEET I012

CP-2200 HS 2220 HOA R YL 2220 RUNNING

CP-2200 HS 2230 HOA R YL 2230 RUNNING RAISE / OFF / AUTO / LOWER HS 2240

HV SV 2201 S A

SBR BLOWERS

SPLITTER BOX

P-2220-DIS

120VAC AIT 2210 JB-2211 MX-230-DIS

SLUDGE STORAGE LAGOON

DO AE 2210 PROBE — LE 2211 LEVEL — LSLL 2212 FLOAT

MX 2230 MSH 2230 TSH 2230 M MIXER #1

JBH-2240 JBL-2240

MSH 2220 TSH 2220 P 2220 WAS PUMP #1

24VDC FIT 2250 CV FE 2250 M HV

DECANTER #1

DEC 2240 ZSH 2240 ZSHH 2240 ZSL 2240 ZSLL 2240

SBR BASIN #1

EQ BASIN

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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

P&ID SBR BASIN #1

DRAWING
1013
204 OF 223

JOB NUMBER
2599.3220.0

SCADA

SBR BUILDING
MAIN PLC, CP-2000

SBR CONTROLLER PLC,
CP-2100

HIGH TEMP — TH 2420 — MS 2420 — MOISTURE ALARM
FAIL — YA 2420
START COMMAND — XC 2420 — YL 2420 — RUNNING
RUN ENABLE (AUX.) — YC 2420 — HS 2420 — HOA IN AUTO
ZCO 2401 — PURGE VALVE OPEN
FI 2450 — FLOW
FQ 2450 — FLOW TOTALIZER
DO LEVEL — AI 2410
LI 2411 — BASIN LEVEL
LS 2412 — STORM FLOAT
HIGH TEMP — TH 2430 — MS 2430 — MOISTURE ALARM
FAIL — YA 2430
START COMMAND — XC 2430 — YL 2430 — RUNNING
RUN ENABLE (AUX.) — YC 2430 — HS 2430 — HOA IN AUTO
SPEED COMMAND — SC 2440 — YL 2440 — RUNNING
RAISE COMMAND — ZRC 2440 — HS 2440 — HOA IN AUTO
LOWER COMMAND — ZLC 2440 — ZSH 2440 — DECANTER RAISE LIMIT
SPEED SELECT — SS 2440 — ZSHH 2440 — DECANTER SECONDARY RAISE LIMIT
VFD FAIL — YA 2440 — ZSL 2440 — DECANTER LOWER LIMIT
ZSLL 2440 — DECANTER SECONDARY LOWER LIMIT

EIP

ISB-2411 ISB-2412

MCC-2000 — FVNR

MCC-2000 — FVNR — VFD

DISCONNECT AUX. CONTACT

CP-2400 — HS 2420 HOA — R — YL 2420 RUNNING

CP-2400 — HS 2430 HOA — R — YL 2430 RUNNING — RAISE / OFF / AUTO / LOWER — HS 2440

CONTINUED ON SHEET I012

HV — SV 2401 — S

SBR BLOWERS

SPLITTER BOX

P-2420-DIS

120VAC — AIT 2410 — JB-2411

MX-2430-DIS

SLUDGE STORAGE LAGOON

DO — AE 2410 — PROBE

LE 2411 — LEVEL

LSLL 2412

MX 2430 — MSH 2430 — TSH 2430 — M — MIXER #2

JBH-2440 — JBL-2440

DECANTER #2

MSH 2420 — TSH 2420 — P 2420 — WAS PUMP #2

24VDC — FIT 2450 — FE 2450 — CV — HV

FLOAT

DEC 2440 — ZSH 2440 — ZSHH 2440 — ZSL 2440 — ZSLL 2440

EQ BASIN

SBR BASIN #2

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DATE: JUN 2026

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EXPIRES: 12-31-2026

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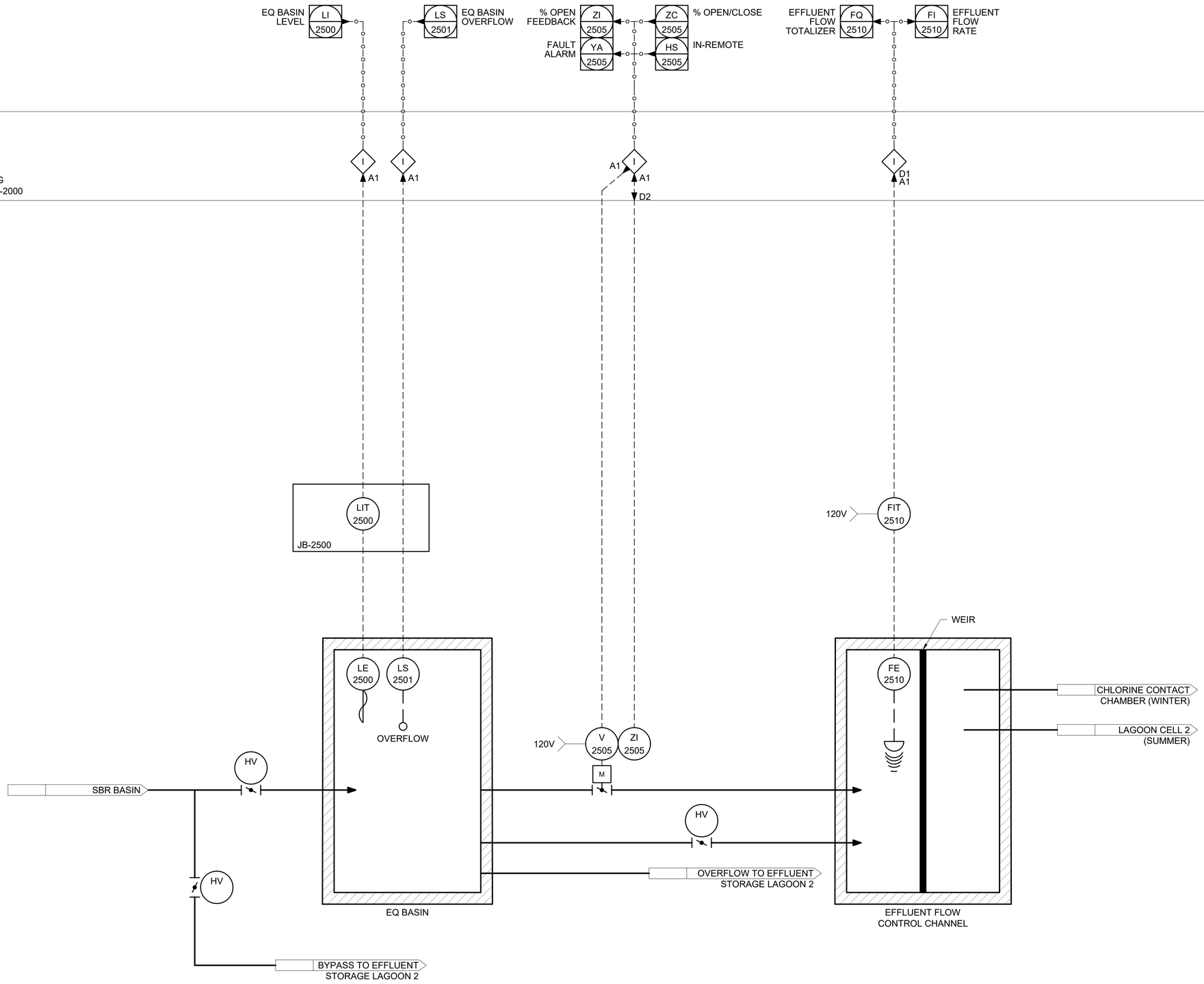
CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

