

## WPTP Primary Sedimentation Area Roof Structure

**Contract Number C01398C20**

### CLARIFICATION 3

Prospective bidders are hereby notified that pursuant to §00100-1.02, King County provides the following questions and responses as clarifications of the referenced Contract Documents. This Clarification form and these clarifications herein are not part of the Contract nor part of the Contract Documents.

Ref.	Section and Page or Drawing	Questions and Responses
1.	Spec Section 26 09 16 D-E201 to D-E208 E201 to E208	<p><b>Q.</b> We are unable to find a specification section for the following, so that we can know what manufacture and part number to use?</p> <ul style="list-style-type: none"> <li>• Control Stations</li> <li>• Torque Switches</li> <li>• Terminal Junction Boxes</li> </ul> <p><b>R.</b> Provide devices to match existing as follows:</p> <ul style="list-style-type: none"> <li>• Control Stations: Please refer to Spec 26 09 16, 2.01.D.</li> <li>• Torque Switches: These have been removed from the scope. Please refer to changes on D-E201 through D-E208 in Addendum 5.</li> <li>• Terminal Junction Boxes: Please refer to Drawing sheets E201 through E208, note 5.</li> </ul>
2.	Drawings E201 & E207	<p><b>Q.</b> We are unable to find Tag number “S06336 &amp; S06339” on the drawings? They are called out on the cable schedule E331. Please let us know where they apply?</p> <p><b>R.</b> Cables &amp; conductors require field verification. S06336 is located at Field Control Panel 706-FP0521 East Primary Outlet Gate. S06339 is located at Field Control Panel 706-FP0520 West Primary Outlet Gate.</p>
3.	Drawings S121 to S128 and S251 to S258	<p><b>Q.</b> Spec 07 14 00 fluid-applied membrane waterproofing We can't seem to locate the work scope for fluid-applied membrane waterproofing on the drawings set and other bid documents, please clarify where this work scope should apply</p> <p><b>R.</b> The fluid applied membrane is applied directly to the concrete surfaces of the flat canopy roofs. Note 5 on S121 through S128 and the Legends on S251 through S258 revised in Addendum 5.</p>
4.	Drawings S121 to S128 and S251 to S258 and Spec Section 41 22 23.19	<p><b>Q.</b> 1. We can't seem to locate the work scope for fluid-applied membrane waterproofing on the drawings set and other bid documents, please clarify where this work scope should apply.</p> <p>2. 9 Monorail Hoists Spec 41 22 23.19 Monorail Hoists Most of the performance requirements listed in specs section 1.03.B are TBD, please provide the exact performance parameters for</p> <p><b>R.</b> 1. The fluid applied membrane is applied directly to the concrete surfaces of the flat canopy roofs. Note 5 on S121 to S128. See Addendum 5.</p> <p>2. Hoist requirements provided in 41 22 23.19, 1.03.B. See Addendum 5.</p> <p>3. Capacity of hoist in Pre-Aeration Basins noted as 1-ton in 1.03.B.</p>


Ref.	Section and Page or Drawing	Questions and Responses
5.	Drawing S260 and Spec Section 07 53 23	<p><b>Q.</b> Spec 07 53 23 EPDM Membrane Roofing What is the new roof system comprised of? It calls for EPDM and fiberglass insulation but doesn't call out type and size of insulation.</p> <p>No coverboard? Please confirm.</p> <p><b>R.</b> See 7/S260 for the roof assembly. Insulation is not required. See revisions to 07 53 23 in Addendum 5.</p>
6.	Drawings S121 through S128 and S421.	<p><b>Q.</b> DWG S123/S253 S123 shows expansion joint at grid 4W-5W/A-B on roof level, S253 roofing plan doesn't show expansion joint at the same location.</p> <p>Please clarify if expansion joint cover will be required on roofing and specify the product and connection details</p> <p><b>R.</b> Detail 5/S421 will eliminate the expansion joint at the flat canopy roofs so the new roof membrane can be installed directly over the former joint.</p>
7.	Drawings S121 to S128 and Drawings S251 to S258 and Spec Section 07 14 00	<p><b>Q.</b> DETAIL 12/DWG S260; Spec 07 53 23 EPDM Membrane Roofing</p> <p>The specified system on the flat concrete decks does not meet the manufacturers requirements. Please confirm the new roof system over the concrete decks (should have a coverboard at a minimum).</p> <p><b>R.</b> The fluid applied membrane is applied directly to the concrete surfaces of the flat canopy roofs. Note 5 on S121 through S128. See Addendum 5.</p>
8.	Spec Section 41 22 23.19	<p><b>Q.</b> Spec 41 22 23.19 Section 2.01 C Materials - this section calls for Bottom Tees of the Monorail Steel Hoist Beams to be Manganese Steel, 225 Brinell Hardness. The hoisting and steel contractors did not think this would be needed for this type of application. Please confirm this will be required for the steel beams at monorail hoists.</p> <p><b>R.</b> See Addendum 5 for changes to 41 22 23.19, 2.01, C.</p>
9.	Spec Section 41 22 23.19	<p><b>Q.</b> Spec 41 22 23.19 - According to Division 41, section 1.02 (references and standards) and section 1.05 (quality assurance), the monorails are to follow either MH-27.1 or MH-27.2. According to the plans, S121- S127, the monorail beams themselves are called out as W10 x 26, standard wide flange shapes. Neither MH-27.1 or MH-27.2 allows for standard shapes.</p> <p>In addition;</p> <ul style="list-style-type: none"> <li>• Div 41, section 2.01 C 2 calls out for the bottom tees to be, "Manganese steel, 225 Brinell hardness".</li> <li>• Div. 41 section 2.01 D 1 requires, - "Monorail Beam: Beam section of a proper size for the monorail supplied with suitable splices and accessories".</li> </ul> <p>The plans also indicate on drawing, S501, details 4, 7 &amp; 9 that the monorail is a W10 x 26. Please clarify.</p>

Ref.	Section and Page or Drawing	Questions and Responses
		<p><b>R.</b> 1. Provide W10x26 beams per plan. See Addendum 5 for deleted reference to MH-27.1 and MH-27.2.</p> <p>2. See Addendum 5 for deleted requirement for Manganese steel, 225 Brinell hardness deleted by Addendum 5.</p>
10.	Drawings S430 and M130	<p><b>Q.</b> Are duct supports Type 1 thru 4 to be Fabricated from carbon steel and Galvanized? Or from 316ss as stated on Mechanical drawings?</p> <p><b>R.</b> The duct supports shall be fabricated from galvanized steel as shown on Structural drawings. Note on detail B/M130 revised. See revised M130 drawing issued with Addendum 5.</p>
11.	Drawings E201 through E208	<p><b>Q.</b> Form_01725A_017840 – New_TAGS-100% Submittal document shows that the electrical equipment listed is shown on DWGNO E0605.</p> <p>Please provide DWGNO E0605 as this sheet is not in the provided plan sheets.</p> <p><b>R.</b> Refer to revised electrical portion of Form_01725A_017840 – New_TAGS-100% Submittal document revised with Addendum 5. Form 01725 (01 78 40-A), as issued in the original bid documents, referenced record drawing numbers (e.g. E0605 through E0612) that were included as Reference Documents. Form 01725 has been revised and issued with Addendum 5 and references current drawing numbers (E201 through E208).</p>
12.	Spec Section 01 55 26	<p><b>Q.</b> We are working with the crane companies and our best solution is to use a crawler crane that will be 27 ft wide. This would block the entire North roadway but could be moved when not connected to a Z Panel. How often will trucks need to pass on this road and would we be able to coordinate with them? As soon as the crane is connected to the piece it will have to remain until that piece is removed</p> <p><b>R.</b> Trucks may use the south side of the "loop" road, between the sedimentation basins and the Administration Building, for accessing or exiting the plant if the north road is temporarily blocked for crane operations.</p>
13.	Spec Section 01 14 00	<p><b>Q.</b> I read in the notes that in Renton they attempted to saw cut the panels but were unsuccessful and swapped over to breaking out the concrete and torching the rebar. Is breaking the concrete an option?</p> <p><b>R.</b> Procedures for demolition of the concrete are contractor's means and methods. Refer to 01 14 00 1.04.C.2 for abatement of lead-based coatings in any area to be disturbed by demolition processes.</p>
14.	Spec Section 01 13 00	<p><b>Q.</b> Are there any concerns with ground pressures in the area where we would have the crane? We would be putting down steel plates along the entire north roadway</p> <p><b>R.</b> Tunnels/galleries are located under the road on the north side of the sedimentation basins. Reference record drawings for the location and construction. Reference drawings "Tunnel-Gallery Record Drawings-1966" included with this Clarification and added to Section 01 13 00 via Addendum 5. Tunnel roofs have a capacity of 1,600 psf for total loads.</p>
15.	Spec Section 01 14 00	<p><b>Q.</b> The tanks do not align with the girders holding the Z panels. Which is a concern for the 3rd/4th tank work. I am assuming that we will be taking the roof off of the north half of the 4th tank prior to it being shut down?</p> <p><b>R.</b> Refer to 01 14 00, para. 1.04.C.1.</p>

