

**NOTES**

1. TOPOGRAPHIC INFORMATION TAKEN FROM A SURVEY, PREPARED BY KPFF CONSULTING ENGINEERS, DATED MARCH 3, 2022 AND CITY OF TACOMA LIDAR DATA.
2. SEE SHEET C1 FOR DETAILED EXISTING UTILITIES.
3. PROPERTY BOUNDARY LINES TAKEN FROM PIERCE COUNTY GIS DATA.
4. CONTRACTOR SHALL COORDINATE CONSTRUCTION TRAFFIC WITH CITY OF TACOMA PUBLIC WORKS DEPARTMENT.
5. SEE EROSION AND SEDIMENT CONTROL NOTES 4 AND 9 ON SHEET D1 FOR CONSTRUCTION ENTRANCE REQUIREMENTS.

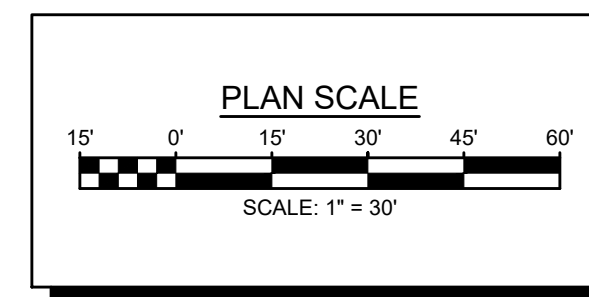
**CONSTRUCTION SEQUENCING**

1. CONTRACTOR TO MOBILIZE.
2. PAVEMENT DEMOLITION TO OCCUR - SEE DEMOLITION PLAN FOR PAVEMENT DEMOLITION EXTENTS.
3. ELECTRICAL INSTALLATION TO OCCUR.
4. CONTRACTOR TO INSTALL FOUNDATION AND CONTAINMENT STRUCTURE.
5. CONTRACTOR TO SET TANK(S).
6. CONTRACTOR TO INSTALL PUMP(S), CONTROLLER(S), AND PIPING.
7. CONTRACTOR TO INSTALL STAIRS, LADDER, CATWALK, AND HANDRAIL(S).
8. CONTRACTOR TO INSTALL LIGHTS.
9. ASPHALT PAVING TO OCCUR.
10. COMMISSIONING TO OCCUR.
11. PUNCHLIST TO OCCUR.

**KEY PLAN**

1

SCALE: 1" = 30'

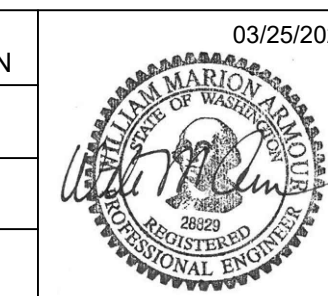


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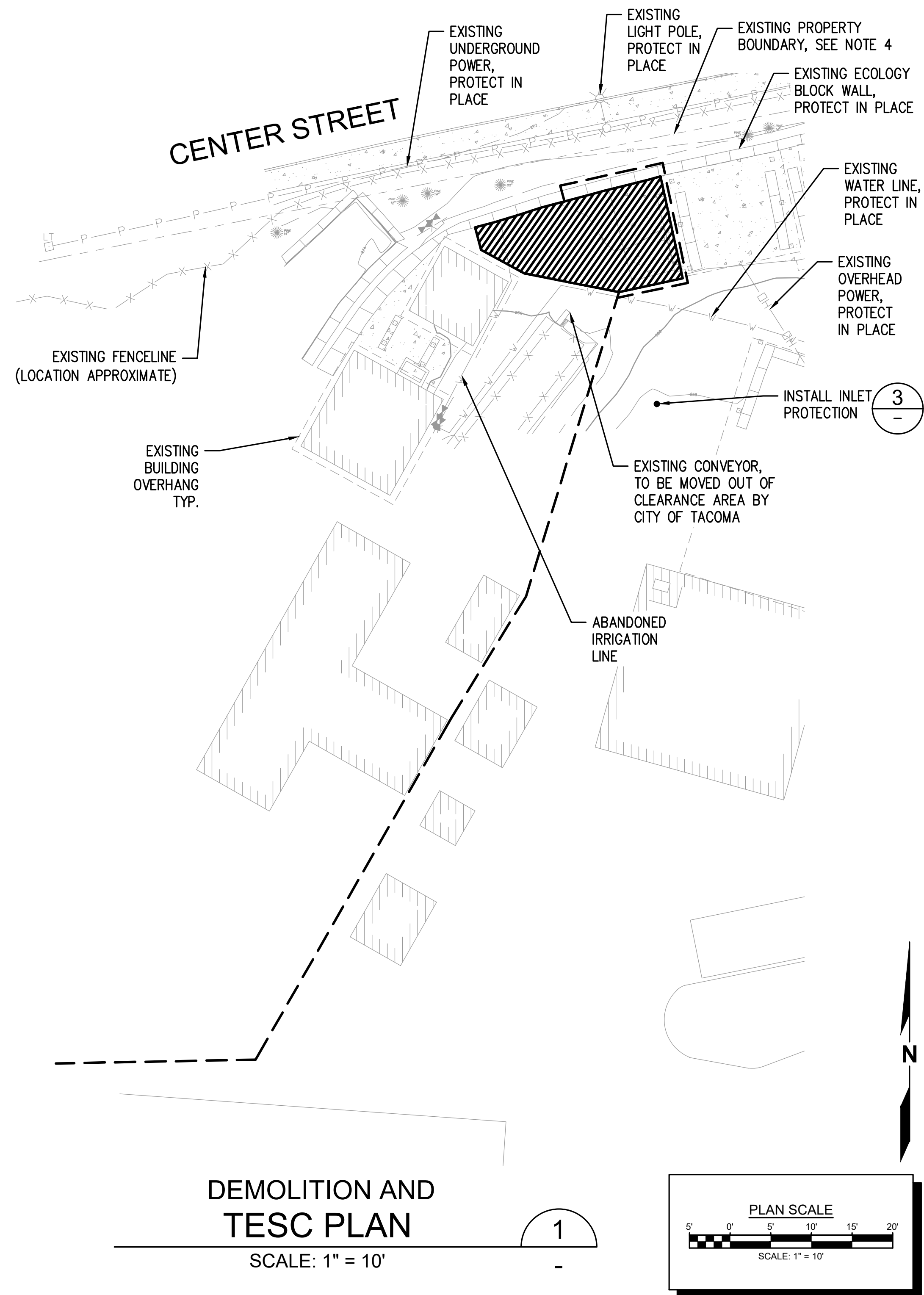
NO	REVISION	DATE	APPD

FINAL CONSTRUCTION CHECKED	DATE	SCALE
BY	02/08/2024	AS SHOWN
DATE	JPO	WMA
FIELD BOOKS	JPO	PROJECT NAME
DRAWING NAME		
KEY PLAN		

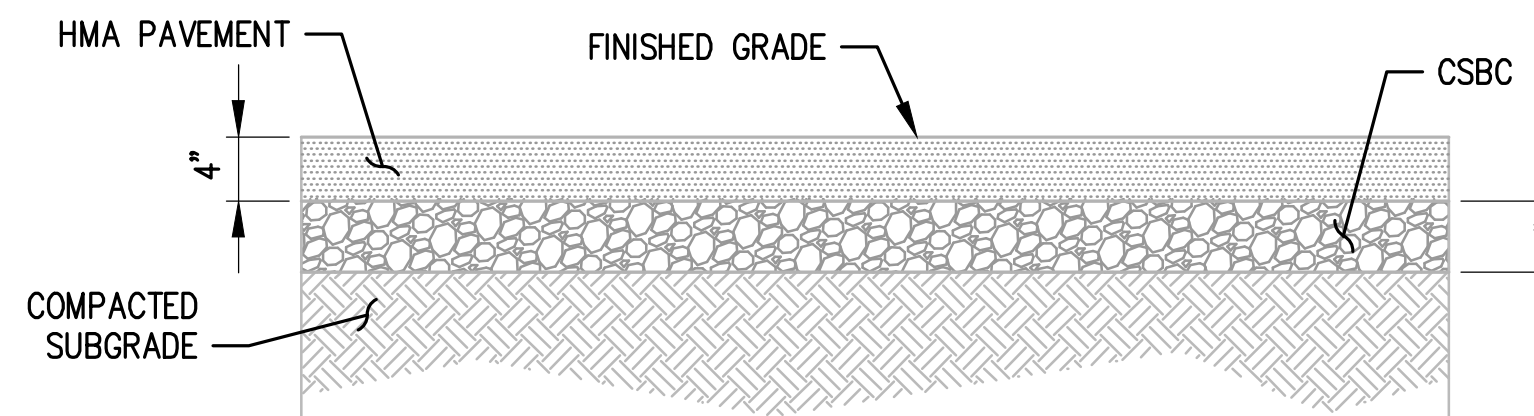


CITY OF TACOMA PUBLIC WORKS DEPARTMENT		SPEC. NO.
<b>ASPHALT BATCH PLANT STORAGE TANKS</b>		WBS NO.
KEY PLAN		SHEET NO. <b>G2</b>
		SHEET <b>2</b> OF <b>16</b>

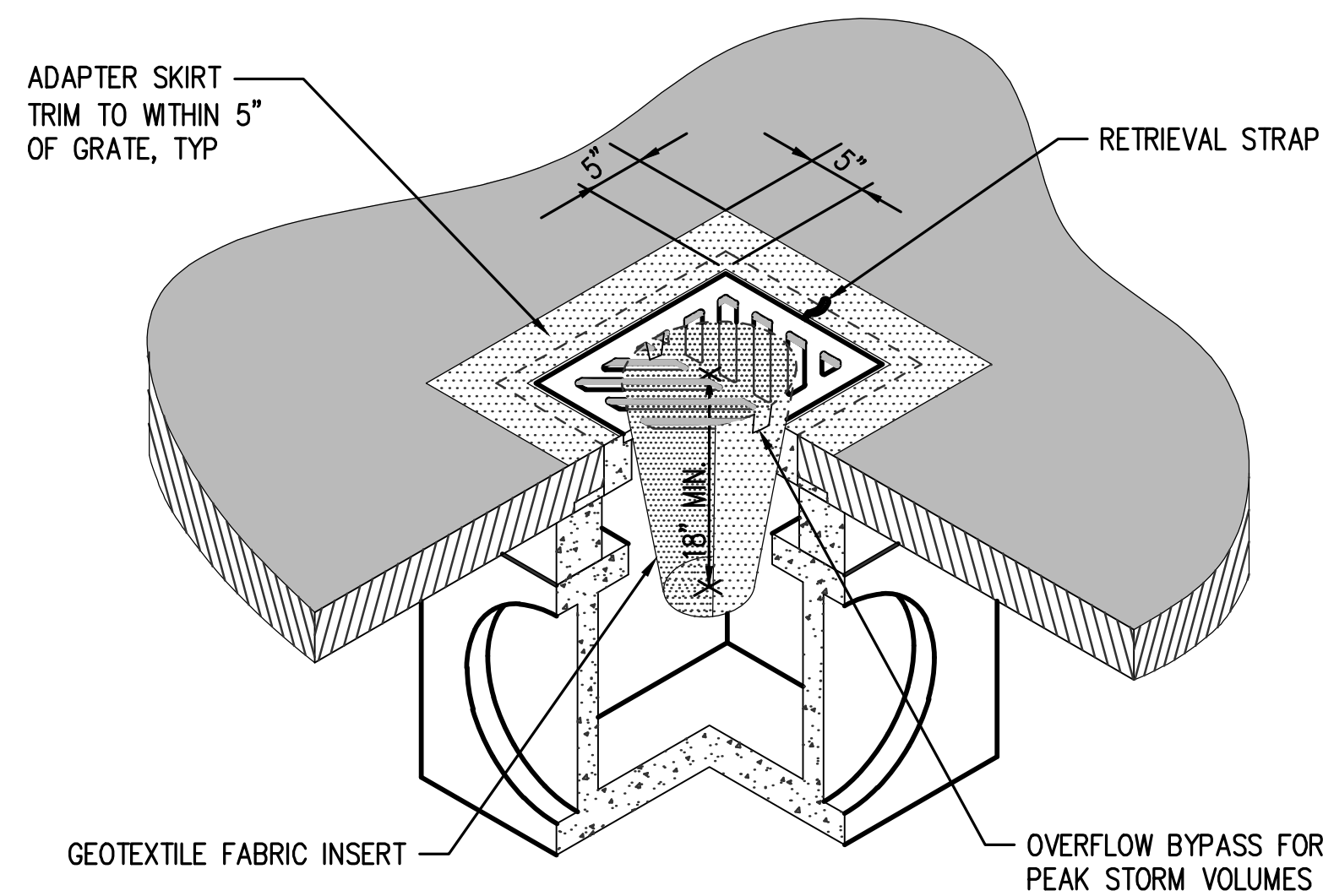
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**DEMOLITION AND TESC PLAN**  
SCALE: 1" = 10'



**EXISTING PAVEMENT SECTION**  
SCALE: NTS



- NOTES:
1. INSERT SHALL BE INSTALLED IN ALL OPERATIONAL CATCH BASINS WITHIN 500 FEET OF WORK LIMITS PRIOR TO CLEARING AND GRADING ACTIVITY, OR UPON PLACEMENT OF A NEW CATCH BASIN.
  2. FILTERS SHALL BE INSPECTED AFTER EACH STORM EVENT AND CLEANED OR REPLACED WHEN IT IS 1/3 FULL.