P&ID SBR BASIN #2

DRAWING
I014
205 OF 223

JOB NUMBER
2599.3220.0



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		REVISIONS	

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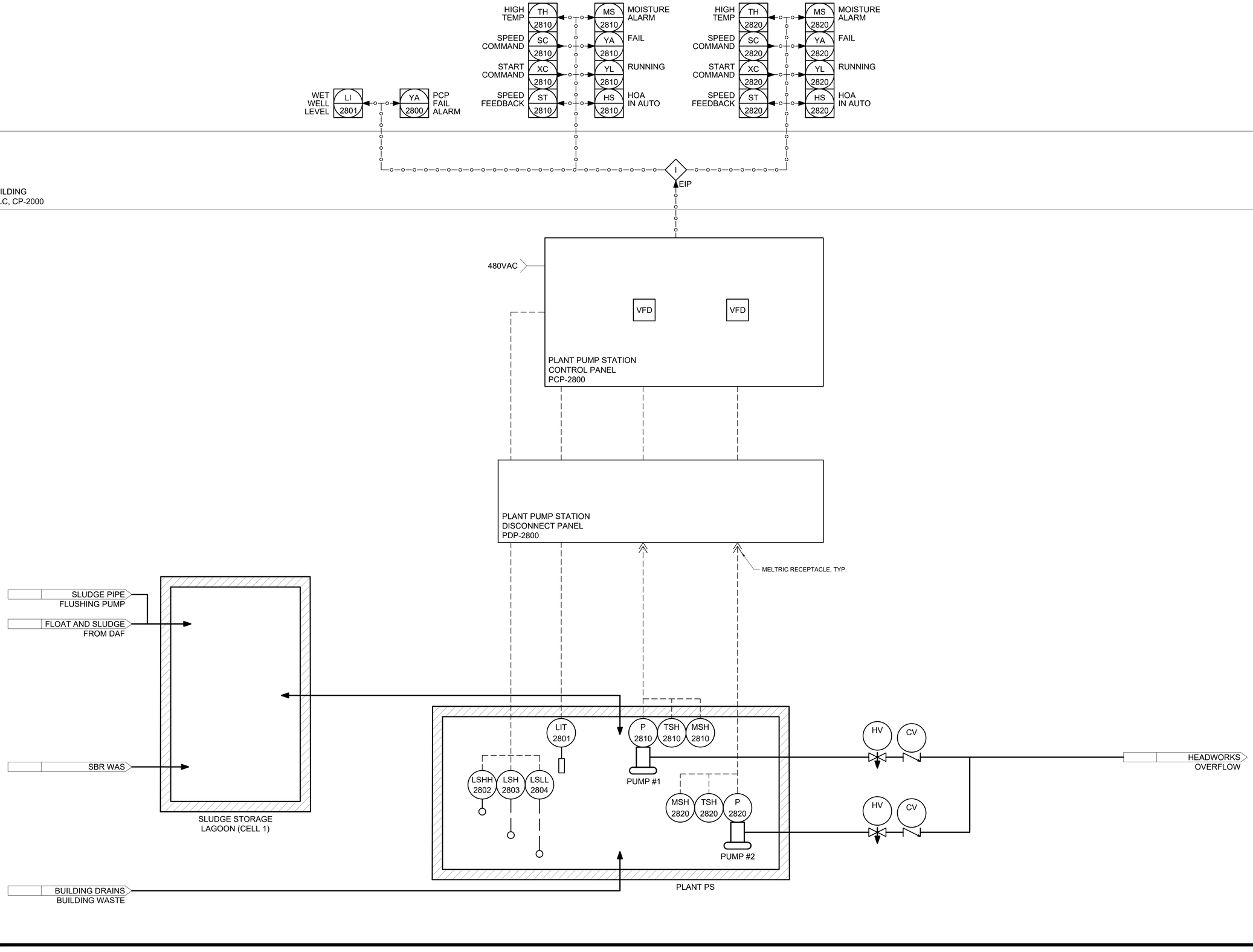
CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

P&ID EQ BASIN & EFFLUENT FLOW CONTROL CHANNEL

DRAWING
1015
206 OF 223

JOB NUMBER
2599.3220.0



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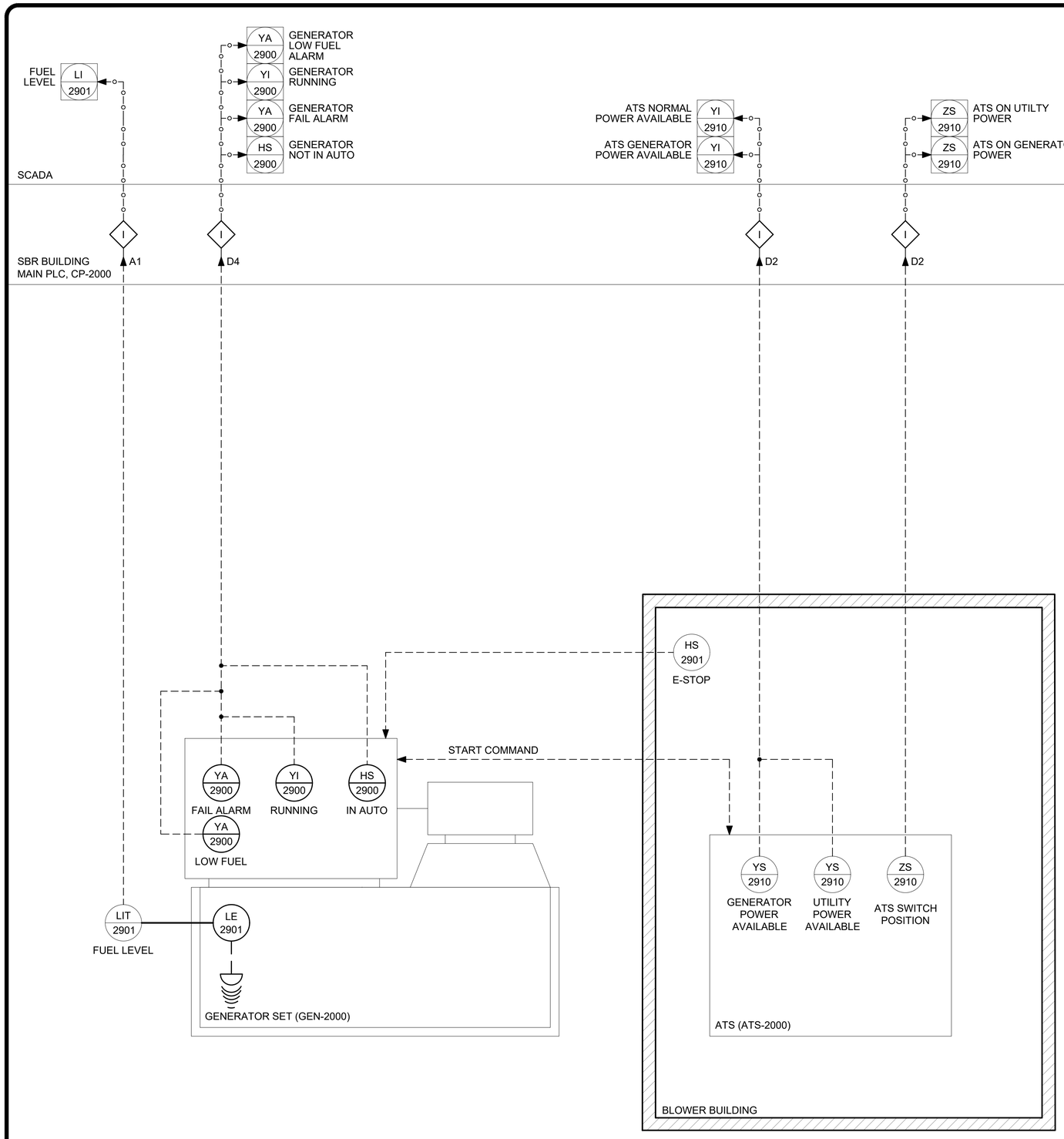
CITY OF AUMSVILLE, OREGON