Ref.	Section and Page or Drawing	Questions and Responses
16.	Spec Section 01 14 00	<p><b>Q.</b> The schedule you have listed is for May 17th through Sept 17<sup>th</sup>. How much time will be needed when we are completed to complete the build back and recommission the tanks?</p> <p><b>R.</b> Refer to 01 14 00, para. 1.04.B.1.f and 1.g.</p>
17.	Drawings I & C117 through I & C139 Clarification 2, Ref 34	<p><b>Q.</b> Clarification 2, question 34 response says to refer to reference drawings J101-J112.</p> <p>These drawings are not part of the plan set.</p> <p>Please issue or clarify further the locations of these drawings.</p> <p><b>R.</b> Form 01725 (01 78 40-A), as issued in the original bid documents, referenced record drawing numbers (e.g. J101 through J112) that were included as Reference Documents. Form 01725 has been revised and issued with Addendum 5 and references current and correct drawing numbers (I &amp; C117 through I &amp; C139).The reference to J101 and J112 in Clarification 2, Ref 34 was incorrect.</p>
18.	Drawings D-E201 through D-E208 and E201 through E208	<p><b>Q.</b> The following questions relate to what conduits are supposed to be demolished and replaced or remain as is. All issues noted below also apply to the west basin.</p> <p>a. D-E206 and D-E208 call out note 1 along grid H.5 from 4E to 14.5E. Key note 1 states to demolish conduits after new raceways are installed. E206 and E208 call out flag note 1 for the same conduits which is provide raceway and wiring and refers to the conduit and cable schedule. The Addendum 4 E330 states some of the conduits existing (IE C06249), and others that are also existing do not have the same existing note in the schedules (IE C06221). Detail 12/S460 shows these conduits as existing with existing Unistrut below that gets re-supported with a HSS T frame below. Please confirm this bank of conduits and wiring is only re-supported and is not demolished and rebuilt.</p> <p>b. D -E207 and D-E208 calls out note 1 (ref above) for the bank of conduits from A/15E-20E. Note 1 is also called out on the new drawings. The new conduits are the same conduits as the existing conduits and appear to be in the same location. They also appear to be in an area where the structure they are hanging from will remain. C06249 (same as described above) and C06250 is called out as existing per Addendum 4 E330. S06112 does not have the same notes. Are these conduits to be reused not be demolished or new wire pulled? If not, how will these conduits and wiring be replaced in the same location if systems are to remain functional?</p> <p><b>R.</b> a. Conduit &amp; Cable Schedules reflect record documentation as received. All existing raceways &amp; conductors including raceways in the existing conduit rack supported from the existing roof structure to be demolished shall be removed as indicated on drawings D-E201 through D-E208 after installation of new raceways &amp; conductors as indicated on drawings E201 through E208.</p> <p>b. Conduit &amp; Cable Schedules reflect record documentation as received. All existing raceways &amp; conductors including raceways in the existing conduit rack supported from the existing roof structure to be demolished shall be removed as indicated on drawings D-E201 through D-E208 after installation of new raceways &amp; conductors as indicated on drawings E201 through E208. Contractor shall provide temporary power to motors, equipment, &amp; devices per General Note 1 on drawings D-E201 through D-E208.</p>

Ref.	Section and Page or Drawing	Questions and Responses
19.	Drawings D-E201 through D-E208 and E201 through E208	<p><b>Q.</b> Are the conduits from 14.5E to 21E and corresponding west locations hung from the roof or mounted to the operating level slab? If mounted to the floor slab, is there a protection detail that needs followed?</p> <p><b>R.</b> Conduits from gridline 14.5E to 21E are to be routed on the concrete tank deck. Refer to sheet E350 for conduit/grating details. Refer to structural drawings for extent &amp; phasing of roof demolition.</p>
20.	E201 through E208 and E350	<p><b>Q.</b> D-E205 and D-E206 and corresponding west locations show virtually all conduits, conductions, control stations and torque switches to be demolished based on key notes 2,3, and 5. E205 and E-206 appear to show new conduits, control stations and torque switches in the same locations between grids 1E and 4E.</p> <p>a. Are all of the new conduits mounted to the floor or ceiling?</p> <p>b. If mounted to the floor, is there a protection detail that needs followed?</p> <p>c. If mounted to the ceiling, how is all of this work to be installed in the same location without taking systems out of service for extended durations? It seems that nearly everything in this area could be left as is if temporarily supported from the floor and then re-supported from the ceiling. Please advise.</p> <p>d. The electrical portion of the technical part 2c states to temporarily support new conduit between grid 3E and 4E. These spans are greater than the new HSS T frame along grid H.3. If ceiling mounted (regardless of reuse or demo/new, please provide a structural detail sufficient to support the conduits.</p> <p><b>R.</b> a. Conduits from gridline 14.5E to 21E are to be routed on the concrete tank deck. Refer to structural drawings for extent &amp; phasing of roof demolition. Refer to sheet E350 for conduit/grating details.  b. Refer to sheet E350 for conduit/grating details.  c. Contractor shall provide temporary power to motors, equipment, &amp; devices per General Note 1 on drawings D-E201 through D-E208. Refer to structural drawings for extent &amp; phasing of roof demolition.  d. Temporary support requirements and details to be determined by the contractor.</p>
21.	Structural Drawings S111, S112, S117, S118 and Electrical drawings E201 through E208 and E350  Clarification 2, Ref 35	<p><b>Q.</b> The response to Clarifications 2 #35 refers to 5/E350 at all lighting conduits on the operating deck. Is a concrete ramp required at every intersection of lighting conduit and perpendicular walkway meaning there will be thousands of additional LF of grating and hundreds of ramps not shown on the structural drawings?</p> <p><b>R.</b> See structural drawings S111, S112, S117 and S118 for extent of grating covers and cable protectors.</p>