**INLET PROTECTION DETAIL**  
SCALE: NTS

**LEGEND**

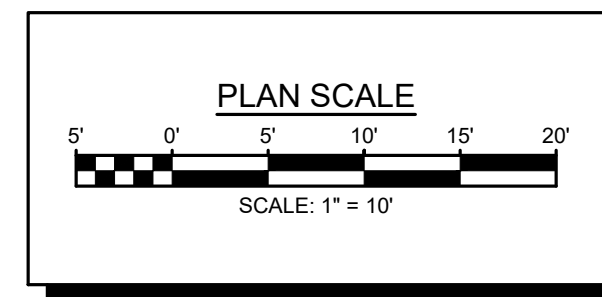
- DEMOLISH EXISTING PAVEMENT, 930 SF 2
- ELECTRICAL TRENCHING, APPROX. 290 LF, SEE BLDNC23-0004

**GENERAL NOTES**

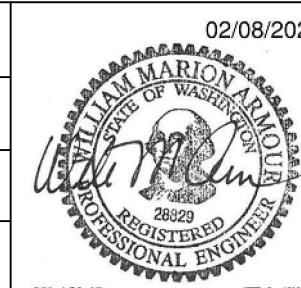
1. THE EXISTENCE, LOCATION AND CHARACTERISTICS OF UNDERGROUND AND OVERHEAD UTILITIES IS APPROXIMATE AND SHALL BE VERIFIED PRIOR TO CONSTRUCTION.
2. TOPOGRAPHIC INFORMATION TAKEN FROM A SURVEY, PREPARED BY KPFF CONSULTING ENGINEERS, DATED MARCH 3, 2022.
3. ECOLOGY BLOCK WALL CONSTRUCTION IS UNKNOWN.
4. PROPERTY BOUNDARY LINES TAKEN FROM PIERCE COUNTY GIS DATA.
5. REFER TO SHEET G2 FOR FACILITY/CONSTRUCTION ENTRANCE LOCATIONS AND CONSTRUCTION SEQUENCING.

**EROSION AND SEDIMENT CONTROL NOTES**

1. APPROVAL OF THIS EROSION/SEDIMENTATION CONTROL (ESC) PLAN DOES NOT CONSTITUTE AN APPROVAL OF PERMANENT ROAD OR DRAINAGE DESIGN (E.G. SIZE AND LOCATION OF ROADS, PIPES, RESTRICTORS, CHANNELS, RETENTION FACILITIES, UTILITIES, ETC.).
2. THE IMPLEMENTATION OF THESE ESC PLANS AND THE CONSTRUCTION, MAINTENANCE, REPLACEMENT, AND UPGRADING OF THESE ESC FACILITIES IS THE RESPONSIBILITY OF THE APPLICANT/CONTRACTOR UNTIL ALL CONSTRUCTION IS COMPLETED AND APPROVED AND VEGETATION/LANDSCAPING IS ESTABLISHED.
3. THE BOUNDARIES OF THE CLEARING LIMITS SHOWN ON THIS PLAN SHALL BE CLEARLY FLAGGED IN THE FIELD PRIOR TO CONSTRUCTION. DURING THE CONSTRUCTION PERIOD, NO DISTURBANCE BEYOND THE FLAGGED CLEARING LIMITS SHALL BE PERMITTED. THE FLAGGING SHALL BE MAINTAINED BY THE APPLICANT/CONTRACTOR FOR THE DURATION OF CONSTRUCTION.
4. THE ESC FACILITIES SHOWN ON THIS PLAN MUST BE CONSTRUCTED IN CONJUNCTION WITH ALL CLEARING AND GRADING ACTIVITIES, AND IN SUCH A MANNER AS TO ENSURE THAT SEDIMENT AND SEDIMENT LADEN WATER DO NOT ENTER THE DRAINAGE SYSTEM OR ROADWAYS, OR VIOLATE APPLICABLE WATER STANDARDS.
5. THE ESC FACILITIES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIREMENTS FOR ANTICIPATED SITE CONDITIONS. DURING THE CONSTRUCTION PERIOD, THESE ESC FACILITIES SHALL BE UPGRADED AS NEEDED FOR UNEXPECTED STORM EVENTS AND TO ENSURE THAT SEDIMENT AND SEDIMENT-LADEN WATER DO NOT LEAVE THE SITE.
6. THE ESC FACILITIES SHALL BE INSPECTED DAILY BY THE APPLICANT/CONTRACTOR AND MAINTAINED AS NECESSARY TO ENSURE THEIR CONTINUED FUNCTIONING.
7. THE ESC FACILITIES ON INACTIVE SITES SHALL BE INSPECTED AND MAINTAINED A MINIMUM OF ONCE A MONTH OR WITHIN THE 48 HOURS FOLLOWING A MAJOR STORM EVENT.
8. AT NO TIME SHALL MORE THAN ONE FOOT OF SEDIMENT BE ALLOWED TO ACCUMULATE WITHIN A CATCH BASIN SEDIMENT TRAP. 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.
9. STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION 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.



FINAL CONSTRUCTION CHECKED	DATE	SCALE
BY	02/08/2024	AS SHOWN
DATE	JPO	WMA
FIELD BOOKS	JPO	PROJECT NAME
DRAWING NAME		
DEMO PLAN		

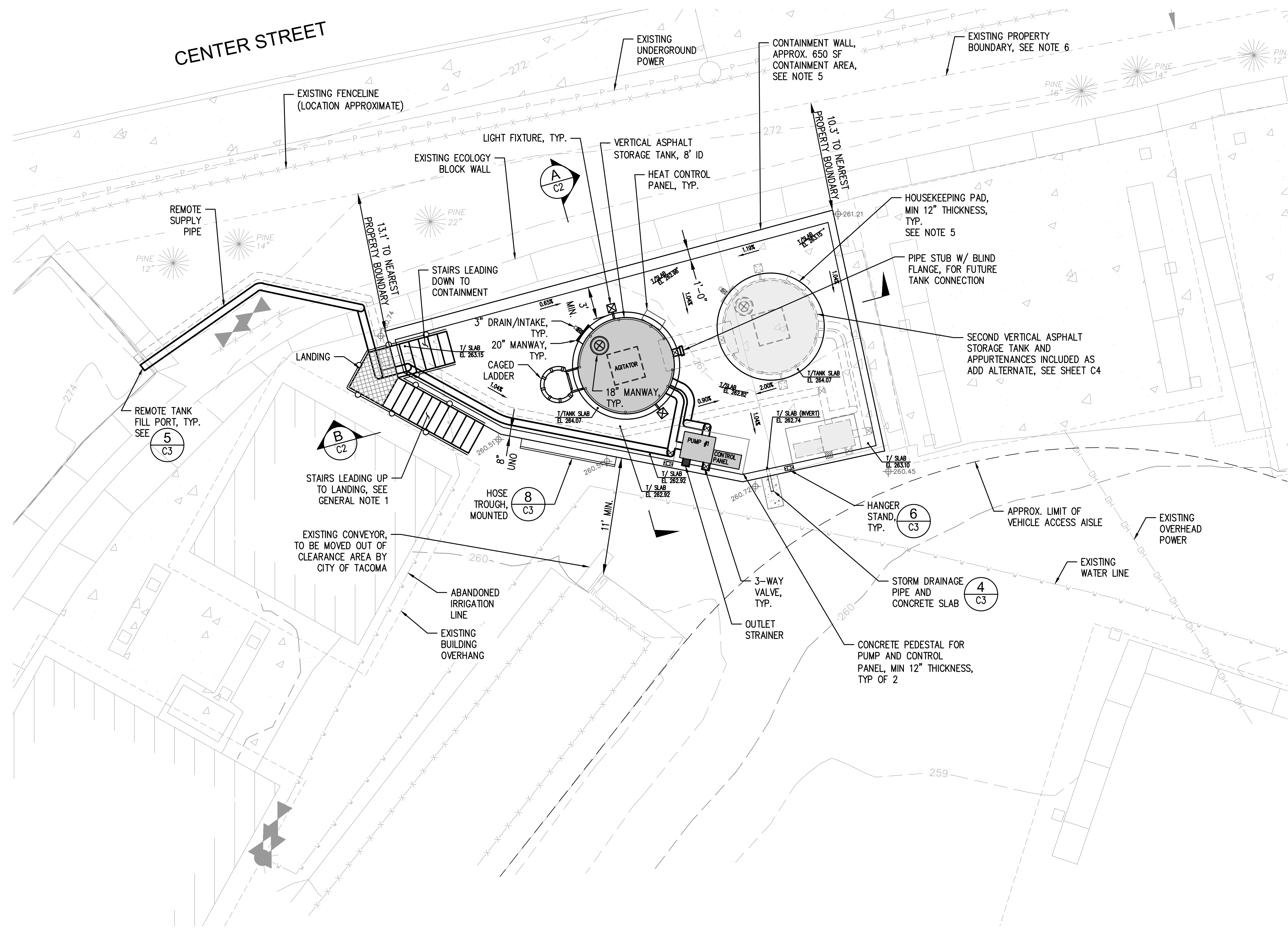


CITY OF TACOMA  
PUBLIC WORKS DEPARTMENT  
**ASPHALT BATCH PLANT STORAGE TANKS**  
DEMOLITION PLAN

SPEC. NO.	
WBS NO.	
SHEET NO.	D1
SHEET	3 OF 16

BID SET

CENTER STREET



**NOTES**

1. THE EXISTENCE, LOCATION AND CHARACTERISTICS OF UNDERGROUND AND OVERHEAD UTILITIES IS APPROXIMATE AND SHALL BE VERIFIED PRIOR TO CONSTRUCTION.
2. TOPOGRAPHIC INFORMATION TAKEN FROM A SURVEY, PREPARED BY KPFF CONSULTING ENGINEERS, DATED MARCH 3, 2022.
3. ECOLOGY BLOCK WALL CONSTRUCTION IS UNKNOWN.
4. ALLOWANCE OF 7' CLEAR DISTANCE PROVIDED FOR SKIDSTER/FORKLIFT ACCESS AND 10' FOR TRUCK ACCESS TO EXISTING FACILITIES.
5. DESIGN INFORMATION FOR CONTAINMENT WALL AND FOUNDATIONS CONTAINED WITHIN BLDGN23-0004.
6. PROPERTY BOUNDARY LINES TAKEN FROM PIERCE COUNTY GIS DATA.

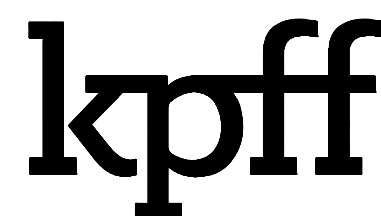
**GENERAL NOTES**

1. DETAILS SHOWN ON THIS PLAN ARE FOR INFORMATION PURPOSES ONLY AND INDICATE ANTICIPATED MINIMUM LEVEL OF DETAILING REQUIRED FOR THE DESIGN OF THE ASPHALT STORAGE AND HANDLING SYSTEM. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN OF ASPHALT STORAGE AND HANDLING SYSTEM DESIGN, PERMITTING, FABRICATION, INSTALLATION, AND TESTING AS NOTED ON SHEET G1.

**BASE BID  
SITE PLAN**

SCALE: 1" = 5'

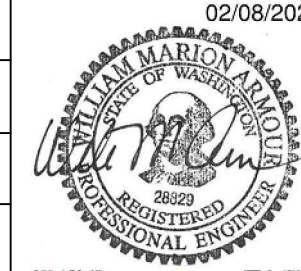
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				BY	JPO	DESIGNED	WMA	CHECKED	
				DATE	JPO	DRAWN		PROJECT NAME	
				FIELD BOOKS		DRAWING NAME	SITE PLAN - BASE BID		