WASTEWATER TREATMENT PLANT IMPROVEMENTS

P&ID SLUDGE STORAGE LAGOON & PLANT PUMP STATION

DRAWING
I016
207 OF 223

JOB NUMBER
2599.3220.0



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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

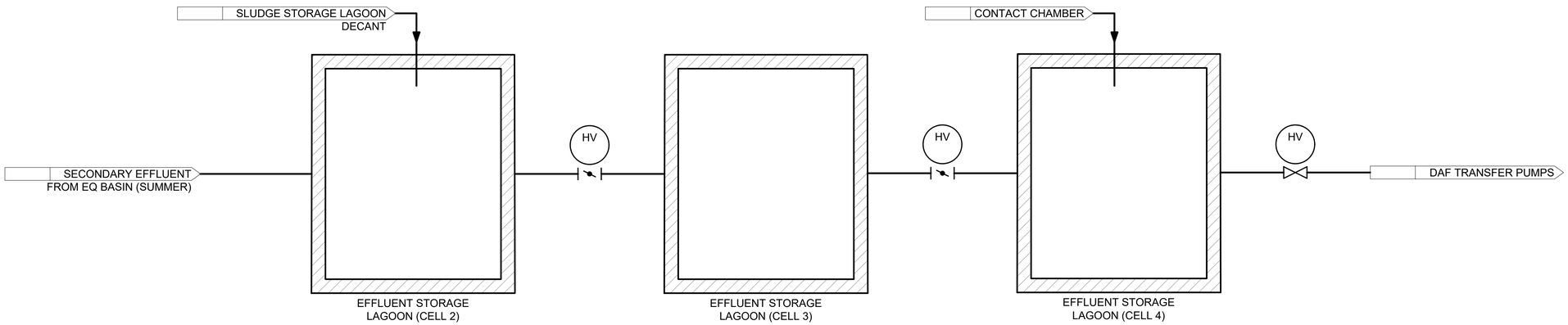
P&ID SBR GENERATOR

DRAWING
1017
208 OF 223

JOB NUMBER
2599.3220.0

SCADA

DAF BUILDING
MAIN PLC, CP-3000



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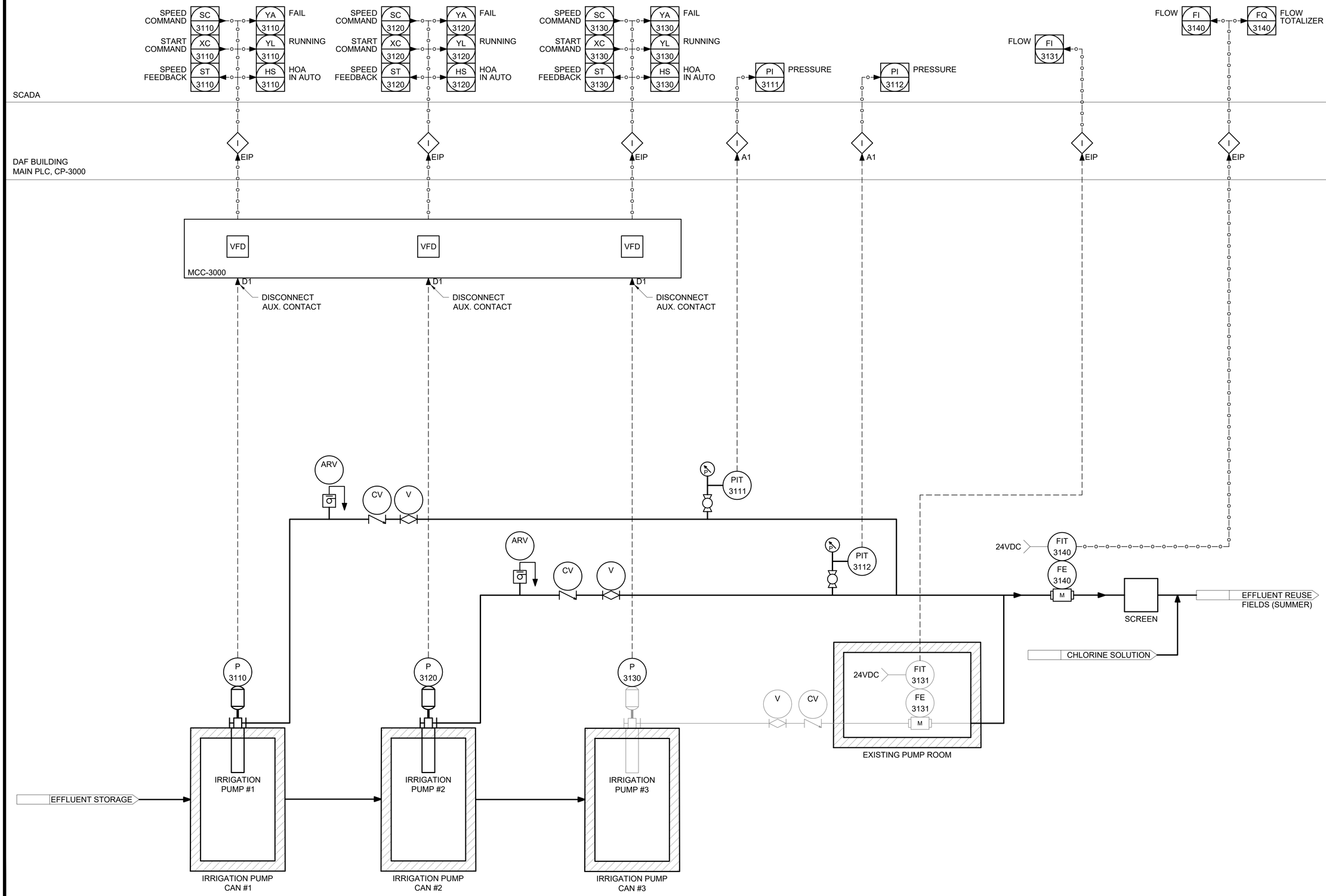
CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