Ref.	Section and Page or Drawing	Questions and Responses
22.	Drawings I & C117, I & C123, and E201 through E208. Clarification 2 Ref 34	<p><b>Q.</b> The response to Clarifications 2 #34 refers to drawings J101 and J112. These were not provided in the as-built drawings or new drawings.</p> <p>a. Please provide details and specifications for torque switches, control stations, and terminal junction boxes.</p> <p>b. Given suppliers still do not have enough information to source and provide pricing for torque switches, control stations, and terminal junction boxes, we believe there will be insufficient time to price these products once specifications are provided. Can you please provide at least 7 calendar days from the time specifications are provided to the bid date?</p> <p><b>R.</b> Form 01725 (01 78 40-A), as issued in the original bid documents, referenced record drawing numbers (e.g. J101 through J112) that were included as Reference Documents. Form 01725 has been revised and issued with Addendum 5 and references current and correct drawing numbers (I &amp; C117 through I &amp; C139). The reference to J101 and J112 in Clarification 2, Ref 34 was incorrect.</p> <p>Existing specifications are as follows:  Hand Switches: 3-Position Maintained Selector Switch with Class 1, Div 2 contact block Allen-Bradley #800H-J2AR.  Terminal Junction Boxes: Stainless Steel  Torque Switches: Removed from Scope. None Required.</p>
23.	Clarification 2, Ref 33	<p><b>Q.</b> The second sentence of the response to Clarifications 2 # 33 does not appear to be complete. Based on the response it is unclear what work is to be demolished, replaced, re-supported, or temporarily re-supported. Please clarify.</p> <p><b>R.</b> Existing motors, control stations, lighting fixtures, raceways, &amp; conductors are to be replaced as indicated on the drawings. Provide temporary support of existing conduits during demolition and construction as required. Provide temporary power &amp; lighting as indicated. Coordinate with Structural drawings and Contractor's phasing plan.</p>
24.	Section 00 10 00	<p><b>Q.</b> Given the magnitude of the electrical questions asked above, can you please provide at least 7 calendar days to price responses as many of these questions show the drawings cannot be quantified until responses are provided?</p> <p><b>R.</b> Please see Addendum 5.</p>

Ref.	Section and Page or Drawing	Questions and Responses
25.	Drawings C101 and C102	<p><b>Q.</b> Is there a possibility to modify the trucking route in the way depicted in the attachment? The crane is the blue box and we were hoping to run the trucking route as depicted in red. I understand that this will require us to perform additional demo and we would have to rebuild that wall.</p>  <p><b>R.</b> The section of road highlighted in red is not available for use by the Contractor.</p>
26.	Electrical Drawings E101 through E108 and E201 through E208; S111, S112, S117, S118 and S461	<p><b>Q.</b> The E20x drawings conduit running north south at grids 14.3 are shown stopping at motors, control stations, and torque switches. The S11x drawings show notches in the FRP grating at motors, control stations, and torque switches. Please provide a typical detail which dimensionally shows motors, equipment motors are driving, control stations, and torque switches, FRP grating, and how conduit is to be routed around them.</p> <p><b>R.</b> Conduits shown on lighting and power plans indicate suggested conduit routing. Actual conduit routing to be determined by contractor based on field conditions.</p>
27.	Drawings S111, S112, S117, S118, S461 and E350 Clarification 2, Ref 35	<p><b>Q.</b> Detail 9/S461 shows FRP grating at 2'-10" wide. Details 4,5/E350 show FRP grating at 2'-2" wide.</p> <ol style="list-style-type: none"> <li>Which dimension is correct?</li> <li>Is the dimension the same for the work shown on S111, S112, S117, and S118 and the that described by Clarifications 2 #35?</li> </ol> <p><b>R.</b> The 2'-10" dimension on Detail 9/S461 is correct. Please see revised drawing E350 issued with Addendum 5.</p>
28.	Spec Section 40 05 93 and Drawings E201 through E208, and E310 through E323.	<p><b>Q.</b> Schedules for motors describing manufacturer, model, hp, etc. cannot be found in the mechanical / electrical drawings or in specification 40 05 93. Please provide.</p> <p><b>R.</b> Refer to specification 40 05 93, 2.03, B.3.c for acceptable manufacturers. Refer to drawings E201 through E208 and E310 through E323 for motor HP, etc.</p>

Ref.	Section and Page or Drawing	Questions and Responses
29.	Drawing E201 through E208 Clarification 1, Ref 3	<p><b>Q.</b> The response to Clarification 1 #3 describes where the tank lids are. Please confirm that conduit over the Operating Level slab and not over the odor control panels is not subject to Class 1 Division 2.</p> <p><b>R.</b> Class 1 Division 2 classification extends over the entire basin from the operation level concrete slab to 36 inches above the concrete slab.</p>
30.	Drawings S111, S112, S117, S118 and E350 Clarification 2, Ref 35	<p><b>Q.</b> The response to Addendum 4 Clarifications 2 #35 refers to 5/E350 at all lighting conduits on the operating deck.</p> <ol style="list-style-type: none"> <li>Please confirm detail 4/E350 does not apply to lighting conduits between tie beams (between grid to grid) as most conduits are shown on the edge of tie beams.</li> <li>Please confirm where conduits are shown in the middle of a tie beam, the conduit is intended to be installed on the edge of beam such that 4/E350 does not apply.</li> <li>Confirm a concrete ramp per 5/E350 is required only at intersections of lighting conduit and perpendicular walkways.</li> <li>Confirm a concrete ramp per 5/E350 is not required at intersections of lighting conduit and perpendicular tie beams that are not considered walkways.</li> <li>Please show this scope on the structural drawings if grating and ramps are required in excess of what is shown on the structural drawings for scope defined by this question and any other locations.</li> <li>Please provide drawings showing extents of all walkways.</li> </ol> <p><b>R.</b> See structural drawings S111, S112, S117 and S118 for extent of grating covers and cable protectors. Conduits shown on lighting and power plans indicate suggested conduit routing. Actual conduit routing to be determined by contractor based on field conditions. Refer to drawing E350 Addendum 5 which deletes concrete ramps.</p>
31.	Drawings D-S111, D-S112, S110W, S110E, S111 to S118, D-E101 to D-E108, D-E201 to D-E208, E101 to E108, E201 to E208	<p><b>Q.</b> E001 Temporary Lighting note 3 states to provide a minimum of 10-foot candles at walkways measured at the operating level walking surface. Walkways do not appear to be clearly shown in the drawings. Please provide drawings showing extents of all walkways.</p> <p><b>R.</b> The walking surfaces include all concrete slabs on the Operating Level of the basins. In the plan E-W direction, this includes the perimeter slabs along grids A and Q and the walkways along the top of the tank walls at grids C, E, H, L and N. In the N-S direction, this includes the concrete surfaces along grids 1, 2, 3, 4, 14.5, 20 and 21. The N-S concrete tie beams at grids 5 to 14 and from 15 to 19 are not walking surfaces.</p>



Ref.	Section and Page or Drawing	Questions and Responses
32.	Drawings D-S124 and Reference Drawings	<p><b>Q.</b> Can the contractor design a temporary shoring system transferring the load from the main girder to the gridline wires B, D etc. and can the tank wall be loaded?</p> <p><b>R.</b> On grids B, D, F, K, M and P, the concrete between columns are concrete struts or ties, not walls. The concrete walkways on grids C, E, H, L and K are supported on 12-inch thick concrete walls that extend to the foundation below. The concrete walls can support temporary shoring loads but the adequacy of the walls to support construction loads shall be determined by the Contractor.</p>
33.	Drawings E001, E330 and E331 and Addendum Ref. 4.11, 4.12, and 4.13	<p><b>Q.</b> Please provide cable specifications for Type 1, 3, 4 &amp; 5 as called on sheet E331 on conductor size column.</p> <p><b>R.</b> Please see Addendum 4 for notes added to E001, E330 and E331.</p>