CITY OF TACOMA  
PUBLIC WORKS DEPARTMENT  
**ASPHALT BATCH BLANT STORAGE TANKS**  
SITE PLAN  
BASE BID

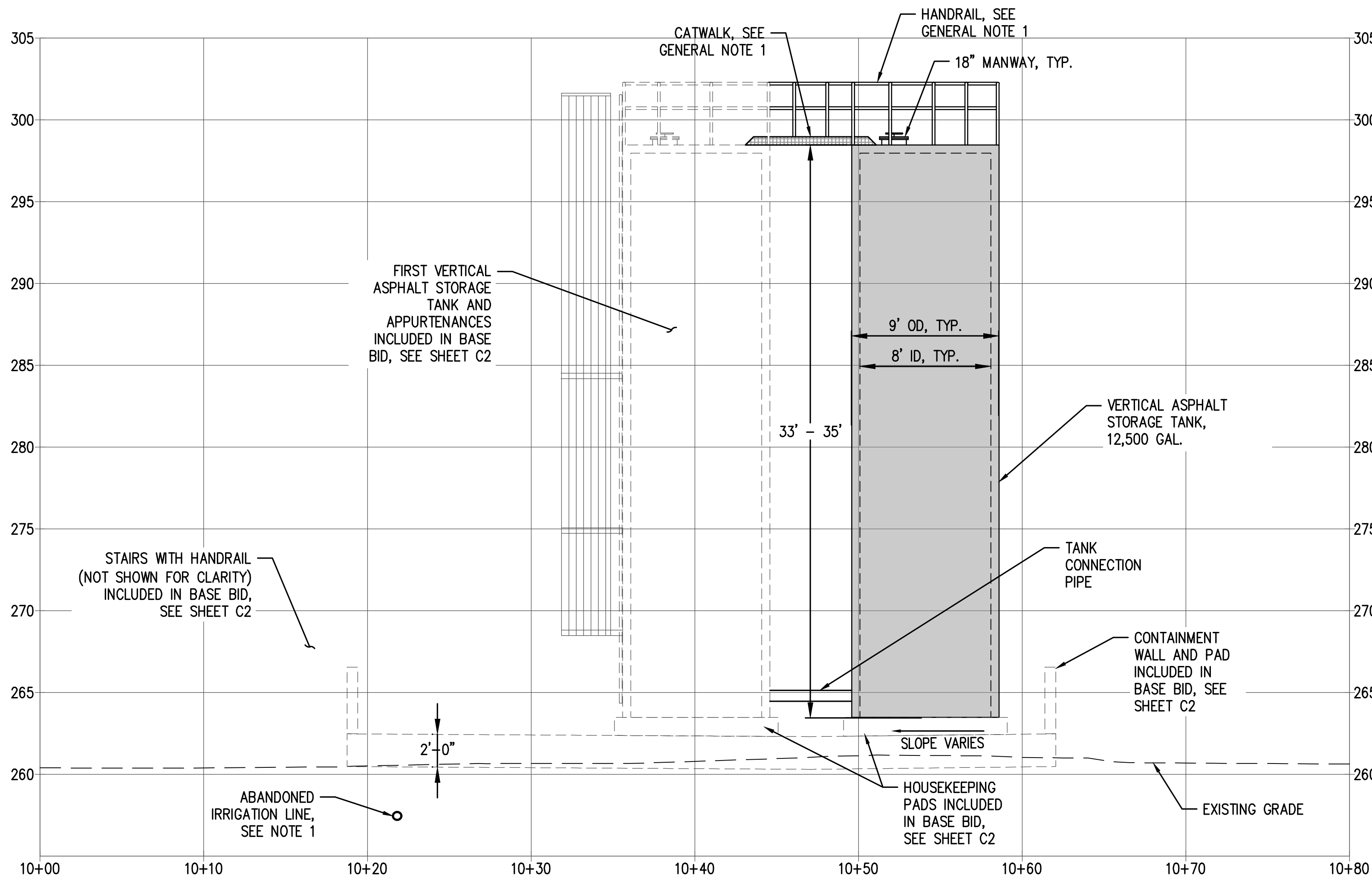
BID SET

SPEC. NO.	
WBS NO.	
SHEET NO.	C1
SHEET	4 OF 16



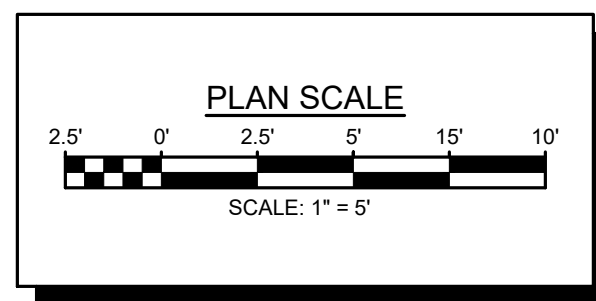






**ADD ALTERNATE SECTION**  
SCALE: 1" = 5'

A  
C4

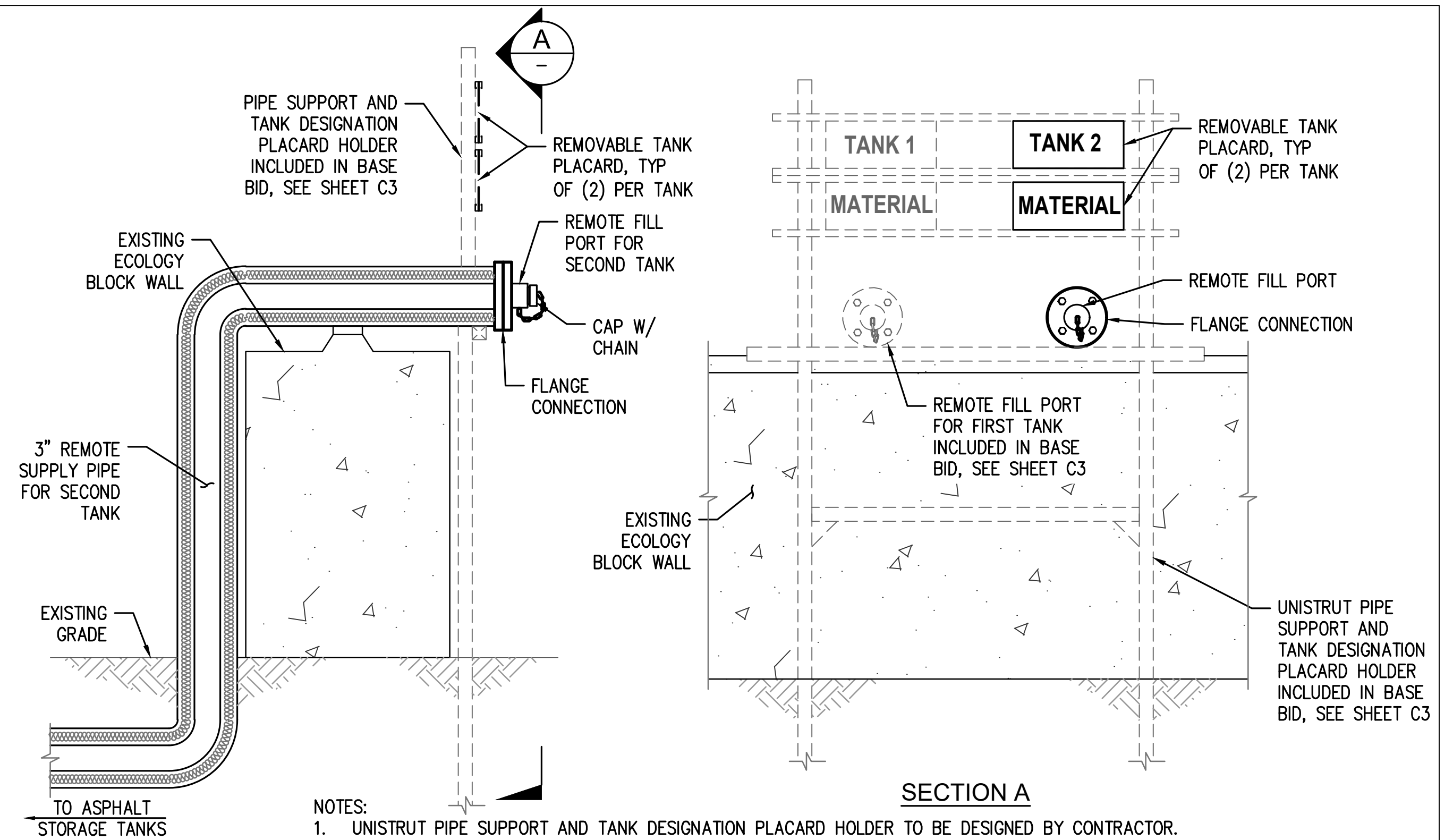


**GENERAL NOTES**

1. DETAILS SHOWN ON THIS PLAN ARE FOR INFORMATION PURPOSES ONLY AND INDICATE ANTICIPATED MINIMUM LEVEL OF DETAILING REQUIRED FOR THE DESIGN OF THE ASPHALT STORAGE AND HANDLING SYSTEM. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN OF ASPHALT STORAGE AND HANDLING SYSTEM DESIGN, PERMITTING, FABRICATION, INSTALLATION, AND TESTING AS NOTED ON SHEET G1.

**NOTES**

1. THE EXISTENCE, LOCATION AND CHARACTERISTICS OF UNDERGROUND AND OVERHEAD UTILITIES IS APPROXIMATE AND SHALL BE VERIFIED PRIOR TO CONSTRUCTION.
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4. ALLOWANCE OF 7' CLEAR DISTANCE PROVIDED FOR SKIDSTER/FORKLIFT ACCESS AND 11' FOR TRUCK ACCESS TO EXISTING FACILITIES.

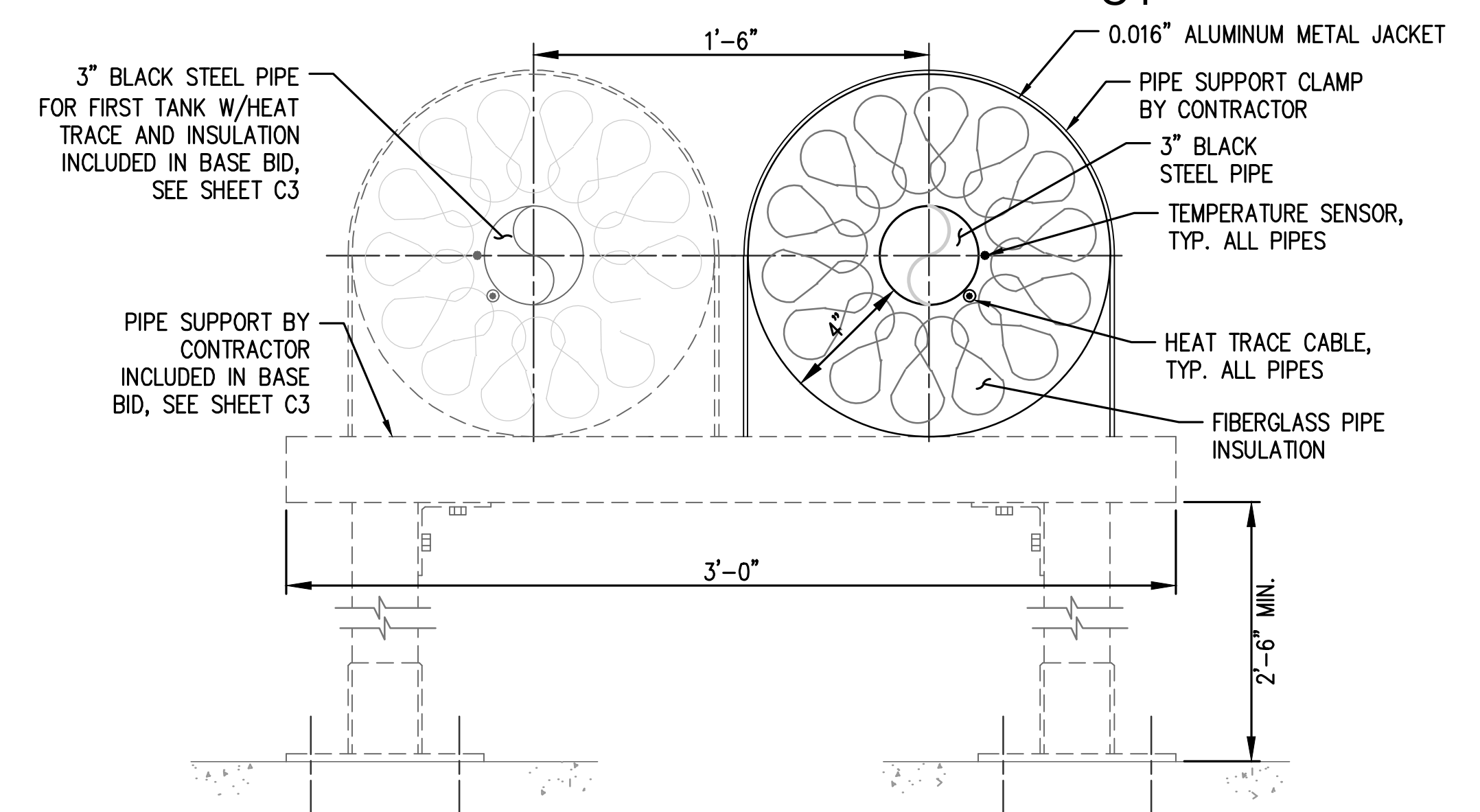


- NOTES:**
1. UNISTRUT PIPE SUPPORT AND TANK DESIGNATION PLACARD HOLDER TO BE DESIGNED BY CONTRACTOR.
  2. ALLOW TANK IDENTIFICATION AND TANK MATERIAL PLACARDS TO SLIDE ALONG HORIZONTAL UNISTRUT CHANNELS ALONG TOP AND BOTTOM EDGES OF PLACARDS.
  3. STENCIL TANK IDENTIFICATION AND TANK MATERIAL ON PLACARDS IN BLACK LETTERING ON AN ORANGE BACKGROUND.
  4. ALL PAINT MARKINGS SHALL BE APPLIED WITH TWO COATS UNLESS OTHERWISE NOTED.

**REMOTE TANK FILL PORT DETAIL**

SCALE: NTS

1  
C4



- NOTES:**
1. DETAILS SHOWN ON THIS PLAN ARE FOR INFORMATION PURPOSES ONLY AND INDICATE ANTICIPATED MINIMUM LEVEL OF DETAILING REQUIRED FOR THE DESIGN OF THE ASPHALT STORAGE AND HANDLING SYSTEM. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN OF ASPHALT STORAGE AND HANDLING SYSTEM DESIGN, PERMITTING, FABRICATION, INSTALLATION, AND TESTING AS NOTED ON SHEET G1.