P&ID EFFLUENT LAGOON CELLS

DRAWING
1018
209 OF 223

JOB NUMBER
2599.3220.0



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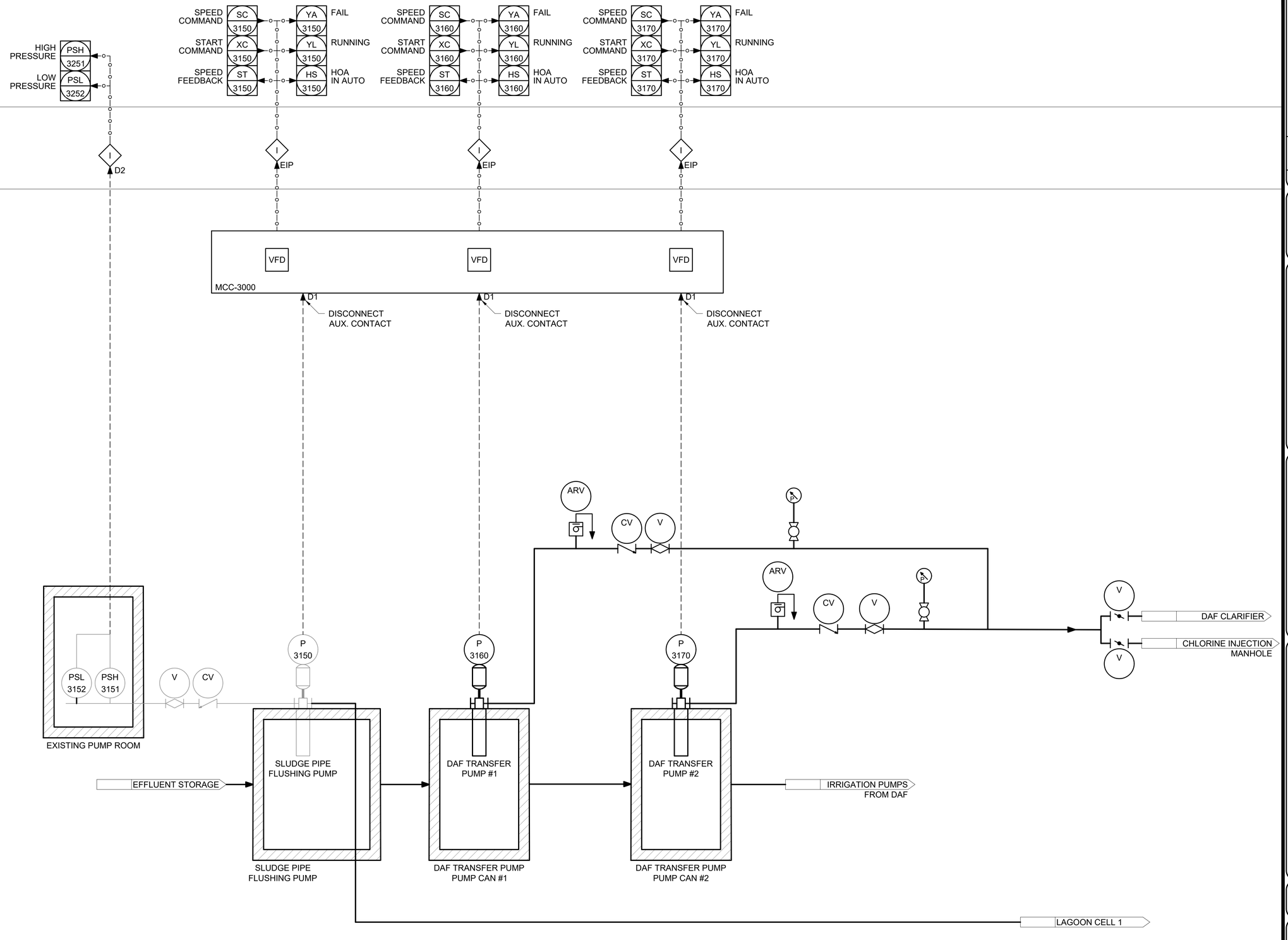
CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

P&ID IRRIGATION PUMPS

DRAWING
1019
210 OF 223

JOB NUMBER
2599.3220.0



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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

P&ID DAF TRANSFER PUMPS

DRAWING
I020
211 OF 223

JOB NUMBER
2599.3220.0

SCADA

DAF BUILDING
MAIN PLC, CP-3000

DAF CLARIFIER SYSTEM PLC,
CP-3205

RUNNING YL 3241
RUNNING YL 3240
E-STOP YA 3201
ZC 3200 % CMD
ZI 3200 % FDBK
FI 3201 DAF FLOW
ZCO 3244 OPEN CMD
ZCO 3244 OPEN CMD
PSL 3242 LOW PRESS
RECYCLE FLOW FIT 3211
DAF LEVEL LS 3231
STORM FLOAT LS 3232
XC 3210 START CMD
YA 3210 FAIL
YL 3210 RUNNING
HS 3210 HOA IN AUTO
OPEN CMD ZC 3221
RUNNING OPEN ZSO 3221
CLOSED ZSC 3221
OPEN ZSC 3222 CLOSED
OPEN CMD ZC 3222
ZSO 3222 OPEN
OPEN CMD ZC 3233
ZSO 3233 OPEN
ZSC 3233 CLOSED
ZCO 3219 OPEN CMD
SPEED CMD SC 3220
START CMD XC 3220
SPEED FDBK ST 3220
YA 3220 FAIL
YL 3220 RUNNING
HS 3220 HOA IN AUTO
VI 3200 VOLTAGE STATUS
SPEED CMD SC 3230
START CMD XC 3230
SPEED FDBK ST 3230
YA 3230 FAIL
YL 3230 RUNNING
HS 3230 HOA IN AUTO
AIT 3240 EFFLUENT TURBIDITY
ZI 3245 % FDBK
ZC 3245 % CMD

I D1 K
I D1 J
I D1
I A1
I A1
I D1 F
I D1 G
I D1 H
I A1
I A1
I D1
I D3 D1
I D2 D1 A
I D2 D1 B
I D2 D1 C
I D
I EIP
I D1
I EIP
I A1
I A2

HS 3201 REMOTE E-STOP

FVNR
VFD
VI 3200
VFD
DAF MOTOR CONTROL PANEL
CP-3200

480VAC
E

FIT 3201 24VDC

TUBE FLOCCULATOR & DAF CLARIFIER

120V
AIT 3240
FCV 3245
CONTACT CHAMBER

DAF SCRAPER
M 3230 M

TUBE FLOCCULATOR
FCV 3200
FE 3201 M
FROM DAF TRANSFER PUMPS
F
G
SV 3243
SV 3244
H
PSL 3242
PNEUMATIC CONTROLLER
K
CMP 3240 208V
M
AIR
J
CMP 3241 208V
M
AIR
POLYMER
ALUM

LIT 3231
LSH 3232
24VDC
FIT 3211
FE 3211 M
V
DAF CLARIFIER
A
V 3221 M
ZS 3221
V 3222 M
ZS 3222
B
V 3233
ZS 3233
C
D
E
SV 3219
TSH 3220
P 3220
CV
SLUDGE STORAGE LAGOON
SLUDGE PUMP
CV
P
480V
P 3210
AIR
PI
RECYCLE PUMP

EQUIPMENT IS FURNISHED BY THE DAF CLARIFIER SYSTEM SUPPLIER. CONTRACTOR SHALL COORDINATE WITH THE OWNER AND DAF CLARIFIER SYSTEM SUPPLIER (KROFTA) FOR INSTALLATION AND TERMINATIONS TO THE SYSTEM SUPPLIER'S PLC.