**Attached To This Clarification:**

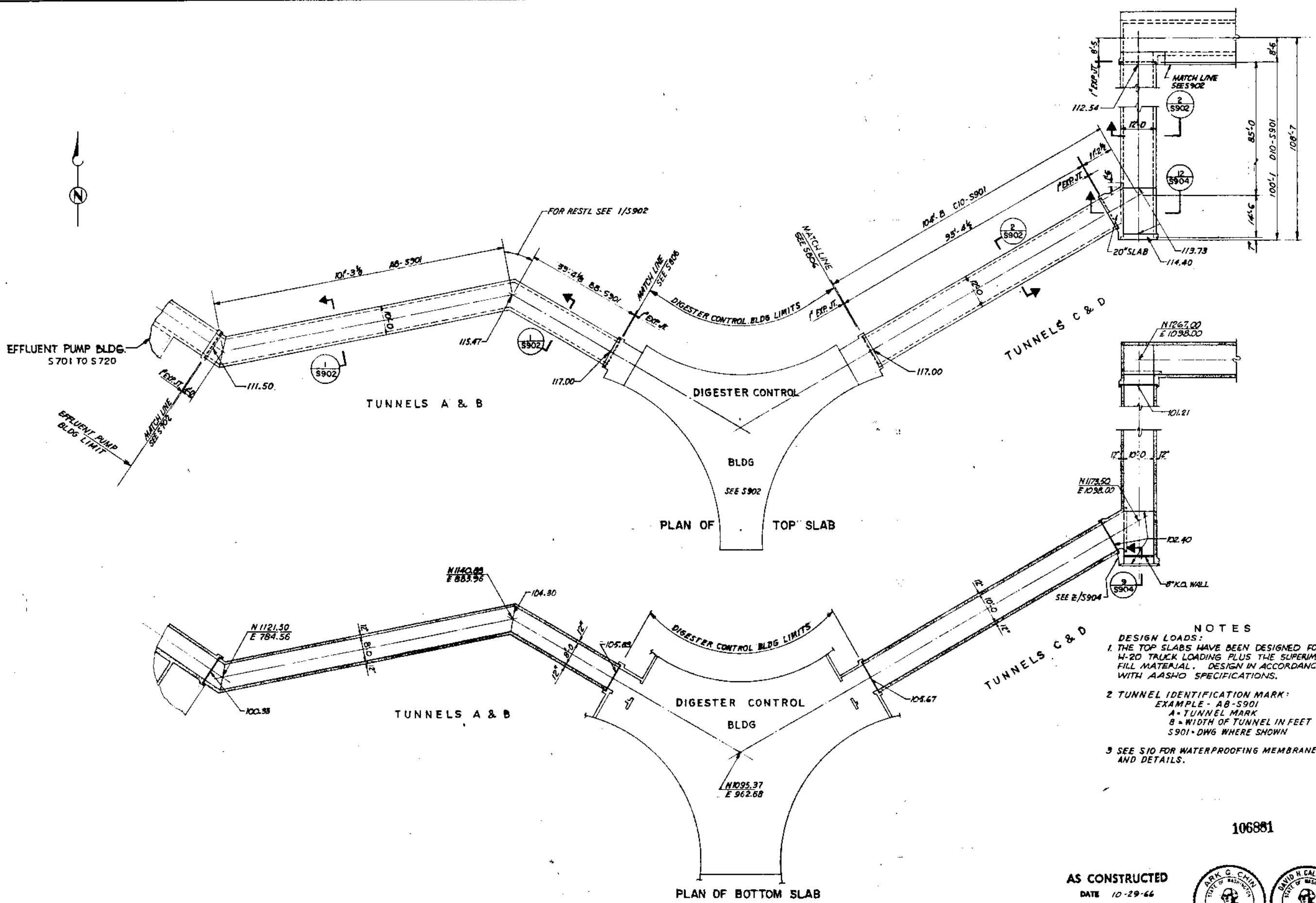
- Reference Document: KC WPTP Sedimentation Basins – Tunnel/Gallery Record Drawings-1966

This Clarification will not form a part of the Contract Documents. Bidders are reminded to review addenda for changes to the Invitation to Bid documents.

Issue date: 12/14/2020

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Back-Up Contract Specialist: Liz Evans, [levans@kingcounty.gov](mailto:levans@kingcounty.gov), 206-263-7898



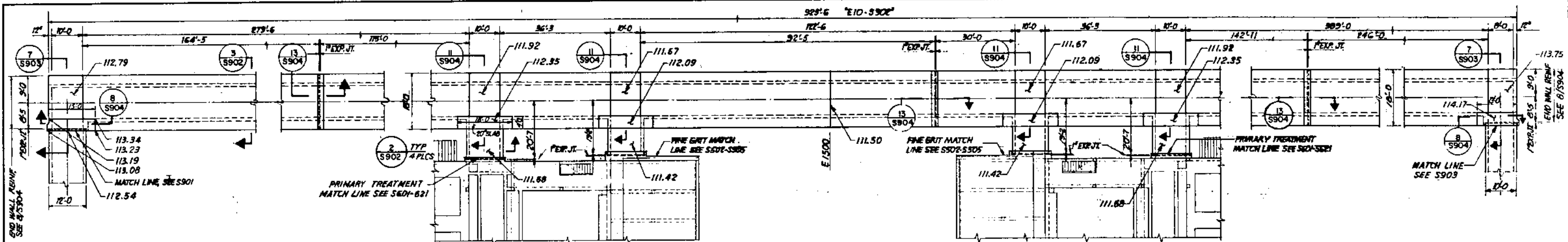
- NOTES**
- DESIGN LOADS:  
1. THE TOP SLABS HAVE BEEN DESIGNED FOR 4-20 TRUCK LOADING PLUS THE SUPERIMPOSED FILL MATERIAL. DESIGN IN ACCORDANCE WITH AASHTO SPECIFICATIONS.
  - TUNNEL IDENTIFICATION MARK:  
EXAMPLE - AB-S901  
A = TUNNEL MARK  
B = WIDTH OF TUNNEL IN FEET  
S901 - DWG WHERE SHOWN
  - SEE S10 FOR WATERPROOFING MEMBRANE AND DETAILS.

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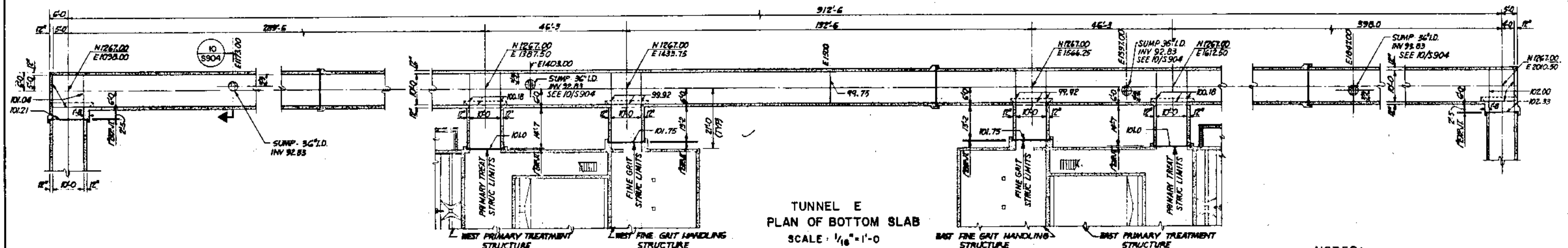
AS CONSTRUCTED  
DATE 10-29-66