**PIPE AND PIPE SUPPORT SECTION**

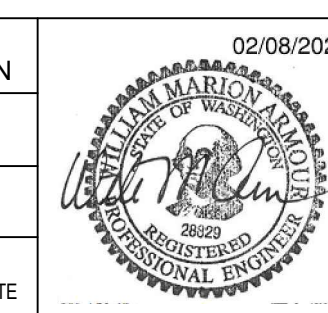
SCALE: NTS

2



NO	REVISION	DATE	APPD

FINAL CONSTRUCTION CHECKED	DATE	SCALE
BY	DESIGNED	CHECKED
DATE	DRAWN	PROJECT NAME
FIELD BOOKS	DRAWING NAME	
	PROFILE AND DETAILS - ADD ALTERNATE	



CITY OF TACOMA  
PUBLIC WORKS DEPARTMENT  
**ASPHALT BATCH PLANT STORAGE TANKS**  
PROFILE AND DETAILS  
ADD ALTERNATE

BID SET

SPEC. NO.	
WBS NO.	
SHEET NO.	C5
SHEET	8 OF 16



**GENERAL STRUCTURAL NOTES**

**DESIGN LOADS**

ALL DESIGN AND CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF THE INTERNATIONAL BUILDING CODE, 2018 EDITION, AS AMENDED BY CITY OF TACOMA.

**SEISMIC LOADS – STORAGE TANK:**

EARTHQUAKE AND WIND LOADS ARE DEVELOPED USING AMERICAN PETROLEUM INSTITUTE(API) STANDARD 650, TWELFTH EDITION, MARCH 2013:

SITE CLASS D  
OCCUPANCY CATEGORY III  
SEISMIC DESIGN CATEGORY D  
S<sub>s</sub> = 1.298 g  
S<sub>1</sub> = 0.508 g  
SDS = 0.865 g  
SD1 = 0.508 g  
TL 6 seconds  
I<sub>E</sub> = 1.25

**WIND LOADS:**

Exposure Category C  
V<sub>3S</sub>= 115 mph

**SOIL LOADS:**

ALLOWABLE SOIL-BEARING PRESSURE 2000 psf

**GENERAL NOTES**

**SUBMITTALS:** SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER PRIOR TO ANY FABRICATION OR CONSTRUCTION FOR ALL STRUCTURAL ITEMS, INCLUDING THE FOLLOWING. CONCRETE REINFORCEMENT AND EMBEDDED STEEL ITEMS.

IF THE SHOP DRAWINGS DIFFER FROM OR ADD TO THE DESIGN OF THE STRUCTURAL DRAWINGS, THEY SHALL BEAR THE SEAL AND SIGNATURE OF THE WASHINGTON STATE REGISTERED PROFESSIONAL ENGINEER WHO IS RESPONSIBLE FOR THE DESIGN.

**DEFERRED SUBMITTALS:** PER IBC SECTION 106.3.4.2, DRAWINGS AND CALCULATIONS FOR THE DESIGN AND FABRICATION OF ITEMS THAT ARE DESIGNED BY OTHERS SHALL BEAR THE SEAL AND SIGNATURE OF THE WASHINGTON STATE REGISTERED PROFESSIONAL ENGINEER WHO IS RESPONSIBLE FOR THE DESIGN AND SHALL BE SUBMITTED TO THE ENGINEER AND THE BUILDING DEPARTMENT FOR REVIEW PRIOR TO FABRICATION. SUBMITTED CALCULATIONS ARE FOR CURSORY REVIEW ONLY AND WILL GENERALLY NOT BE RETURNED. DEFERRED SUBMITTALS INCLUDE BUT ARE NOT LIMITED TO THE FOLLOWING:

STAIRS AND HANDRAIL, ASPHALT STORAGE TANK AND ANCHORAGE, ACCESS CATWALKS

**SPECIAL CONDITIONS:** CONTRACTOR SHALL VERIFY ALL LEVELS, DIMENSIONS, AND EXISTING CONDITIONS IN THE FIELD BEFORE PROCEEDING. CONTRACTOR SHALL NOTIFY THE ARCHITECT OF ANY DISCREPANCIES OR FIELD CHANGES PRIOR TO INSTALLATION OR FABRICATION. IN CASE OF DISCREPANCIES BETWEEN THE EXISTING CONDITIONS AND THE DRAWINGS, THE CONTRACTOR SHALL OBTAIN DIRECTION FROM THE ARCHITECT BEFORE PROCEEDING. DIMENSIONS NOTED AS PLUS OR MINUS (±) INDICATE UNVERIFIED DIMENSIONS AND ARE APPROXIMATE. NOTIFY ARCHITECT IMMEDIATELY OF CONFLICTS OR EXCESSIVE VARIATIONS FROM INDICATED DIMENSIONS. NOTED DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS – DO NOT SCALE DRAWINGS. DIMENSIONS OF EXISTING CONDITIONS ARE TO BE FIELD-VERIFIED BY THE CONTRACTOR.

CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS BEFORE COMMENCING ANY DEMOLITION. CONTRACTOR SHALL PROVIDE ADEQUATE SHORING AND BRACING OF ALL STRUCTURAL MEMBERS, EXISTING CONSTRUCTING AND SOIL EXCAVATIONS, AS REQUIRED, AND IN A MANNER SUITABLE TO FINAL CONNECTIONS HAVE BEEN COMPLETED IN ACCORDANCE WITH THE DRAWINGS AND MATERIALS HAVE ACHIEVED DESIGN STRENGTH. NO REINFORCING BARS IN EXISTING CONSTRUCTION SHALL BE OUT UNLESS DIRECTED TO BY THE ARCHITECT OR AS SHOWN ON THE DRAWINGS.

CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAFETY PRECAUTIONS AND THE METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES REQUIRED TO PERFORM THE WORK.

**CONCRETE**

CONCRETE WORK SHALL CONFORM TO ALL REQUIREMENTS OF CHAPTER 19 OF THE INTERNATIONAL BUILDING CODE.

THE CONTRACTOR SHALL SUBMIT CONCRETE MIX DESIGNS TO THE ENGINEER FOR APPROVAL 2 WEEKS PRIOR TO PLACING ANY CONCRETE. THE MIX DESIGN SHALL BE IN CONFORMANCE WITH IBC 1905. THE SUBMITTAL SHALL INDICATE WHERE EACH CONCRETE MIX IS TO BE USED ON THE PROJECT, AS WELL AS THE MAXIMUM AGGREGATE SIZE OF EACH MIX. MAXIMUM AGGREGATE SIZE SHALL CONFORM TO THE PROJECT SPECIFICATIONS.

**CONCRETE MIXES:** CONCRETE MIXES SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:

f <sub>c</sub> (psi)	TEST AGE (days)	USE
4,000	28	FOUNDATIONS, CONCRETE WALLS, HOUSEKEEPING PADS

CONCRETE MIXTURES SHALL CONFORM WITH THE MOST RESTRICTIVE REQUIREMENTS OF ACI 318-14 FOR EXPOSURE CLASSES F2, S0, W0 AND C1.

WATER-REDUCING ADMIXTURES MAY BE INCORPORATED IN CONCRETE MIX DESIGNS, BUT SHALL CONFORM TO ASTM C 494, AND BE USED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. CACL OR OTHER WATER-SOLUBLE CHLORIDE ADMIXTURES SHALL NOT BE USED.

WATER/CEMENT RATIO SHALL BE MEASURED BY WEIGHT AND SHALL BE BASED ON THE TOTAL CEMENTITIOUS MATERIAL. WATER/CEMENT RATIO AND WATER CONTENT SHALL BE DETERMINED BY THE SUPPLIER BASED ON STRENGTH REQUIREMENTS AND SHALL NOT EXCEED THE MAXIMUM WATER/CEMENT RATIO AND/OR WATER CONTENT IF SHOWN ABOVE OR IN THE PROJECT SPECIFICATIONS.

FIELD-MEASURED SLUMP SHALL CONFORM TO THE SUBMITTED CONCRETE MIX DESIGN. TOLERANCE OF SLUMP SHALL CONFORM TO ASTM C 94.

AN AIR-ENTRAINING AGENT CONFORMING TO ASTM C 260 SHALL BE USED IN ALL CONCRETE MIXES FOR FLATWORK WHICH IS EXPOSED TO WEATHER. THE AMOUNT OF ENTRAINED AIR SHALL BE 5 PERCENT ± 1 1/2 PERCENT BY VOLUME. THE AMOUNT OF ENTRAINED AIR SHALL BE MEASURED IN THE FIELD AT THE DISCHARGE FROM THE TRUCK.

HOT/COLD WEATHER PLACEMENT: DO NOT PLACE CONCRETE ON FROZEN GROUND OR AGAINST FROSTED REINFORCING STEEL OR FORMS. DO NOT MIX OR PLACE CONCRETE WHILE THE ATMOSPHERIC TEMPERATURE IS BELOW 40° F. IF AIR TEMPERATURE EXCEEDS 90°F, PROVIDE WATER SPRAY OR OTHER APPROVED METHODS TO COOL CONTACT SURFACES TO LESS THAN 90°F. HOT AND COLD-WEATHER CONCRETE PLACEMENT SHALL FOLLOW THE RESPECTIVE RECOMMENDATIONS IN ACI 305R AND ACI 306R.

**REINFORCING STEEL**

DEFORMED BARS ASTM A 615, GRADE 60

REINFORCING SHALL BE SUPPORTED AS SPECIFIED BY THE PROJECT SPECIFICATIONS AND THE C.R.S.I. MANUAL OF STANDARD PRACTICE, 27TH EDITION. REINFORCING STEEL SHALL BE DETAILED IN ACCORDANCE WITH ACI STANDARD OF PRACTICE AS OUTLINED IN "DETAILS AND DETAILING OF CONCRETE REINFORCEMENT, ACI 315."

LAP ALL REINFORCING BARS AS NOTED ON THE DRAWINGS. WHERE SPLICE LENGTH IS NOT SHOWN, USE TYPE LB (LBT FOR TOP BARS) SPLICE PER DEVELOPMENT AND SPLICE LENGTH SCHEDULE. MECHANICAL OR WELDED BUTT SPLICES SHALL BE USED SUBJECT TO ENGINEER'S APPROVAL. MECHANICAL SPLICES CALLED OUT ON THE PLANS SHALL BE TYPE 1, UNLESS OTHERWISE NOTED. TYPE 1 SPLICES SHALL DEVELOP 125 PERCENT OF THE YIELD CAPACITY OF THE SPLICED BARS IN BOTH TENSION AND COMPRESSION. TYPE 2 SPLICES SHALL DEVELOP THE SPECIFIED TENSILE STRENGTH OF THE SPLICED BARS IN TENSION IN ADDITION TO MEETING TYPE 1 SPLICE REQUIREMENTS.

REINFORCING STEEL SHALL HAVE PROTECTION AS FOLLOWS, UNLESS NOTED OTHERWISE:

USE	COVER
NONSTRUCTURAL SLAB-ON-GRADE	MID-DEPTH
WALL BARS: INTERIOR FACES	3/4"
EXPOSED TO EARTH OR WEATHER	1 1/2" (#5 AND SMALLER) 2" (#6 AND LARGER)
FOOTING: BOTTOM BARS	3" (CAST AGAINST EARTH)
TOP BARS	1 1/2" 2"
SIDE BARS	2"

NON-SHRINK GROUT: BASE PLATE GROUT SHALL BE NON-SHRINK TYPE WITH MINIMUM F<sub>c</sub> = 8,000 psi.

**SOILS**

**SOILS:** SEE THE GEOTECHNICAL REPORT BY GEOENGINEERS, DATED JULY 14, 2022, FOR MORE COMPLETE INFORMATION. EARTHWORK MATERIAL, BACKFILL AND COMPACTION SHALL BE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT. EXCAVATE EXISTING MATERIALS TO ACCOMMODATE THE NEW FOUNDATION SLAB AND PROVIDE COMPACTED STRUCTURAL FILL AS REQUIRED IN ACCORDANCE WITH THE GEOTECHNICAL RECOMMENDATIONS. PREPARED BEARING SURFACES MUST BE OBSERVED BY THE GEOTECHNICAL ENGINEER TO CONFIRM THAT FOOTINGS ARE FOUNDED IN DENSE GLACIAL SOILS.

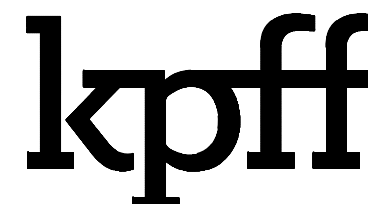
SPECIAL INSPECTION SCHEDULE ESTABLISHED PER 2018 IBC SECTION 109 & CHAPTER 17			
ITEM	CONTINUOUS INSPECTION	PERIODIC INSPECTION	COMMENTS
SOILS			
GRADING, EXCATATION, AND FILL		X	
FINAL FOUNDATION PREP		X	
CONCRETE			
REINFORCEMENT PLACEMENT		X	
PREP OF TEST SPECIMENS	X		
ANCHOR BOLTS	X		
CONCRETE PLACEMENT	X		
CURING		X	
EPOXY DOWEL REBAR	X		

**INSPECTION SCHEDULE NOTES:**

- THE ITEMS CHECKED WITH AN "X" SHALL BE INSPECTED IN ACCORDANCE WITH IBC CHAPTER 17 BY A CERTIFIED SPECIAL INSPECTOR FROM AN ESTABLISHED TESTING AGENCY. FOR MATERIAL SAMPLING AND TESTING REQUIREMENTS, REFER TO THE STRUCTURAL NOTES AND THE NOTES BELOW. THE TESTING AGENCY SHALL SEND COPIES OF ALL STRUCTURAL TESTING AND INSPECTION REPORTS DIRECTLY TO THE ENGINEER, OWNER, CONTRACTOR AND BUILDING OFFICIAL. ANY MATERIALS WHICH FAIL TO MEET THE PROJECT SPECIFICATIONS SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
- SPECIAL INSPECTION IS NOT REQUIRED FOR WORK PERFORMED BY AN APPROVED FABRICATOR PER IBC SECTION 1704.2.2.
- CONTINUOUS SPECIAL INSPECTION MEANS THAT THE SPECIAL INSPECTOR IS ON THE SITE AT ALL TIMES OBSERVING THE WORK REQUIRING SPECIAL INSPECTION (IBC 1702). PERIODIC SPECIAL INSPECTION MEANS THAT THE SPECIAL INSPECTOR IS ON SITE AT TIME INTERVALS NECESSARY TO CONFIRM THAT ALL WORK REQUIRING SPECIAL INSPECTION IS IN COMPLIANCE.