NO.	DATE	DESCRIPTION	BY
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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

P&ID DAF CLARIFIER

DRAWING
I021
212 OF 223

JOB NUMBER
2599.3220.0

SCADA

DAF BUILDING
MAIN PLC, CP-3000

DAF CLARIFIER SYSTEM PLC,
CP-3205

FS 3290 SHOWER IN-USE

RUN CMD XC 3250
POLYMER DOSING FLOW FI 3250
YL 3250 RUNNING
FSL 3250 LOW FLOW

RUN CMD XC 3260
POLYMER DOSING FLOW FI 3260
YL 3260 RUNNING
FSL 3260 LOW FLOW

RUN CMD XC 3270
COAG DOSING FLOW FI 3270

RUN CMD XC 3280
COAG DOSING FLOW FI 3280

D1
D2
A1

P 3250 — 120V FROM CP-3205 — TUBE FLOCCULATOR
POLYMER TANK #1

P 3260 — 120V FROM CP-3205 — TUBE FLOCCULATOR
POLYMER TANK #2

ALUM T-3270
P 3270 — 120V FROM CP-3205 — TUBE FLOCCULATOR

ALUM T-3280
P 3280 — 120V FROM CP-3205 — TUBE FLOCCULATOR

480V — H — TMV — FS 3290 — POTABLE WATER
INTERIOR EMERGENCY SHOWER
EMERGENCY SHOWER & EYEWASH
CHEMICAL TRANSFER AREA

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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

P&ID CHEMICAL FEED PUMPS

DRAWING
1022
213 OF 223

JOB NUMBER
2599.3220.0

SCADA

DAF BUILDING
MAIN PLC, CP-3000

DAF CLARIFIER SYSTEM PLC,
CP-3205

SALT TANK LEVEL LI 3311

RECTIFIER CURRENT II 3320

RECTIFIER VOLTAGE EI 3320

RECTIFIER RUNNING YL 3320

RECTIFIER FAIL YA 3320

BRINE PUMP START/STOP XC 3322

BRINE FLOW FI 3324

OPEN / CLOSE ZC 3322

WATER FLOW FI 3323

BRINE INLET TEMP TI 3325

ELECTROLYTE OUTPUT TEMP TI 3331

ELECTROLYTE LEVEL LI 3331

HYDROGEN LEAK ALARM YA 3340

EIP

480VAC

LCP-3300
OSEC CONTROLLER (ON SKID)
(CHLORINE GENERATION CONTROLLER)

LI 3311 · YL 3320 · YL 3320 · EIT 3320 · IIT 3320 · BP 3322 · FT 3324 · FV 3322 · FT 3323 · TT 3325 · TT 3331 · LSL 3331 · AAH 3340

A1 · D1

CONTINUED ON SHEET I024

AE 3340 · AIT 3340 · 120V

FIELD WIRING

FIELD WIRING

120V

LIT 3311

LE 3311

TR-3320
RECTIFIER (ON SKID)

YL 3320 · YL 3320 · EIT 3320 · IIT 3320

HYPOCHLORITE

TT 3331 · LSL 3331

EC-3330
ELECTROLYTE CONVERTER

BULK SOLAR SALT

SV 3312 · E

FO

PT 3313 · LIC 3313

SALT DISSOLVING TANK
BT-3310

POTABLE WATER

SANITARY DRAIN

WATER SOFTENER

FCV · FV 3322 · S

FT 3323 · M

WATER INLET FLOWMETER

P · FO

FO

BP 3322

P · PV

BRINE PUMP

FT 3324 · M · PV

BRINE FLOWMETER

TT 3325

EQUIPMENT IS MOUNTED ON PACKAGED SKID SYSTEM

NO.	DATE	DESCRIPTION	BY
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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

P&ID CHLORINE GENERATOR

DRAWING
I023
214 OF 223

JOB NUMBER
2599.3220.0

SCADA

DAF BUILDING
MAIN PLC, CP-3000

DAF CLARIFIER SYSTEM PLC,
CP-3205

XC 3351 — YA 3351 FAIL; HS 3351 RUNNING; HS 3351 HOA IN-AUTO

XC 3352 — YA 3352 FAIL; HS 3352 RUNNING; HS 3352 HOA IN-AUTO

HYPOCHLORITE LEVEL LI 3361

LOW AIR ALARM YA 3362

CL2 DOSING PUMP FAIL YA 3371; CL2 DOSING FLOW FI 3371

CL2 DOSING PUMP FAIL YA 3372; CL2 DOSING FLOW FI 3372

CL2 DOSING PUMP FAIL YA 3373; CL2 DOSING FLOW FI 3373

I — EIP

I — A1 D1

CONTINUED ON SHEET I023

LCP-3300
OSEC CONTROLLER (ON SKID)
(CHLORINE GENERATION CONTROLLER)

YIC 3351 — YIC 3352 — LIT 3361 — A1 — FSL 3362 — D1

MCC

XO 3351 — JIC 3351 — HS 3351 — XO 3352 — JIC 3352

VENT

120V — LIT 3361

LE 3361

FO — FSL 3362

HYPOCHLORITE

480VAC — BL 3351 — STORAGE TANK BLOWER #1

480VAC — BL 3352 — STORAGE TANK BLOWER #2

NACLO STORAGE TANK HT-3360

DRAIN

120V — P 3371 — PUMP #1

120V — P 3372 — PUMP #2 (SWING)

120V — P 3373 — PUMP #3

CHLORINE METERING PUMP SKID

CHLORINE INJECTION MANHOLE

IRRIGATION PUMP FLOW METER VAULT

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WASTEWATER TREATMENT PLANT IMPROVEMENTS

P&ID CHLORINE TANK & FEED PUMPS

DRAWING
I024
215 OF 223

JOB NUMBER
2599.3220.0

SCADA

DAF BUILDING
MAIN PLC, CP-3000

EFFLUENT FLOW FI 3401 — FQ 3401 EFFLUENT TOTALIZED FLOW

SPEED COMMAND SC 3400
START COMMAND XC 3400
SPEED FEEDBACK ST 3400
YA 3400 FAIL
YL 3400 RUNNING
HS 3400 HOA IN AUTO

CARRIER WATER FLOW FS 3500

SO2 WEIGHT #1 WI 3530 — WI 3530 SO2 WEIGHT #2

EFFLUENT FLOW SAMPLE COMMAND FQ 3600
EFFLUENT SAMPLER PH LEVEL AI 3600
TI 3600 EFFLUENT SAMPLER TEMPERATURE

YA 3531 GAS DETECTED

I A1 D1
I EIP
I D1
I A2
I A2 D1
I A1

480VAC — VFD — MCC-3000

120V — FIT 3401

D1 — DISCONNECT AUX. CONTACT

DAF FLOW METER

SECONDARY EFFLUENT FROM EQ BASIN (WINTER)

DAF INFLUENT

CHLORINE SOLUTION TANK

CHLORINE INJECTION MANHOLE

LAGOON CELL 4

120V

P 3410 DRAIN PUMP

P 3400 CARRIER WATER PUMP

CHLORINE CONTACT CHAMBER

3401 FE

WEIR

120V — AIT 3600 EFFLUENT SAMPLER

COMPLIANCE MANHOLE

FINAL EFFLUENT BEAVER CREEK (WINTER)