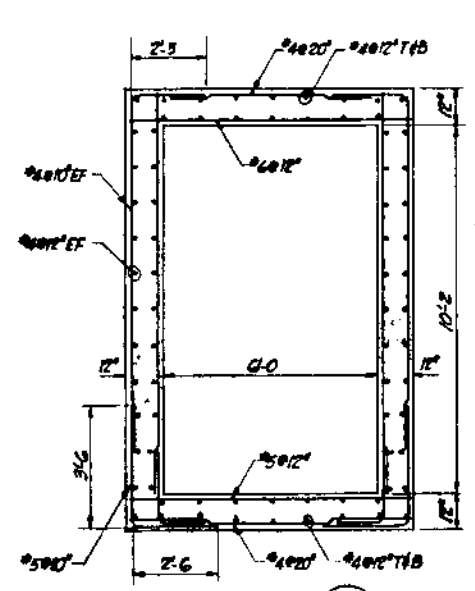
DESIGNED <b>AWG</b>	METROPOLITAN ENGINEERS	MUNICIPALITY OF METROPOLITAN SEATTLE				FILE W200A	WEST POINT SYSTEM	WEST POINT SEWAGE TREATMENT PLANT TUNNELS A, B, C AND D PLAN	DRAWING NUMBER <b>S901</b>
DRAWN <b>BJF</b>	BROWN AND CALDWELL HILL AND INGMAN	RECOMMENDED <b>[Signature]</b>	APPROVED <b>[Signature]</b>	APPROVED <b>[Signature]</b>	APPROVED <b>[Signature]</b>	SCALE 1/16" = 1'-0"	DATE MAY 1963	SHEET NUMBER 129 OF 148	
CHECKED <b>FDL</b>	CAREY AND KRAMER R.W. BECK AND ASSOCIATES	DESIGN ENGINEER - METROPOLITAN ENGINEERS	PROJECT ENGINEER - METROPOLITAN ENGINEERS	CHIEF ENGINEER - METROPOLITAN ENGINEERS	CHIEF ENGINEER - METROPOLITAN ENGINEERS				



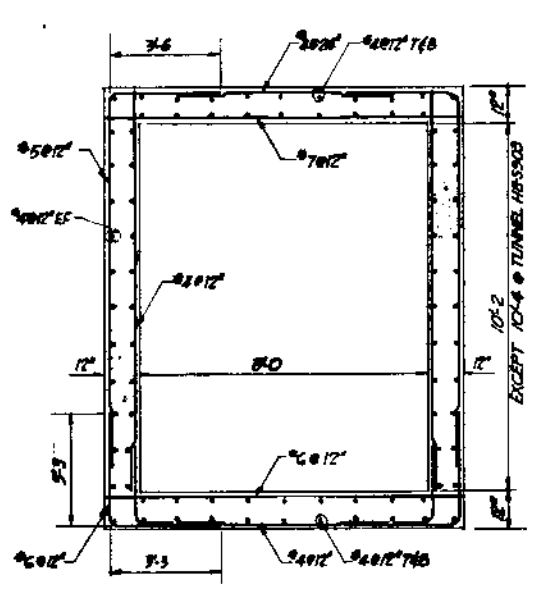
TUNNEL E  
PLAN OF TOP SLAB  
SCALE: 1/8" = 1'-0"



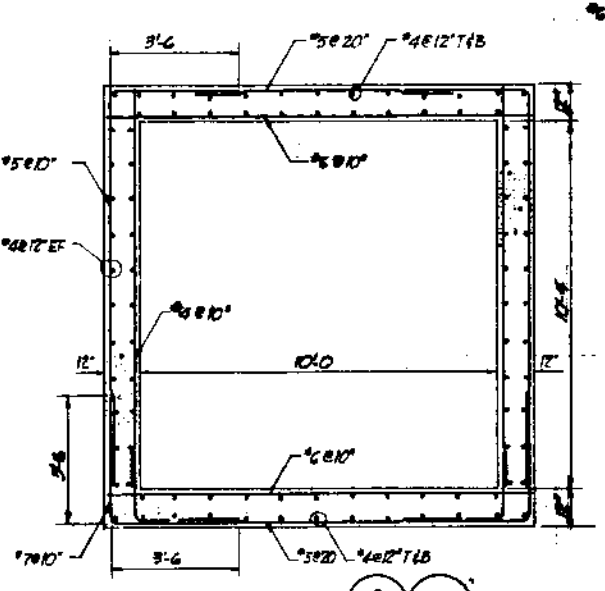
TUNNEL E  
PLAN OF BOTTOM SLAB  
SCALE: 1/8" = 1'-0"



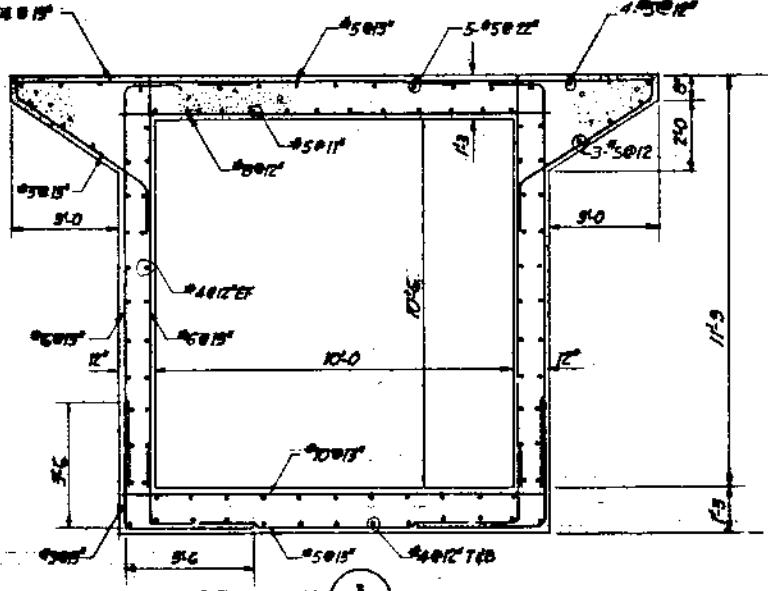
SECTION 4  
S903  
J6 & K6 - S903  
SCALE: 3/8" = 1'-0"



SECTION 1  
S901 S903  
A8 & B8 - S901  
F8, G8 & H8 - S903  
SCALE: 3/8" = 1'-0"



SECTION 2  
S901 S902  
C10 - S901  
D10 - S901  
SCALE: 3/8" = 1'-0"



SECTION 3  
S902  
E10 - S902  
SCALE: 3/8" = 1'-0"