**STRUCTURAL ABBREVIATIONS**

B/	BOTTOM OF
BOT	BOTTOM
CJ	CONTROL JOINT
CL	CENTRELINE
CLR	CLEAR
CONC	CONCRETE
DIA	DIAMETER
DWG(S)	DRAWING(S)
EL	ELEVATION
EMBED	EMBEDMENT
EW	EACH WAY
FT	FEET
FTG	FOOTING
HORIZ	HORIZONTAL
IBC	INTERNATIONAL BUILDING CODE
LOCNS	LOCATIONS
MAX	MAXIMUM
MIN	MINIMUM
OC	ON CENTER
PSI	POUNDS PER SQUARE INCH
REINF	REINFORCING
T/	TOP OF
TOW	TOP OF WALL
TOF	TOP OF FOOTING
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
VERT	VERTICAL



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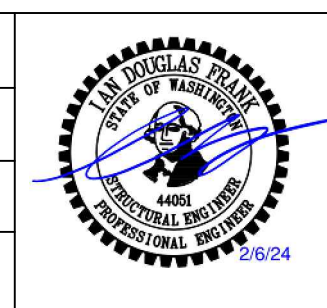


NO	REVISION	DATE	APPD
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FINAL CONSTRUCTION CHECKED	DATE	SCALE
	02/08/2024	AS SHOWN

DESIGNED	CHECKED
JDS	IDF
DATE	PROJECT NAME
DRAWN	
JDS	

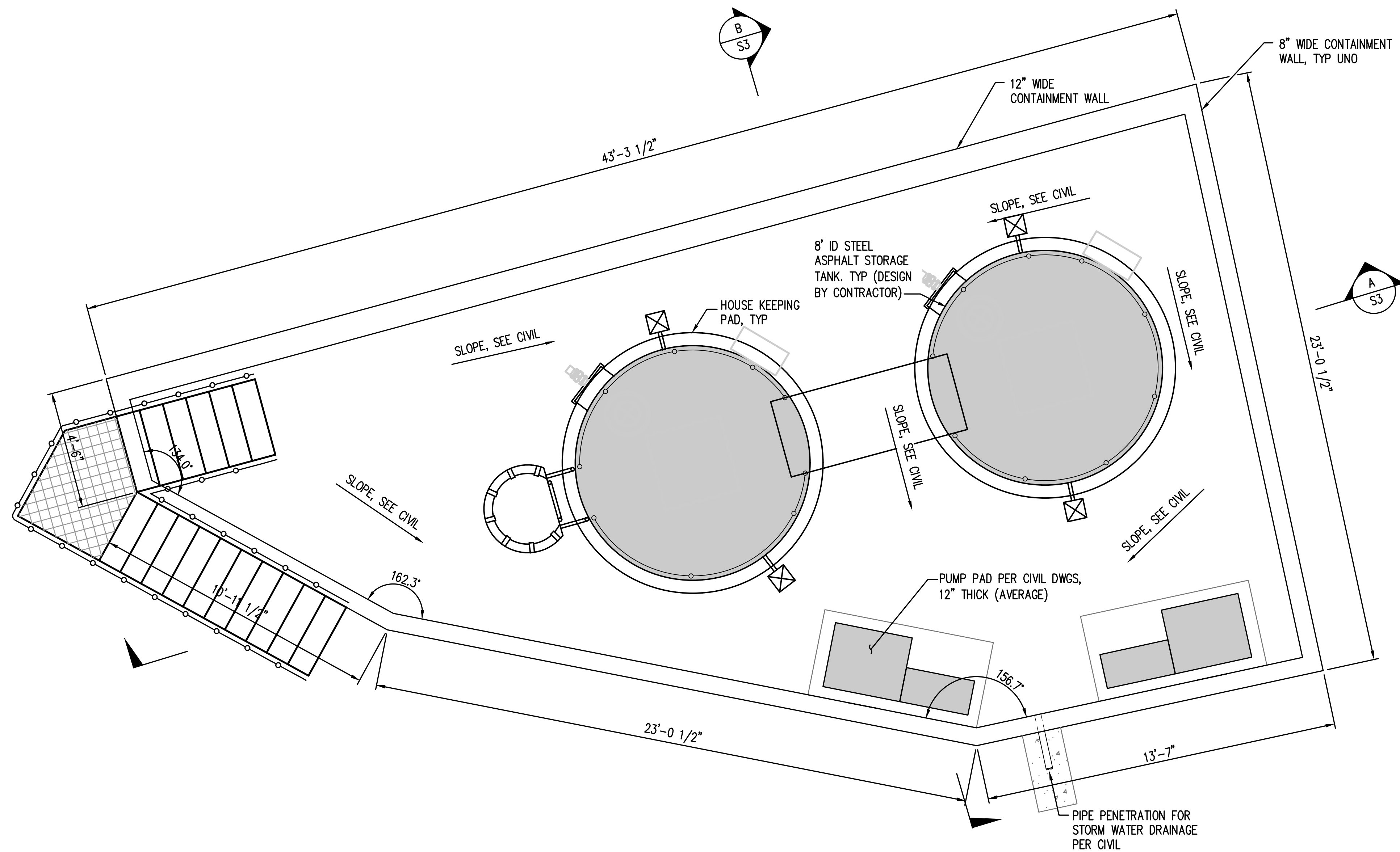
FIELD BOOKS	DRAWING NAME
	STRUCTURAL NOTES



CITY OF TACOMA  
PUBLIC WORKS DEPARTMENT  
ASPHALT BATCH PLANT STORAGE TANKS  
STRUCTURAL NOTES

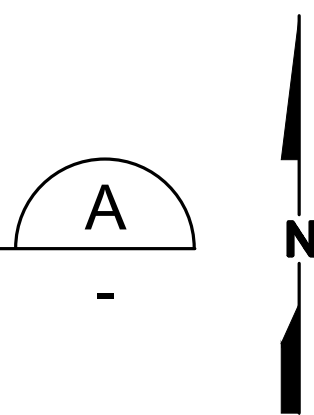
SPEC. NO.	
IRBS NO.	
SHEET NO.	S1
SHEET	9 OF 16

BID SET



STORAGE TANK  
FOUNDATION PLAN

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

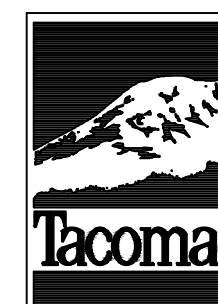


NOTES:

- REFER TO CIVIL DRAWINGS FOR TOP OF WALL ELEVATIONS, SLAB ELEVATIONS, AND SLOPE

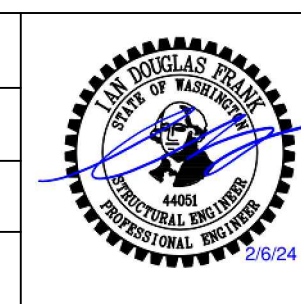


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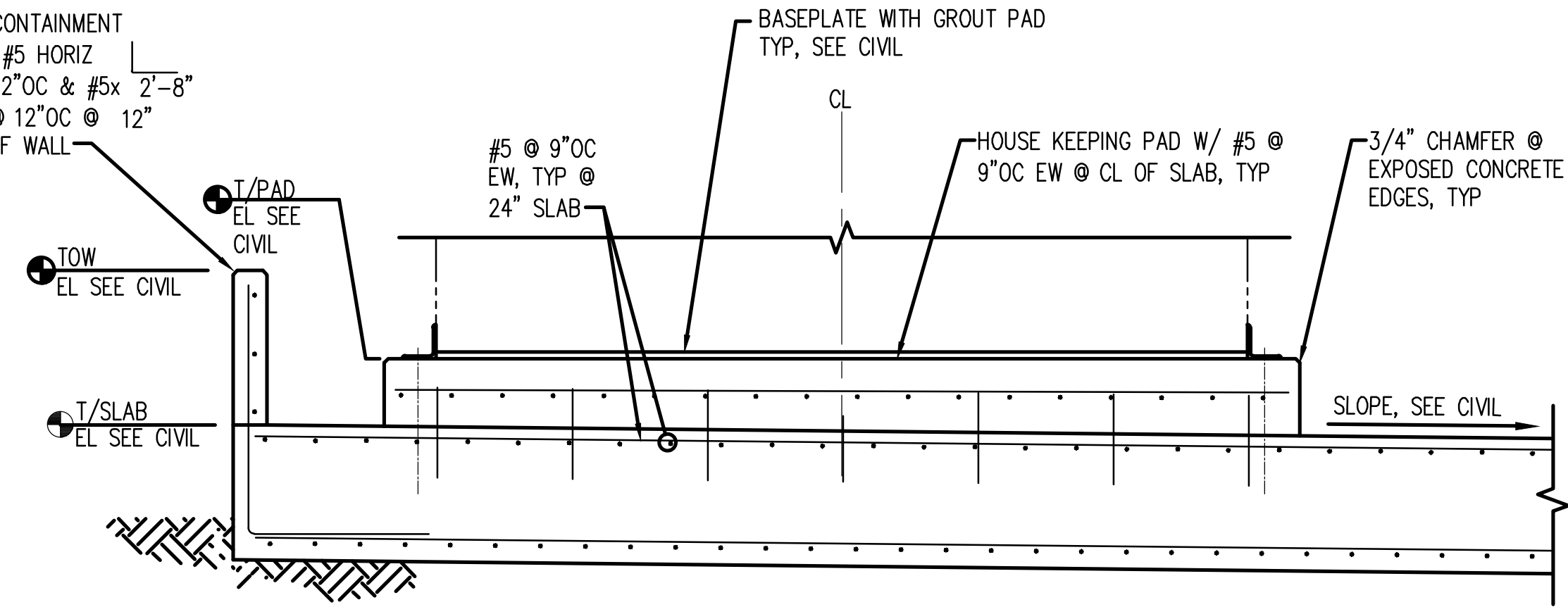
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	02/08/2024	AS SHOWN
DESIGNED	DESIGNED	CHECKED
JDS	JDS	IDF
DATE	DRAWN	PROJECT NAME
	JDS	
FIELD BOOKS	DRAWING NAME	
	FOUNDATION PLAN	



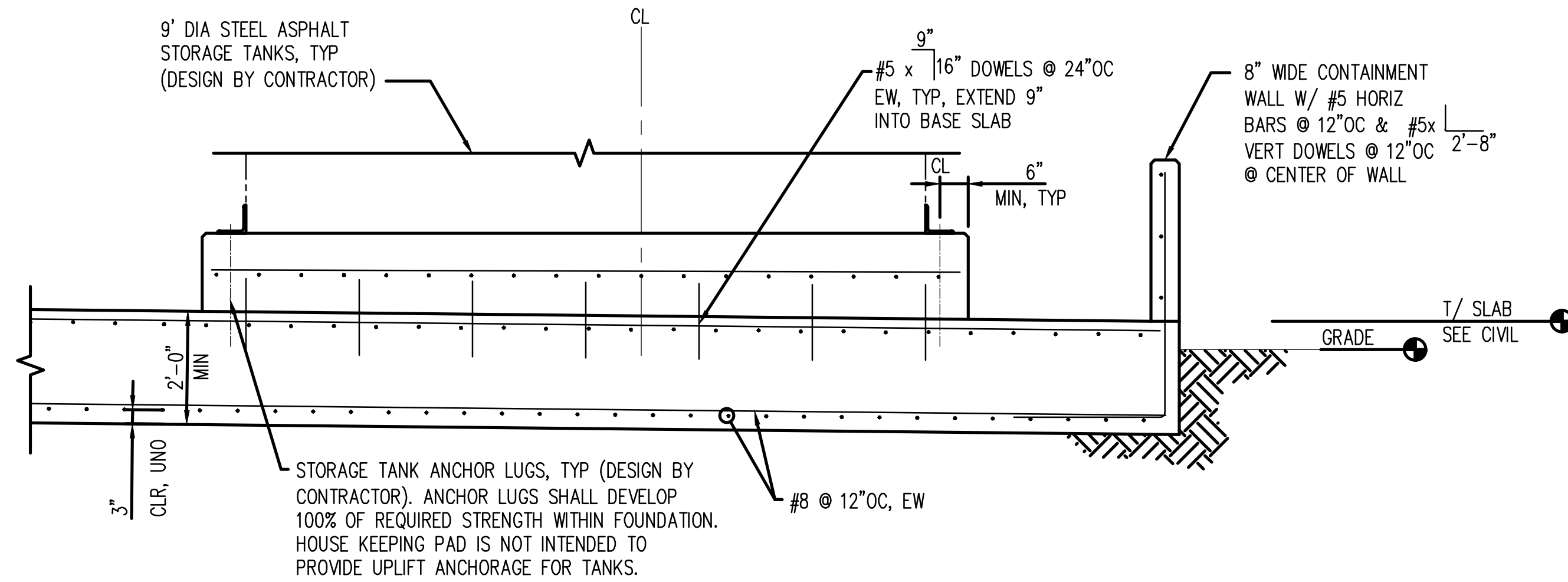
CITY OF TACOMA  
PUBLIC WORKS DEPARTMENT  
ASPHALT BATCH PLANT STORAGE TANKS  
FOUNDATION PLAN