FS 3500 FLOW SWITCH

IV 3501 SULFUR INJECTOR

HMI — 120V — SULFUNATOR LCP-3510

SV 3520

SV 3540

VS 3511 VACUUM REGULATOR

SO2 GAS SCALE TRANSMITTER WIT 3530 — 120V — SULFUR DIOXIDE GAS

SO2 GAS MONITOR AIT 3531 — 120V

SO2 GAS SENSOR AE 3531

WE 3521

WE 3541

EXISTING DE-CHLORINATION BUILDING

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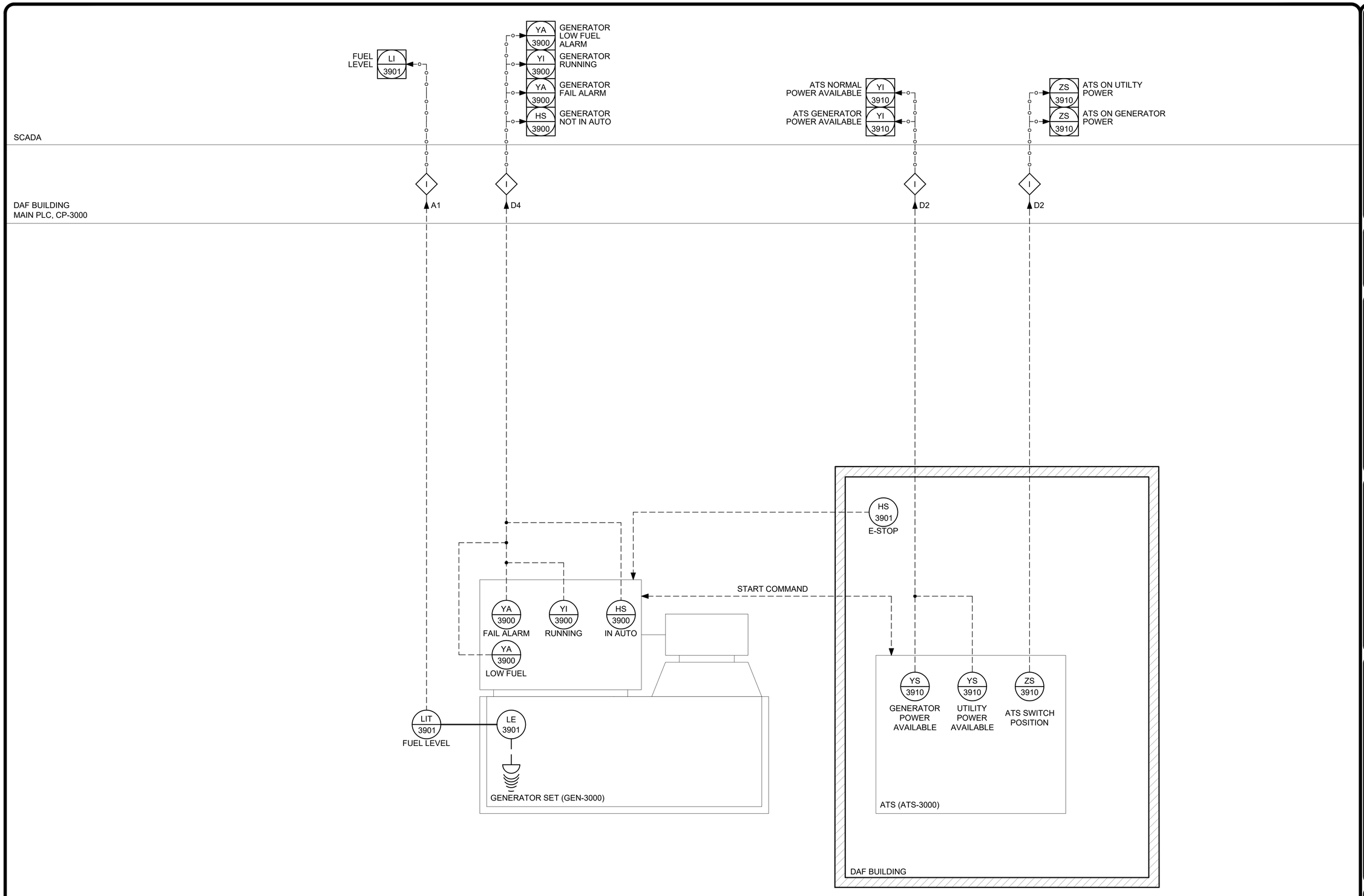
WASTEWATER TREATMENT PLANT IMPROVEMENTS

P&ID CHLORINE CONTACT CHAMBER & SULFUR INJECTION

DRAWING
I025
216 OF 223

JOB NUMBER
2599.3220.0



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3841 Fairview Industrial Dr. S.E., Suite 100, Salem, OR 97302
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E-mail: westech@westech-eng.com

CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

P&ID GENERATOR

DRAWING
1026
217 OF 223

JOB NUMBER
2599.3220.0

FIELD | CP-2000 | PLC

GENERAL SHEET NOTES

1. THE LOOP WIRING DIAGRAMS INCLUDED IN THIS DRAWING PACKAGE ARE TYLICAL DIAGRAMS. THE CONTRACTOR SHALL PRODUCE INSTRUMENT-SPECIFIC AS-BUILT LOOP WIRING DIAGRAMS FOR EACH INSTRUMENT LISTED IN SECTION 13420.
2. EACH INSTRUMENT-SPECIFIC AS-BUILT SHALL REFLECT ACTUAL, FIELD-VERIFIED CONDITIONS AND SHALL INCLUDE, AT MINIMUM:
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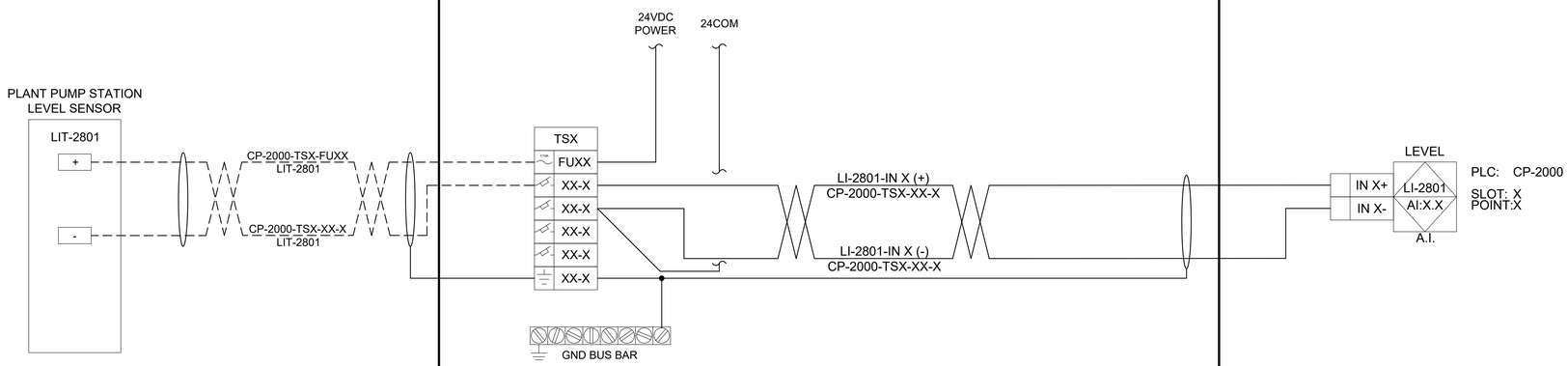
3. AS-BUILT LOOP WIRING DIAGRAMS SHALL BE SUBMITTED TO THE OWNER FOR REVIEW AND APPROVAL PRIOR TO PROJECT CLOSEOUT.



VERIFY SCALE
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DSN. DSN
DRN. DRWN
CKD. CHCK
DATE: JUN 2026

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

LANDIS CONSULTING
Salem
503-584-1576
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REGISTERED PROFESSIONAL ENGINEER
86683
Digitally Signed
OREGON
MAY 08, 2012
BENJAMIN E. PERRY
EXPIRES: 12-31-2026

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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

TYPICAL 2-WIRE (LOOP POWERED)