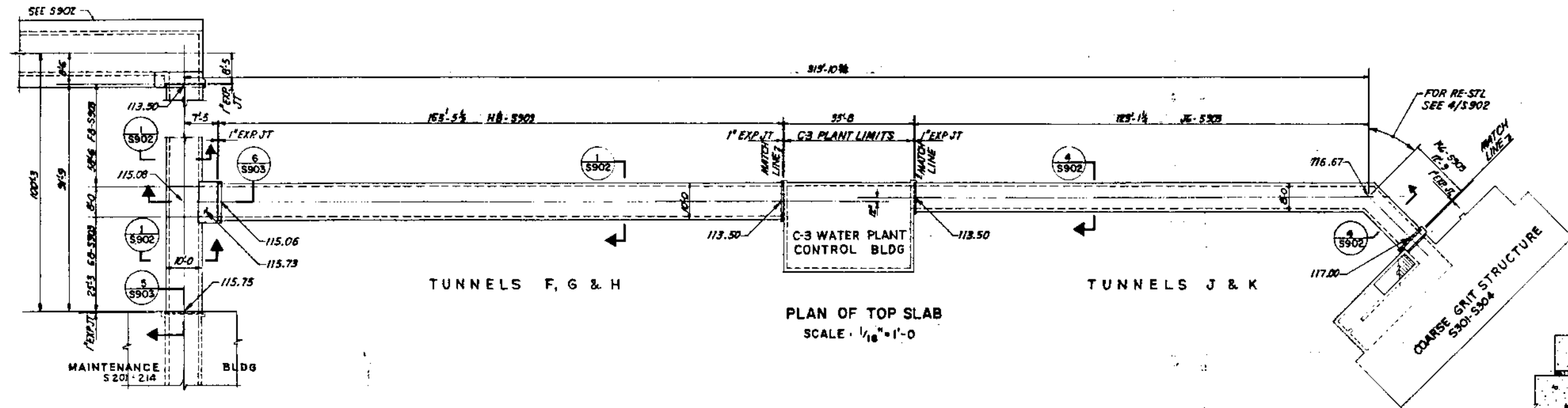
- NOTES:
1. AT EXPANSION JTS ADD EXTRA TRANSVERSE BARS E.F. BAR SIZE SAME AS NORMAL TRANSVERSE RESTL.
  2. SECTIONS 1, 2, 3 & 4 / S902 ARE TYPICAL TUNNEL SECTIONS.

106882

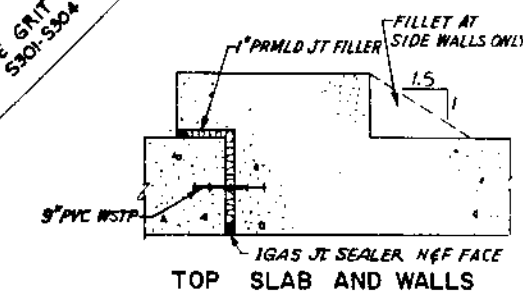
AS CONSTRUCTED  
DATE 10-29-66



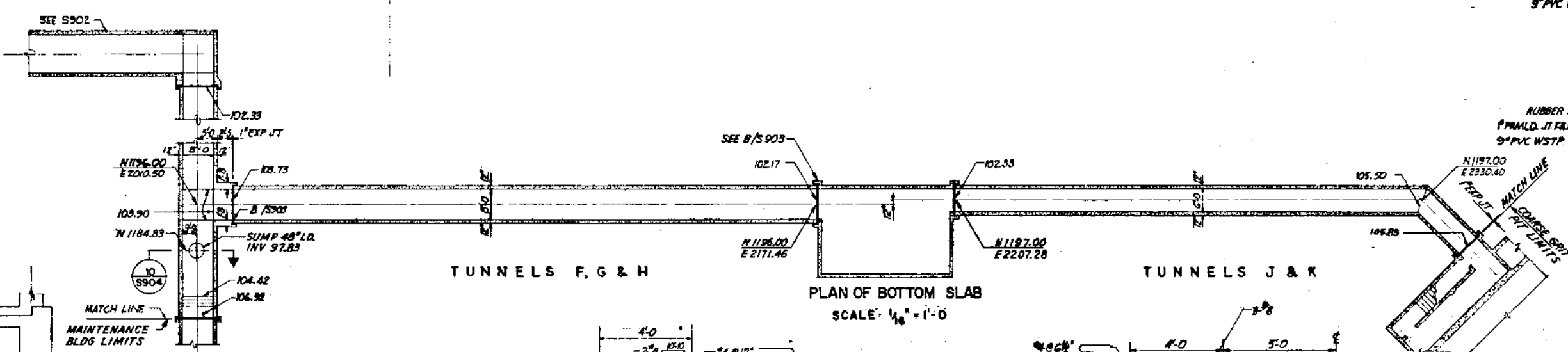
DESIGNED: <b>AWG</b>	METROPOLITAN ENGINEERS	MUNICIPALITY OF METROPOLITAN SEATTLE			PL. W200A	WEST POINT SYSTEM	WEST POINT SEWAGE TREATMENT PLANT	DRAWING NUMBER	
DRAWN: <b>B.J.F.</b>	BROWN AND CALDWELL HILL AND INGMAN	CAREY AND KRAMER R.W. BECK AND ASSOCIATES	APPROVED: <i>[Signature]</i>	APPROVED: <i>[Signature]</i>	APPROVED: <i>[Signature]</i>	SCALE: AS NOTED	DATE: MAY 1963	TUNNEL E AND TYPICAL SECTIONS	DRAWING NUMBER <b>S902</b>
CHECKED: <b>F.D.L.</b>								SHEET NUMBER <b>130 OF 145</b>	



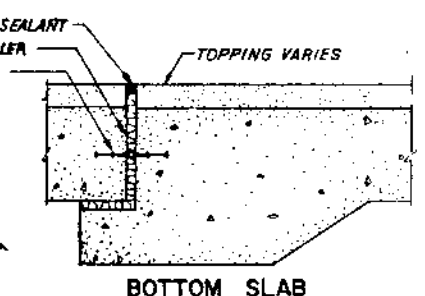
PLAN OF TOP SLAB  
SCALE: 1/16" = 1'-0"



TOP SLAB AND WALLS

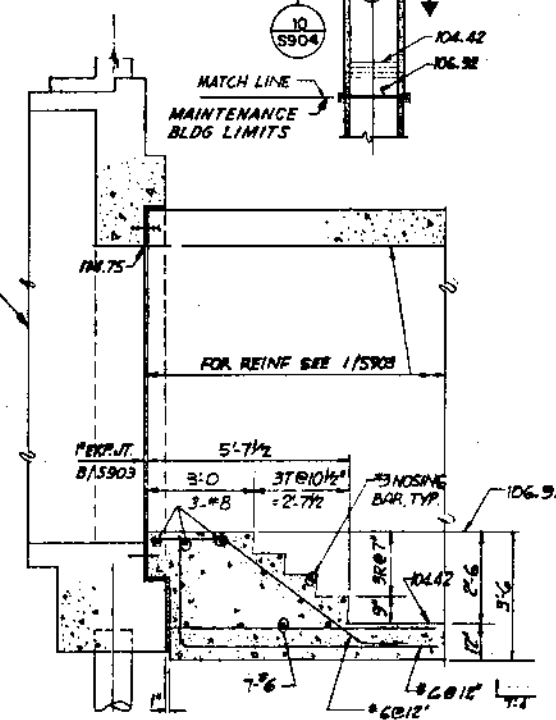


PLAN OF BOTTOM SLAB  
SCALE: 1/16" = 1'-0"