SPEC. NO.	
WBS NO.	
SHEET NO.	S2
SHEET	10 OF 16

8" WIDE CONTAINMENT WALL W/ #5 HORIZ BARS @ 12"OC & #5x 2'-8" DOWELS @ 12"OC @ 12" CENTER OF WALL



9' DIA STEEL ASPHALT STORAGE TANKS, TYP (DESIGN BY CONTRACTOR)

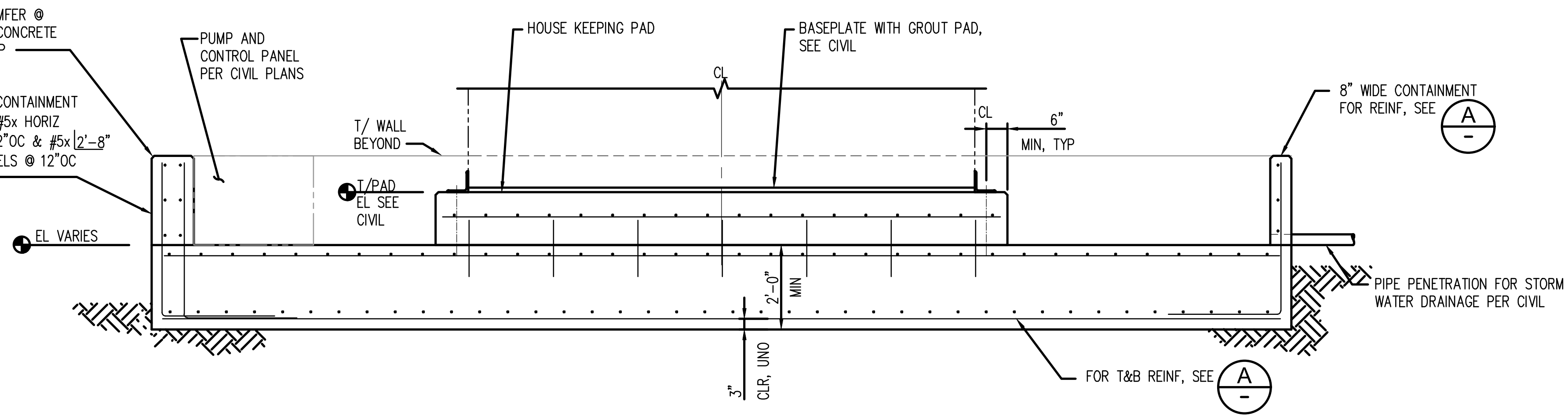


8" WIDE CONTAINMENT WALL W/ #5 HORIZ BARS @ 12"OC & #5x 2'-8" VERT DOWELS @ 12"OC @ 12" CENTER OF WALL

STORAGE TANK  
FOUNDATION SECTION **A**  
SCALE: 1/2"=1'-0" S2

3/4" CHAMFER @ EXPOSED CONCRETE EDGES, TYP

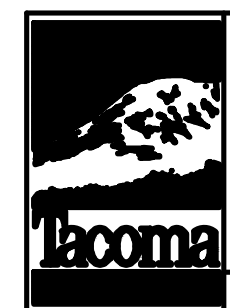
12" WIDE CONTAINMENT WALL W/ #5x HORIZ BARS @ 12"OC & #5x 2'-8" VERT DOWELS @ 12"OC EA FACE



STORAGE TANK  
FOUNDATION SECTION **B**  
SCALE: 1/2"=1'-0" S2

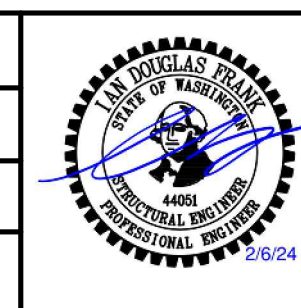


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	02/08/2024	AS SHOWN
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JDS	IDF	
DATE	DRAWN	PROJECT NAME
	JDS	
FIELD BOOKS	DRAWING NAME	
	SECTIONS AND DETAILS	



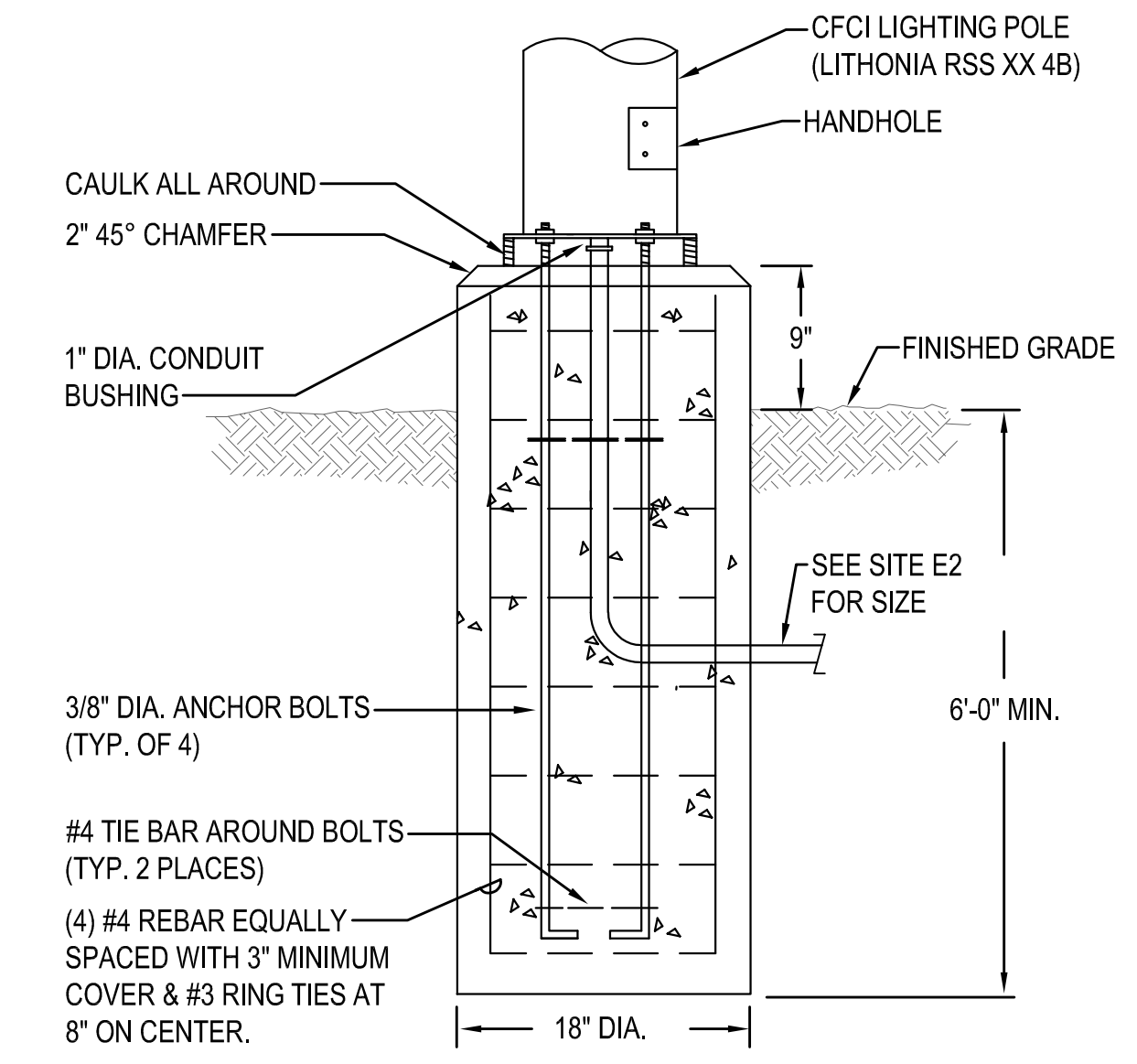
CITY OF TACOMA  
PUBLIC WORKS DEPARTMENT  
ASPHALT BATCH PLANT STORAGE TANKS  
SECTIONS AND DETAILS

SPEC. NO.	
WBS NO.	
SHEET NO.	S3
SHEET	11 OF 16

BID SET

# ELECTRICAL LEGEND

SYMBOL	DESCRIPTION
	POLE LIGHT FIXTURE (ARROW INDICATES DIRECTION OF AIMING FOR OPTICS)
	DUPLEX RECEPTACLE (G INDICATES GROUND FAULT CIRCUIT INTERRUPTER, W INDICATES WEATHERPROOF)
	RACEWAY CONCEALED UNDERGROUND OR UNDER FLOOR SLAB
	METER
	GROUNDING SYSTEM PER CODE
	JUNCTION BOX - SIZE PER CODE
	FUSED DISCONNECT SWITCH
	277/480 VOLT PANELBOARD
	EXISTING PANELBOARD TO BE RETAINED
	MAIN DISTRIBUTION BOARD
	ENCLOSED CIRCUIT BREAKER, AMPERES AS INDICATED
	HANDHOLE
MISCELLANEOUS	
	CONSTRUCTION NOTES
	DEMOLITION NOTES
	W INDICATES WEATHERPROOF FOR ALL DEVICES, PROVIDE LOCKING COVER ON RECEPTACLES.
	ALL DEVICES WITH LIGHT LINE WEIGHT INDICATES EXISTING TO BE RETAINED
	ALL DEVICES WITH DASH LINE INDICATES EXISTING TO BE REMOVED
	MECHANICAL EQUIPMENT CONNECTION



**POLE BASE DETAIL**

SCALE: DIAGRAMMATIC

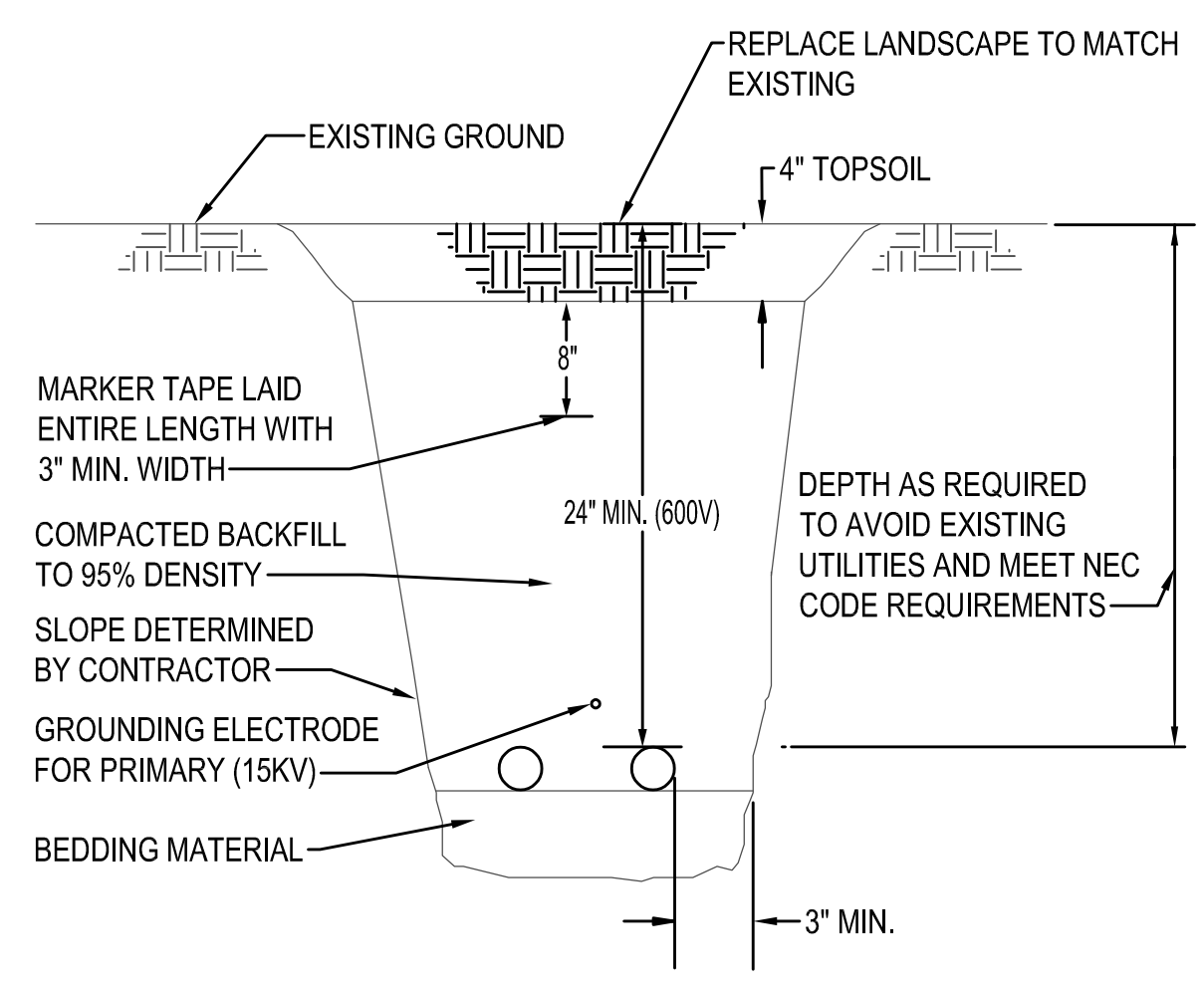
3

GENERAL ABBREVIATIONS	
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
EC	ELECTRICAL CONTRACTOR
GC	GENERAL CONTRACTOR
GFCI	GOVERNMENT FURNISHED, CONTRACTOR INSTALLED
GFGI	GOVERNMENT FURNISHED, GOVERNMENT INSTALLED
MC	MECHANICAL CONTRACTOR
MFR	MANUFACTURER
REQD	REQUIRED
W	WEATHERPROOF