DRAWING
I101
218 OF 223

JOB NUMBER
2599.3220.0

FIELD | CP-3000 | PLC

GENERAL SHEET NOTES

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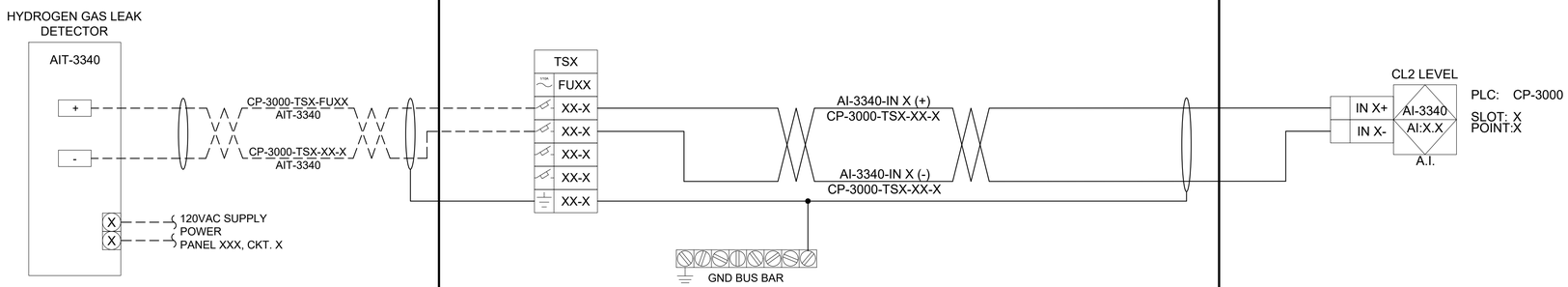

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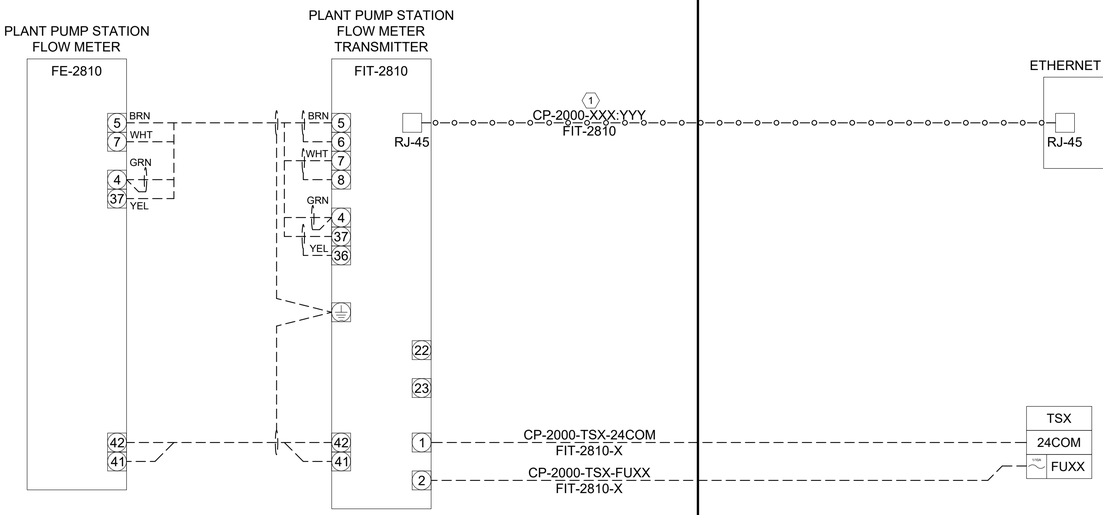
CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

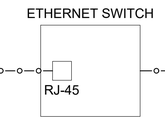
TYPICAL 2-WIRE (EXTERNALLY POWERED)

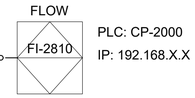
DRAWING
I102
219 OF 223

JOB NUMBER
2599.3220.0

FIELD | CP-2000 | PLC







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3. AS-BUILT LOOP WIRING DIAGRAMS SHALL BE SUBMITTED TO THE OWNER FOR REVIEW AND APPROVAL PRIOR TO PROJECT CLOSEOUT.

SHEET KEY NOTES

1. CONTRACTOR SHALL COORDINATE WITH OWNER'S SYSTEM INTEGRATOR (OSI) FOR FINAL TERMINATION POINTS AND AS-BUILT PATCH & PORT NUMBERS ON THIS LOOP DRAWINGS.
   - XXX = PATCH #.
   - YYY = PORT #.

NO.	DATE	DESCRIPTION	BY
		REVISIONS	

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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

TYPICAL FLOWMETER E IP LOOP DIAGRAM

DRAWING
I103
220 OF 223

JOB NUMBER
2599.3220.0

FIELD | CP-2000 | PLC

GENERAL SHEET NOTES

1. THE LOOP WIRING DIAGRAMS INCLUDED IN THIS DRAWING PACKAGE ARE TYVCAL DIAGRAMS. THE CONTRACTOR SHALL PRODUCE INSTRUMENT-SPECIFIC AS-BUILT LOOP WIRING DIAGRAMS FOR EACH INSTRUMENT VSTED IN SECTION 13420.
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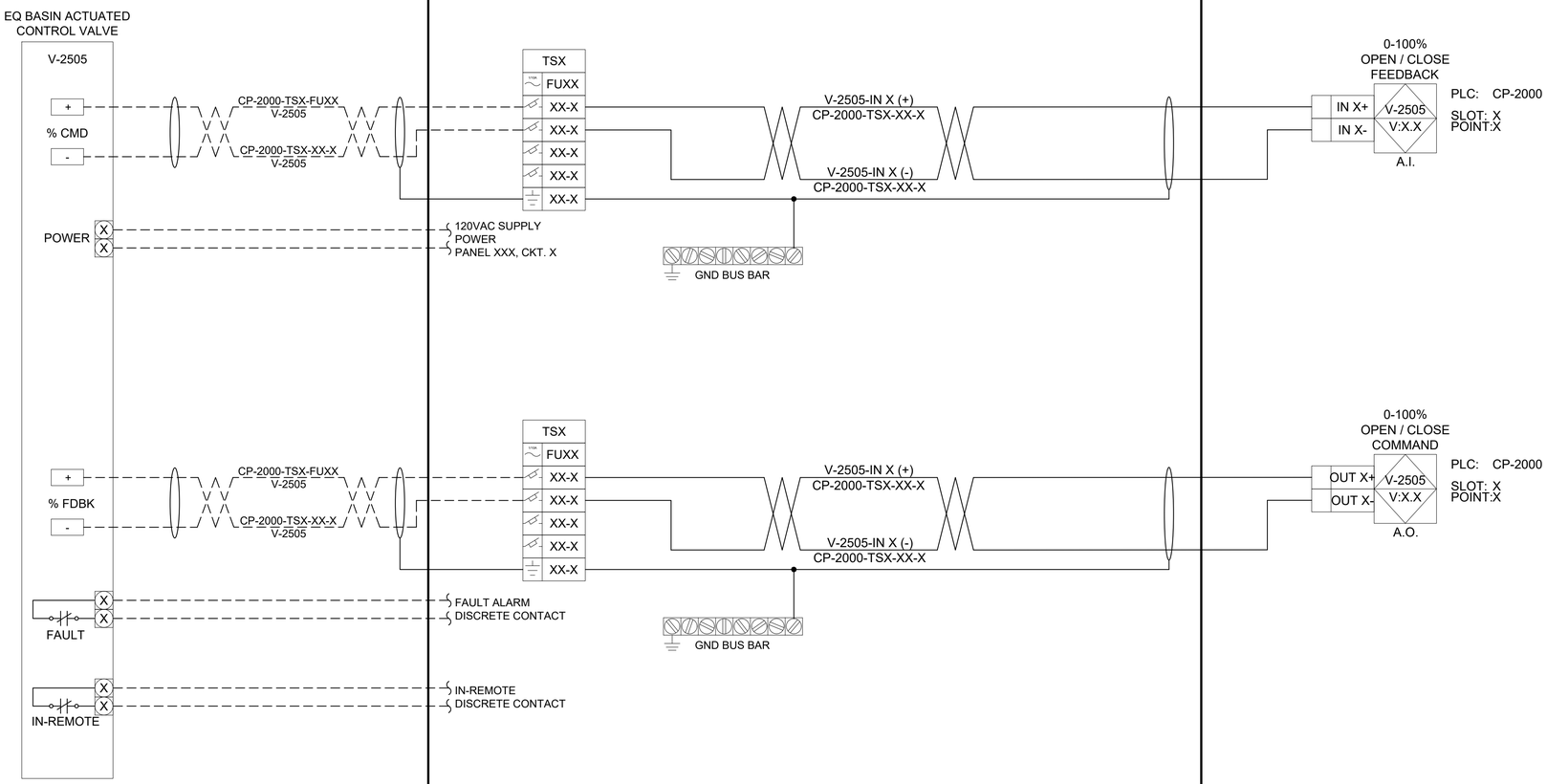