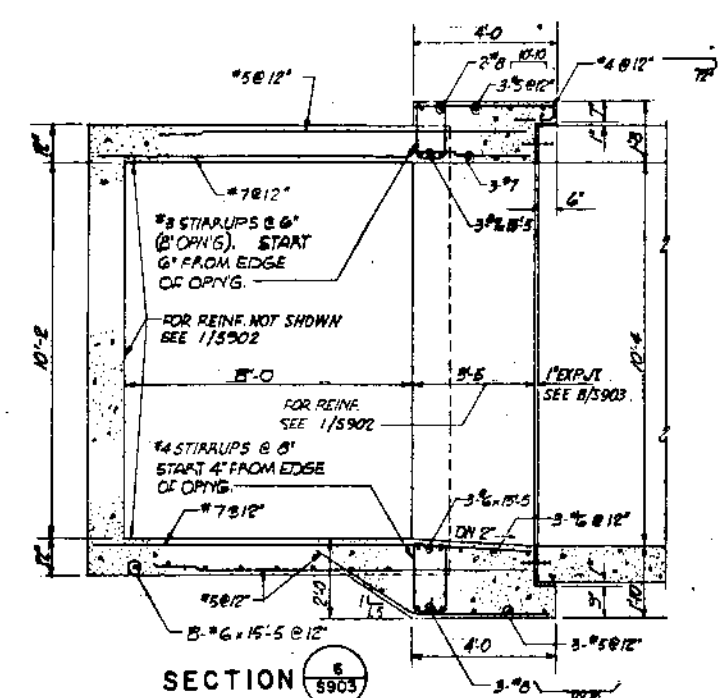


BOTTOM SLAB

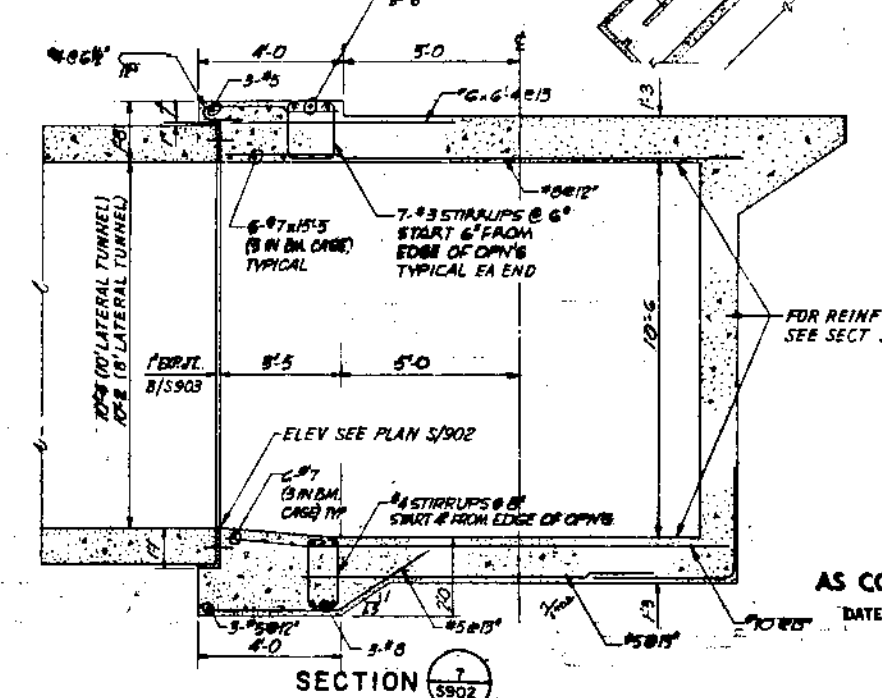
DETAIL (B/S903)  
SCALE: 1" = 1'-0"  
TYP EXPANSION JT



SECTION 5  
SCALE: 3/8" = 1'-0"



SECTION 6  
SCALE: 3/8" = 1'-0"

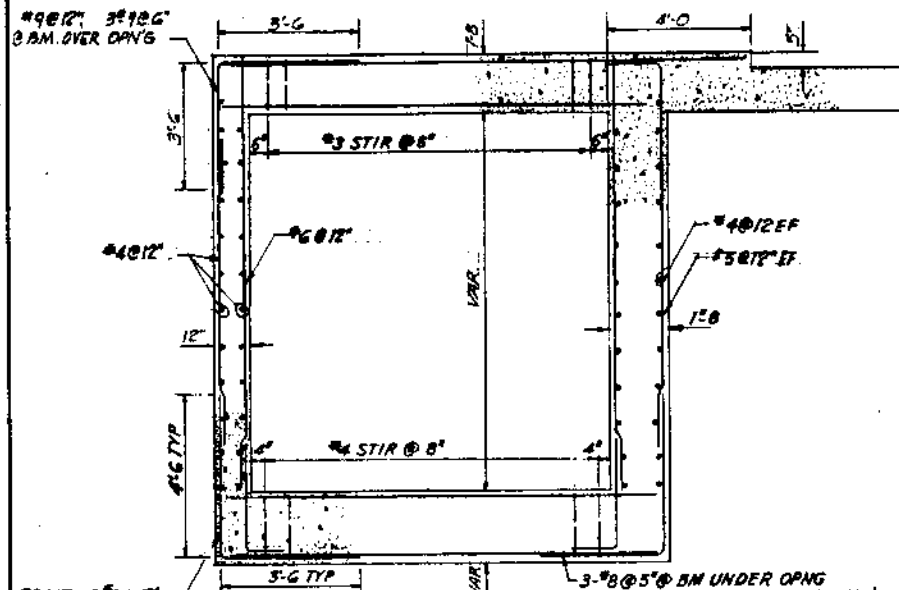


SECTION 7  
SCALE: 3/8" = 1'-0"

AS CONSTRUCTED  
DATE 10-19-66

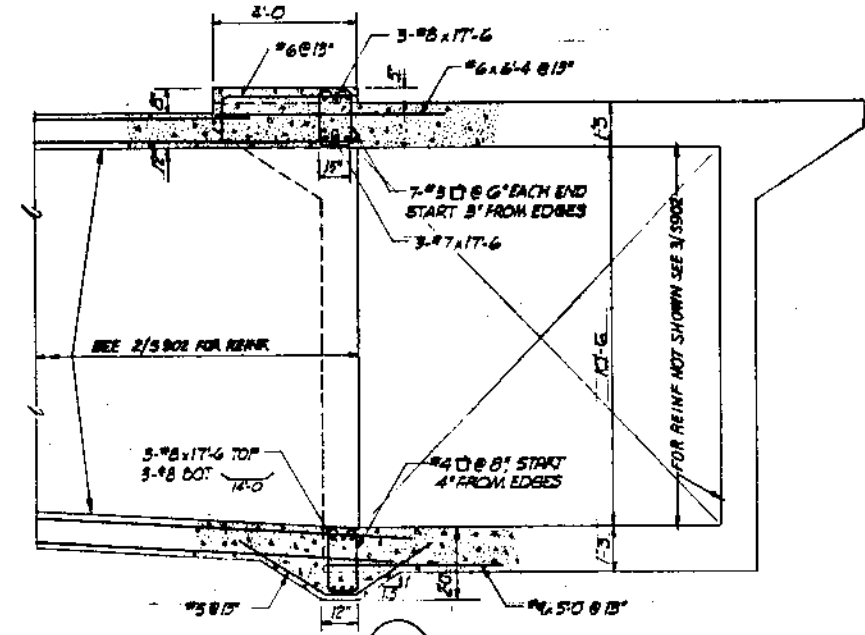
106883





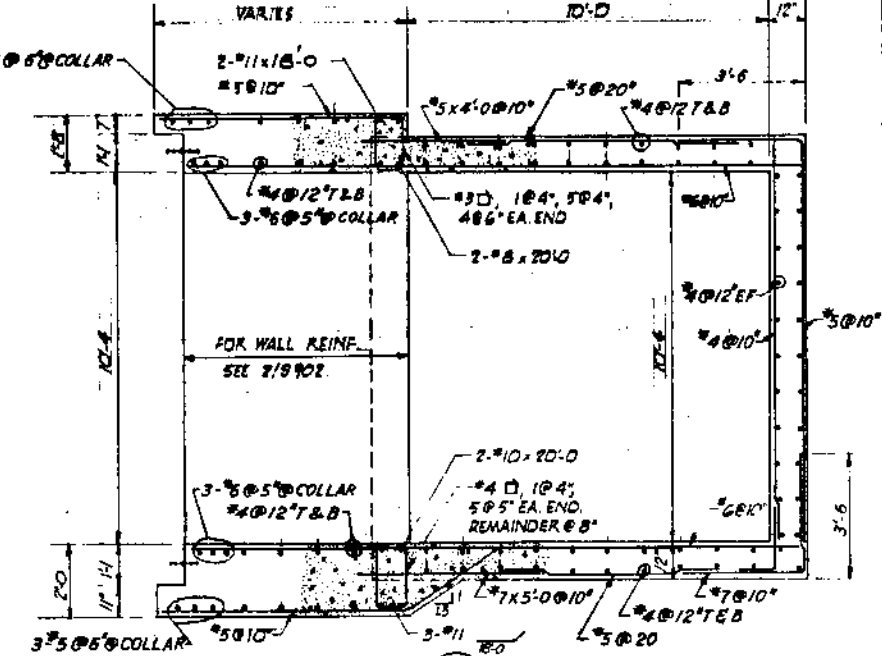
SECTION 8

SCALE: 3/8"=1'-0"