ELECTRICAL ABBREVIATIONS	
AIC	AMPERE INTERRUPTING CAPACITY
AFC	AVAILABLE FAULT CURRENT
C	CONDUIT
CU	COPPER
EMT	ELECTRICAL METALLIC TUBING
FLA	FULL LOAD AMPERE(S)
G	GROUND FAULT CIRCUIT INTERRUPTER
GND	GROUND
HP	HORSEPOWER OR HEAT PUMP
KVA	KILOVOLT-AMPERE(S)
KW	KILOWATT(S)
LED	LIGHT-EMITTING DIODE(S)
LTG	LIGHTING
MCA	MINIMUM CIRCUIT AMPACITY
MCB	MAIN CIRCUIT BREAKER
MLO	MAIN LUGS ONLY
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
PH	PHASE
UG	UNDER GROUND
V	VOLT(S)
VA	VOLT-AMPERE(S)
XFMR	TRANSFORMER

## GENERAL NOTES (APPLY TO ALL SHEETS)

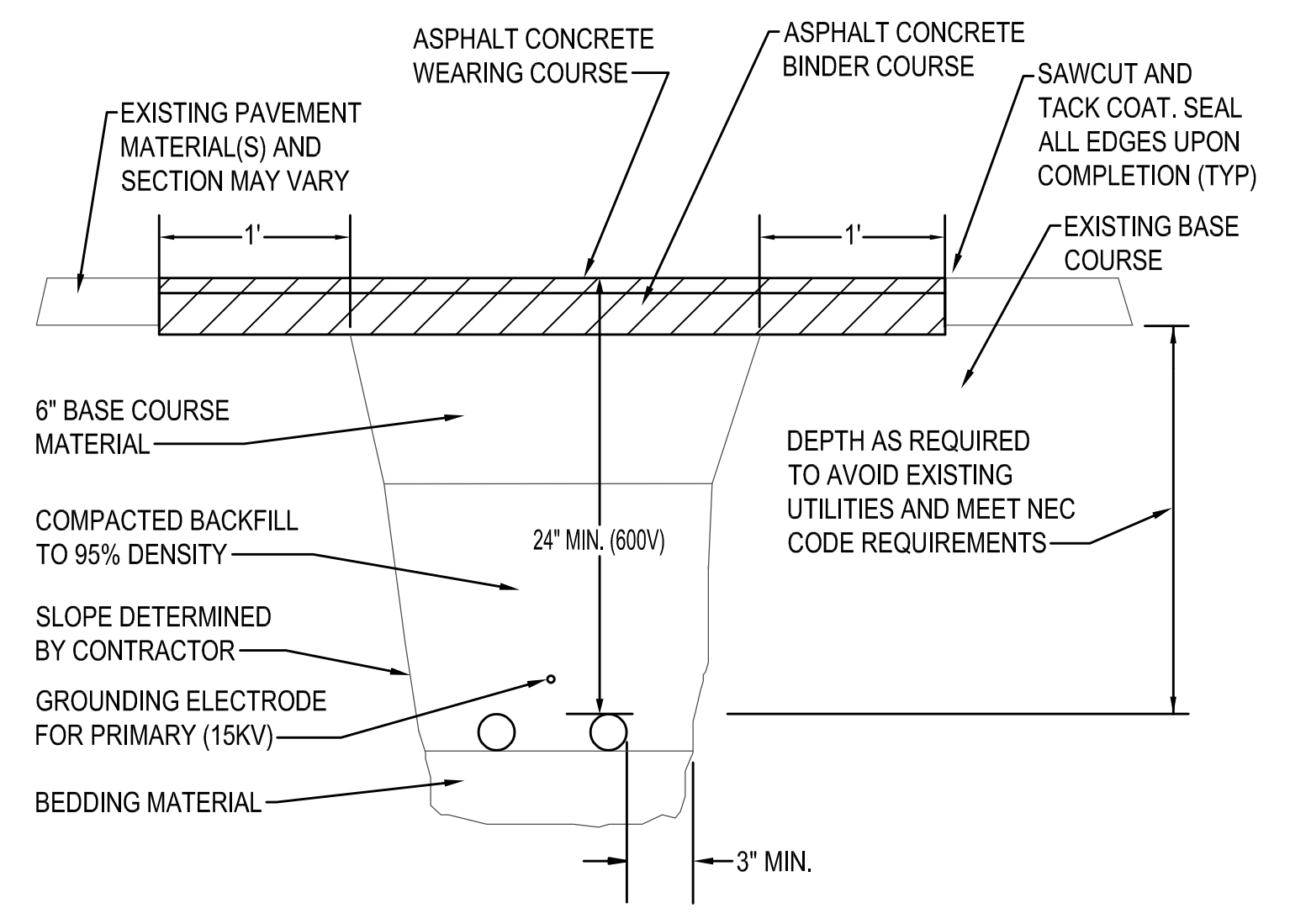
- ELECTRICAL DRAWINGS ARE DIAGRAMMATIC IN NATURE. THE CONTRACTOR SHALL BE FAMILIAR WITH THE SITE AND CONDITIONS, AND SHALL NOT RELY SOLELY ON REVIEW OF THE BIDDING DOCUMENTS IN DETERMINING THE EXTENT OF WORK REQUIRED. COORDINATION OF THESE DRAWINGS WITH REQUIREMENTS FOR CONTRACT WORK IS THE RESPONSIBILITY OF THE CONTRACTOR.
- CONTRACTOR IS RESPONSIBLE FOR ALL PERMITS AND UTILITY FEES.
- PROVIDE CONDUIT SUPPORTS AS REQUIRED.
- PROVIDE A GROUND WIRE AND DEDICATED NEUTRAL FOR EACH CIRCUIT.
- ALL DISCONNECTS SHALL BE THE HEAVY DUTY TYPE.
- SEE EACH SHEET FOR ADDITIONAL GENERAL NOTES THAT ARE SPECIFIC TO AN AREA OR SHEET.
- ALL CONDUIT SHALL BE RUN PARALLEL OR PERPENDICULAR TO STRUCTURE.
- THE CONTRACTOR IS RESPONSIBLE TO VERIFY ALL CMU/CONCRETE WALLS AND BRICK WALLS FOR CABLE ROUTING, CORE DRILLING AND ALL WORK REQUIRED TO FACILITATE A COMPLETE AND FULLY FUNCTIONAL SYSTEM WHETHER SPECIFICALLY INDICATED OR NOT.
- ALL SHUTDOWN AND CHANGE-OVER TIME SHALL BE KEPT TO A MINIMUM. ALL BUILDING SYSTEM SHUT DOWNS SHALL BE DISCUSSED AND COORDINATED BETWEEN THE GENERAL CONTRACTOR AND ALL SUBCONTRACTORS. THE CONTRACTOR SHALL SUBMIT A OUTAGE PROPOSAL TO THE OWNER FOR APPROVAL. NO BUILDING SYSTEM SHUTDOWNS WILL BE ALLOWED WITHOUT BEING SCHEDULED AND APPROVED BY THE OWNER.
- ALL CIRCUIT EXTENSIONS AND NEW RACEWAYS SHALL BE CONCEALED. NOTIFY PROJECT MANAGER FOR APPROVAL. PRIOR TO INSTALLATION OF ANY SURFACE MOUNTED RACEWAY WHERE CONCEALMENT IS NOT POSSIBLE. ROUTE ALL SURFACE METAL RACEWAY AS INCONSPICUOUSLY AS POSSIBLE AND PAINT TO MATCH ADJACENT SURFACE.
- SEAL ALL EDGES OF CONCRETE UPON COMPLETION OF TRENCHING AND BACKFILL.
- PANEL DESIGNATIONS AND CIRCUIT NUMBERS ARE ONLY INDICATED ON THE DRAWINGS FOR REFERENCE BY THE ELECTRICAL CONTRACTOR. THE E.C. IS RESPONSIBLE TO PROVIDE ALL CONDUIT, WIRING, JUNCTION BOXES AND MISCELLANEOUS ACCESSORIES TO ACCOMMODATE INSTALLATION AND CONNECTION OF ALL DEVICES INDICATED ON THE CONTRACT DOCUMENTS. ALL WIRING HOMERUNS SHALL BE IN HARD CONDUIT BACK TO THE DESIGNATED PANELBOARD. ALL JUNCTION BOXES SHALL BE LABELED IDENTIFYING THE PANELBOARD AND CIRCUIT CONTAINED WITHIN. THERE SHALL BE NO MORE THAN (3) CIRCUITS PER HOMERUN. MULTI-WIRE CIRCUITS ARE NOT ALLOWED. EACH CIRCUIT SHALL CONTAIN A DEDICATED NEUTRAL UNLESS SPECIFICALLY ALLOWED BY THE ENGINEER. ALL WIRING SHALL BE SIZED ACCORDING TO THE AMPACITY OF THE CIRCUIT BREAKER INDICATED ON THE PANEL SCHEDULE. ALL CONDUITS SHALL BE SIZED PER NEC CODE BASED ON THE CONDUCTOR SIZE, TYPE, QUANTITY AND MINIMUM FILL REQUIREMENTS. CIRCUITS OVER 120V FOR 120V AND 250V FOR 277V SHALL BE UPSIZED ONE WIRE SIZE TO ACCOUNT FOR VOLTAGE DROP. E.C. IS RESPONSIBLE TO SHOW ALL JUNCTION BOX LOCATIONS, CONDUIT ROUTING AND HOMERUNS ON A SET OF AS-BUILT DRAWINGS.



**UNDERGROUND - LANDSCAPE AREAS**

SCALE: DIAGRAMMATIC

1



**UNDERGROUND - ASPHALT AREAS**

SCALE: DIAGRAMMATIC

2

**GENERAL NOTES FOR LIGHTING FIXTURE SCHEDULE**  
 1. FOR LIGHTING CONTROLS WHICH INCLUDE DAYLIGHT, OCCUPANCY SENSORS AND TIME CLOCK CONTROLS, THE ELECTRICAL CONTRACTOR SHALL PROVIDE TESTING OF THE CONTROL DEVICES, COMPONENTS, EQUIPMENT AND SYSTEMS TO MAKE SURE THEY ARE CALIBRATED, ADJUSTED AND OPERATE IN ACCORDANCE WITH DRAWINGS AND SPECIFICATIONS. SEQUENCES OF OPERATION SHALL BE FUNCTIONALLY TESTED IN THE PRESENCE OF THE ENGINEER. A COMPLETE REPORT OF TEST PROCEDURES AND RESULTS SHALL BE PREPARED AND FILED WITH THE OWNER.

LIGHTING FIXTURE SCHEDULE						
SYMBOL	FIXTURE DESCRIPTION	MANUFACTURER/MODEL #	LUMENS	V	W	MOUNTING & REMARKS
AL1	LED AREA SITE LIGHTING	COOPER - MCGRAW-EDISON# GLEON-SA3D-750-U-T4FT-ADJA-AP-BPC-DIM10-MS/DIM-L40	18005	120/277	191	INSTALL PER MANUFACTURER'S RECOMMENDATIONS. SEE POLE BASE DETAIL THIS SHEET FOR REQUIREMENTS. MOUNT TO THE TOP OF A 2 1/2" ROUND POLE. FIXTURE SHALL BE CONTROLLED VIA PHOTOCELL AND OCCUPANCY SENSOR FOR DIMMING.



NO	REVISION	DATE	APPD

FINAL CONSTRUCTION CHECKED	DATE	SCALE
BY	DESIGNED	CHECKED
DATE	DRAWN	PROJECT NAME
FIELD BOOKS	DRAWING NAME	



CITY OF TACOMA  
PUBLIC WORKS DEPARTMENT

**ASPHALT BATCH PLANT STORAGE TANKS  
ELECTRICAL LEGEND AND DETAILS  
BASE BID**

SPEC. NO.  
WBS NO.  
SHEET NO. **E1**  
SHEET 12 OF 16



**GENERAL NOTES**

1. SEE CIVIL PLANS FOR ADDITIONAL REQUIREMENTS.
2. SEE ONE LINE DIAGRAM ON E3 FOR FEEDER SIZES.
3. ALL LOCATIONS SHOWN ARE APPROXIMATE. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS PRIOR TO STARTING WORK.