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CITY OF AUMSVILLE, OREGON

WASTEWATER TREATMENT PLANT IMPROVEMENTS

TYPICAL FLOW CONTROL VALVE (0-100%) LOOP DIAGRAM

DRAWING
I104
221 OF 223

JOB NUMBER
2599.3220.0

FIELD | MC-9000 | PLC

HEADWORKS PARSHALL FLUME INFLUENT FLOWMETER
FIT-1020

MANUFACTURER'S SUPPLIED CABLE - CONTRACTOR SHALL VERIFY INSTALLATION REQUIREMENTS WITH MANUFACTURER'S INSTRUCTIONS PRIOR TO INSTALLATION.

PARSHALL FLUME RADAR TRANSDUCER FE-1020

11 — 74
12 — 73

NC

TSX
FUXX
XX-X
XX-X
XX-X
XX-X
XX-X

GND BUS BAR

WI-7111A-INX (+)
MC-9000-TSX-XX-X

WI-7111A-INX (-)
MC-9000-TSX-XX-X

B1
B2
LI
230-10

PLC: 0
SLOT: 8
POINT:0

INFLUENT SAMPLER
AIT-1030

FLOW RATE
+ FIT-1020-72 AIT-1030 (+) — 72
- FIT-1020-71 AIT-1030 (-) — 71

X — 120VAC SUPPLY POWER PANEL XXX, CKT. X
X

FUTURE I/O
+ CP-2000-TSX-FUXX AIT-1030
- CP-2000-TSX-XX-X AIT-1030

TSX
FUXX
XX-X
XX-X
XX-X
XX-X
XX-X

AI-1030-IN X (+)
CP-2000-TSX-XX-X

AI-1030-IN X (-)
CP-2000-TSX-XX-X

(FUTURE) SAMPLER PH
IN X+
IN X-
AI-1030
AI:X.X

PLC: CP-2000
SLOT: X
POINT:X

FUTURE I/O
X
X
(FUTURE) SAMPLE COMMAND

GND BUS BAR

FUTURE I/O
+ CP-2000-TSX-FUXX AIT-1030
- CP-2000-TSX-XX-X AIT-1030

TSX
FUXX
XX-X
XX-X
XX-X
XX-X
XX-X

AI-1030-IN X (+)
CP-2000-TSX-XX-X

AI-1030-IN X (-)
CP-2000-TSX-XX-X

(FUTURE) SAMPLER TEMPERATURE
IN X+
IN X-
AI-1030
AI:X.X

PLC: CP-2000
SLOT: X
POINT:X

GND BUS BAR

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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

TYPICAL PARSHALL FLUME & SAMPLER LOOP DIAGRAM

DRAWING
I105
222 OF 223

JOB NUMBER
2599.3220.0

FIELD | CP-3000 | PLC

GENERAL SHEET NOTES

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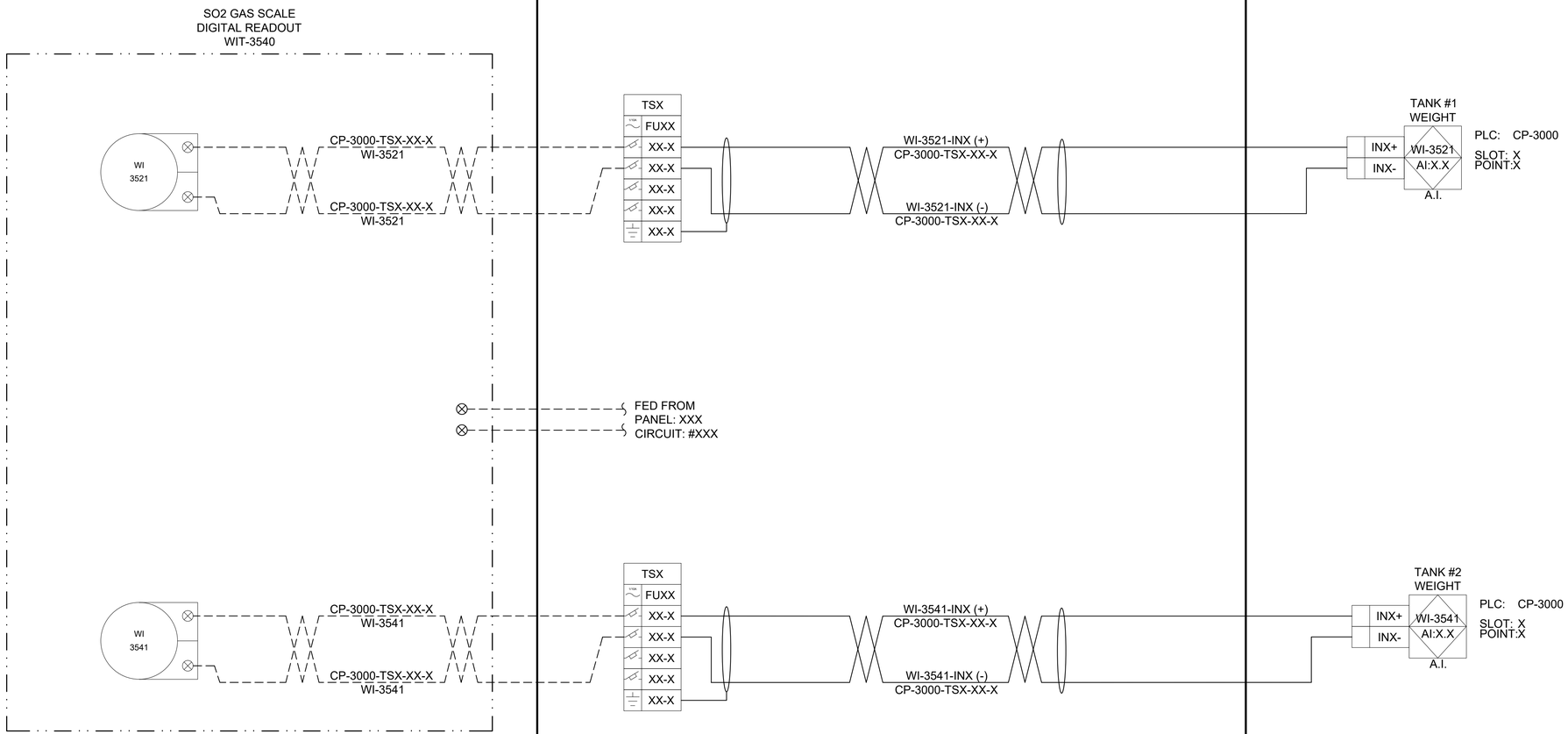

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CITY OF AUMSVILLE, OREGON
WASTEWATER TREATMENT PLANT IMPROVEMENTS

TYPICAL GAS SCALE LOOP DIAGRAM

DRAWING
I106
223 OF 223

JOB NUMBER
2599.3220.0