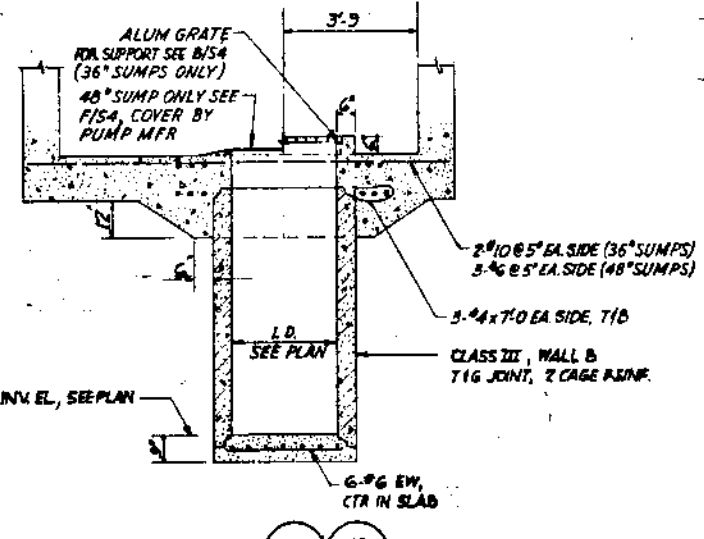
SECTION 11

SCALE: 3/8"=1'-0"



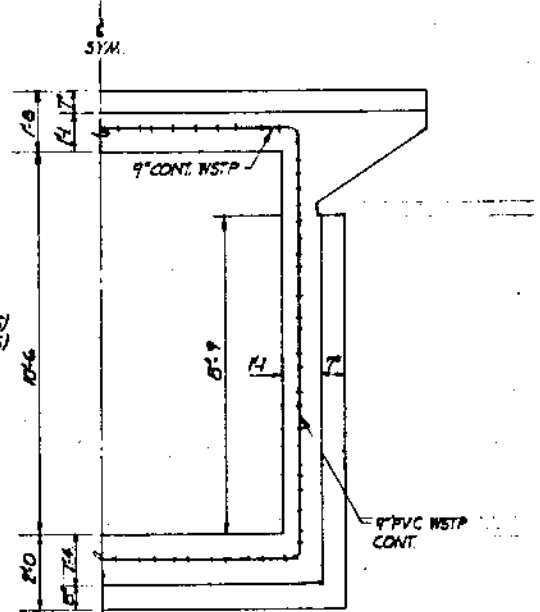
SECTION 12

SCALE: 3/8"=1'-0"



SECTION 10

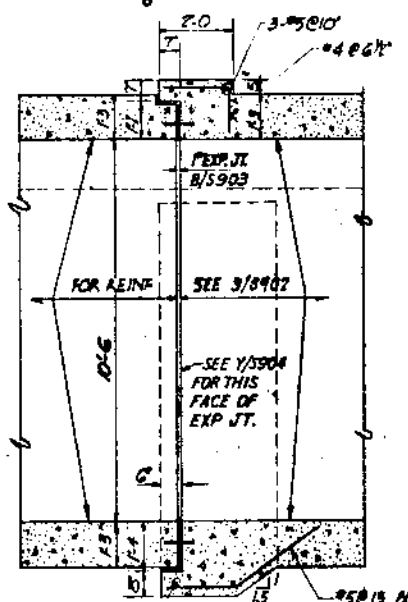
SCALE: 3/8"=1'-0"



EXPANSION JOINT ELEVATION  
TYPICAL 3 PLACES

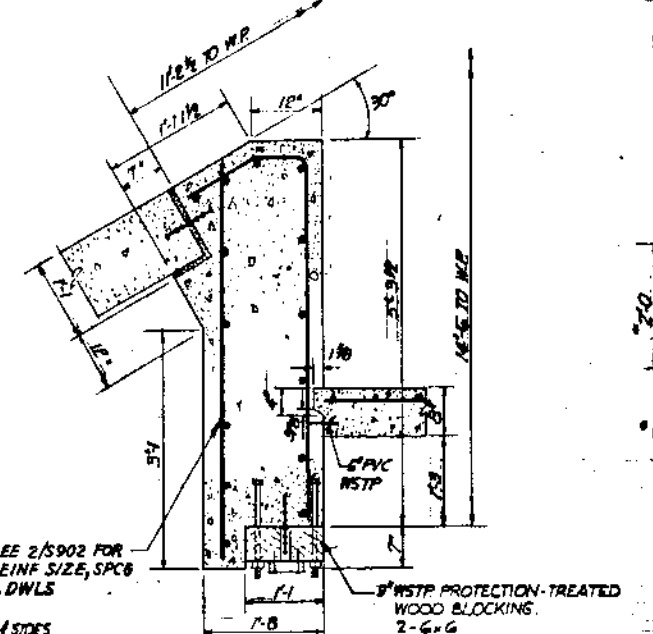
DETAIL Y

SCALE: 3/8"=1'-0"



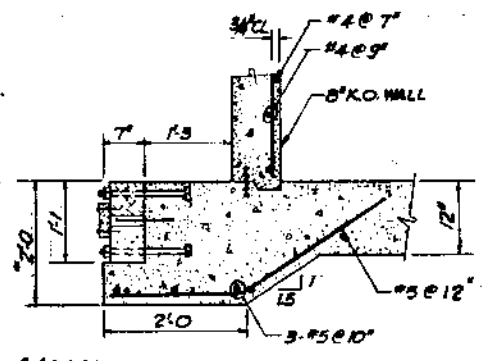
SECTION 13

TYPICAL 3 PLACES  
SCALE: 3/8"=1'-0"



DETAIL Z

SCALE: 3/4"=1'-0"



SECTION 9

SCALE: 3/4"=1'-0"

106884

AS CONSTRUCTED  
DATE 10-29-66



DESIGNED: <b>AWB</b>	METROPOLITAN ENGINEERS	MUNICIPALITY OF METROPOLITAN SEATTLE			SCALE: AS NOTED	DATE: MAY 1965	WEST POINT SYSTEM	WEST POINT SEWAGE TREATMENT PLANT TUNNELS A THRU K SECTIONS AND DETAILS	DRAWING NUMBER: S904
DRAWN: <b>B.J.F.</b>	BROWN AND CALDWELL CAREY AND KRAMER	RECOMMENDED BY: [Signature]	APPROVED: [Signature]	APPROVED: [Signature]					SHEET NUMBER: 132 of 148
CHECKED: <b>F.D.L.</b>	HILL AND INGMAN R.W. BECK AND ASSOCIATES								