**CONSTRUCTION NOTES**

- ① SECONDARY ELECTRICAL FEED BY TPU. TRENCHING AND CONDUIT BY EC. COORDINATE WORK AND ROUTING WITH TPU.
- ② PROVIDE CONNECTION TO PUMP CONTROL PANEL, VFD AND MOTOR. INCLUDE SEPARATE 120V CONNECTION TO HEAT TRACE FOR EACH PUMP FROM PUMP CONTROL PANEL.
- ③ PROVIDE CONNECTION TO CONTROLLER, HEATER AND PUMP AS REQUIRED BY MANUFACTURER.
- ④ PROVIDE A NEW 25' POLE WITH STAINLESS STEEL FINISH AND POLE BASE WITH FIXTURE. SEE DETAIL 3 ON SHEET E1 FOR POLE BASE INSTALLATION REQUIREMENTS.
- ⑤ PROVIDE UNISTRUT AND MOUNTING HARDWARE AS REQUIRED. COORDINATE EXACT LOCATION AND REQUIREMENTS WITH TPU.
- ⑥ PROVIDE GFCI, WEATHERPROOF, LOCKABLE WHILE-IN-USE DUPLEX RECEPTACLE AT 18" ABOVE FINISHED GROUND. MOUNT ALONG CONCRETE WALL. CORE DRILL AND SEAL PENETRATION AS REQUIRED. ROUTE BACK TO NEW TANK PANEL TO CIRCUIT INDICATED.
- ⑦ PROVIDE A 233-LA OLD CASTLE VAULT. COORDINATE EXACT LOCATION OF PULL VAULT WITH CIVIL ENGINEER PRIOR TO INSTALLATION.
- ⑧ REPLACE EXISTING 400A FUSED DISCONNECT AS INDICATED ON E3.
- ⑨ ROUTE CONDUIT UP WALL AND LB INTO ROOM ABOVE MDP.
- ⑩ PROVIDE EQUIPMENT ONLY UNDER BASE BID. UNDER ALTERNATE BID PROVIDE SPARE BREAKER IN PANEL.

**ELECTRICAL SITE PLAN 1**

SCALE: 1" = 20'-0"

EQUIPMENT CONNECTION SCHEDULE											
EQUIP.	VOLT/PH	KVA	MCA	HP	PANEL	BKR	CONDUIT/WIRE SIZE	MAGNETIC STARTER (NOTE 1)	FUSED DISC. (NOTE 1)	MIN. AIC. (AMPS)	REMARKS
AG- 1	480/3	11.634	14.0	10	TH	14,16,18	3/4" C., (4) #10 & (1) #10 GND	EC	EC	7,000	PROVIDE ONLY UNDER BASE BID
AG- 2	480/3	11.634	14.0	10	TH	20,22,24	3/4" C., (4) #10 & (1) #10 GND	EC	EC	7,000	
H- 1	480/3	24	28.9	--	TH	1,3,5	3/4" C., (4) #8 & (1) #10 GND	EC	EC	7,000	PROVIDE ONLY UNDER BASE BID
H- 2	480/3	24	28.9	--	TH	2,4,6	3/4" C., (4) #8 & (1) #10 GND	EC	EC	7,000	
HT- 1	120/1	2.39	24.0	--	TL	3	3/4" C., (2) #10 & (1) #10 GND	EC	EC	5,000	PROVIDE ONLY UNDER BASE BID
HT- 2	120/1	2.39	24.0	--	TL	5	3/4" C., (2) #10 & (1) #10 GND	EC	EC	5,000	
P- 1	480/3	17.451	21.0	15	TH	7,9,11	3/4" C., (4) #8 & (1) #10 GND	EC	EC	7,000	CONNECT PANEL AND ACCESSORIES. PROVIDE ONLY UNDER BASE BID
P- 2	480/3	17.451	21.0	15	TH	8,10,12	3/4" C., (4) #8 & (1) #10 GND	EC	EC	7,000	CONNECT PANEL AND ACCESSORIES

NOTE: 1. CONTRACTOR LISTED SHALL FURNISH AND INSTALL THE LISTED DEVICE.



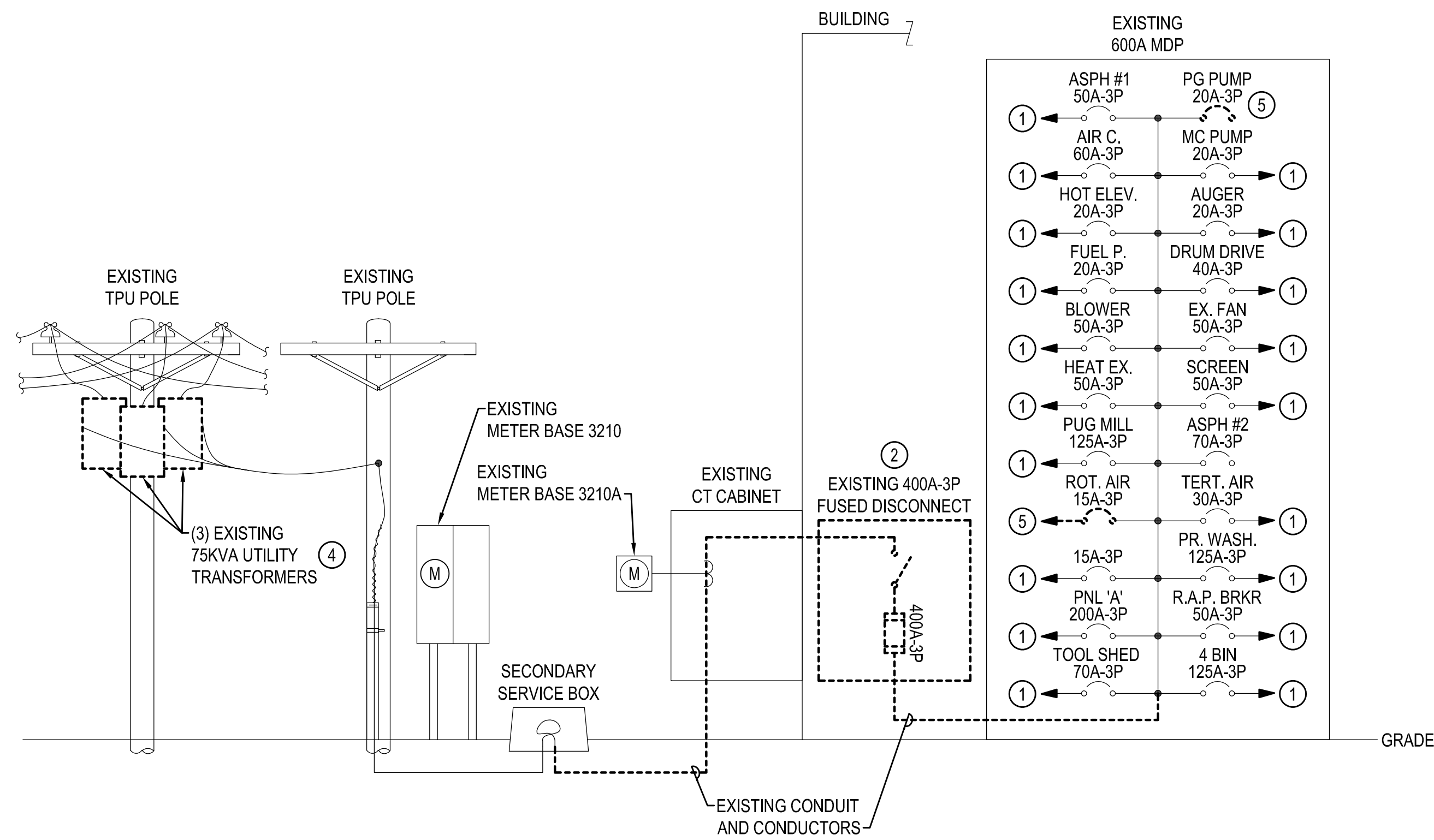
FINAL CONSTRUCTION CHECKED	DATE	SCALE
BY	DESIGNED	CHECKED
DATE	DRAWN	PROJECT NAME
FIELD BOOKS	DRAWING NAME	



CITY OF TACOMA  
PUBLIC WORKS DEPARTMENT  
ASPHALT BATCH PLANT STORAGE TANKS  
ELECTRICAL SITE PLAN  
BASE BID

**BID SET**

SPEC. NO.	
WBS NO.	
SHEET NO.	E2
SHEET	13 OF 16



# ELECTRICAL ONE LINE DIAGRAM - DEMOLITION

SCALE: DIAGRAMMATIC

1

## ASPHALT BATCH PLANT STORAGE TANK UTILITY 12 MONTH PEAK DEMAND CALCULATION WORKSHEET 600 MDP

NEC 220.87 AND WAC 296-46B-900(3)(j)

12 Month Peak Demand (Month & Year): February 2022  
Phase to Phase Voltage (Volts): 480  
Phases (1=Single Phase, 3=Three Phase): 3

Utility Peak Demand	=	174	KW
Power Factor	/	0.98	(P.F.)
Apparent Peak Demand	=	177.55	KVA
NEC 220.87(2) adjustment factor	X	1.25	
Adjusted Peak Demand	=	221.94	KVA
Seasonal adjustment factor	X	1.00	
Seasonal adjustment peak demand	=	221.94	KVA
Occupancy adjustment factor	X	1.00	
Occupancy adjustment peak demand	=	221.94	KVA
Other adjustment factor(s)	X	1.00	
Utility Peak Demand with Adjustments	=	221.94	KVA
New Calculated Demand Load Added	New Tank Panel +	115.96	KVA

Metered Demand Based		
CALCULATED DEMAND LOAD :		337.90 KVA
CALCULATED DEMAND CURRENT :		406 AMPS

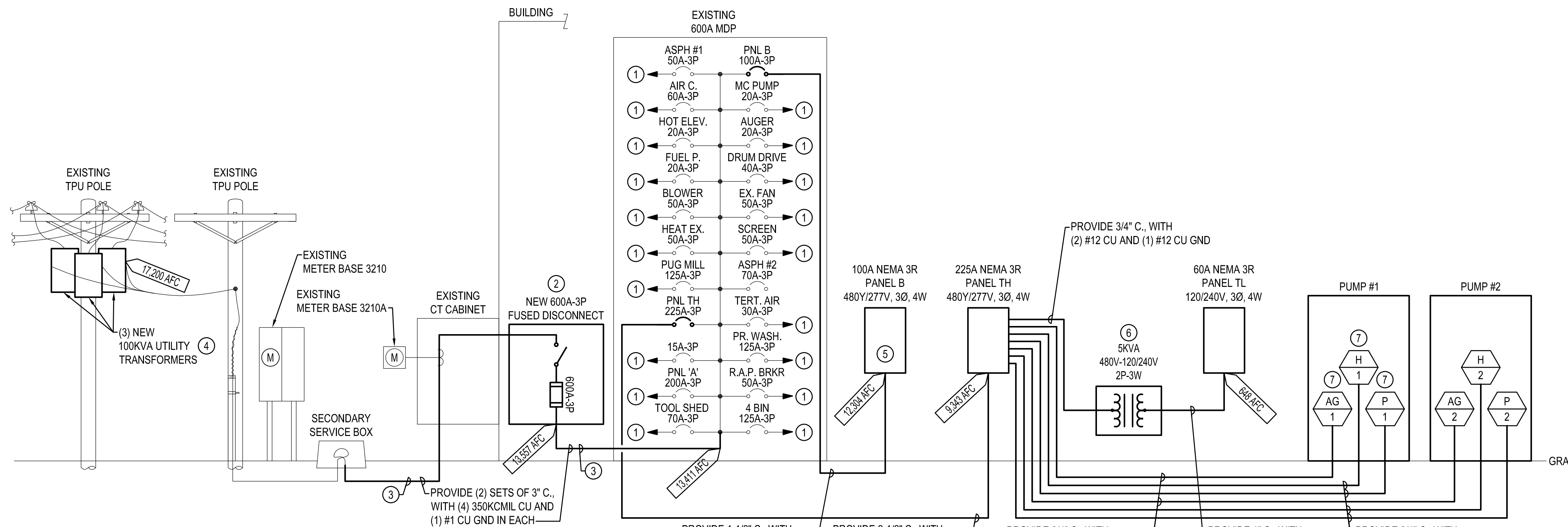
Note: See WAC 296-46B-900 (3)(j) for additional metering requirements

### GENERAL NOTES

- SEE EXISTING AND REVISED SCHEDULES FOR MDP ON SHEET E4.
- SEE NEW PANEL SCHEDULES ON SHEET E5.

### CONSTRUCTION NOTES

- TO EXISTING LOADS.
- PROVIDE A NEW 600A FUSED DISCONNECT WITH 600A FUSES. COORDINATE SERVICE SHUTDOWN WITH TPU AND OWNER.
- COORDINATE WITH TPU TO REPLACE THE FEEDER AS NEEDED TO ACCOMMODATE THE NEW LOAD.
- TPU TO REPLACE THE EXISTING POLE MOUNTED SERVICE TRANSFORMERS. COORDINATE SERVICE SHUTDOWN WITH TPU AND OWNER.
- MOVE LOADS FROM MDP TO NEW 100A PANEL. INTERCEPT, SPLICE AND EXTEND BRANCH CIRCUITS AS NEEDED. DEMOLISH ALL ASSOCIATED APPURTENANCES, INCLUDING THE CIRCUIT BREAKER, THAT ARE NOT TO BE REUSED.
- WALL MOUNTED 5KVA 480V-120/240V STEP-DOWN TRANSFORMER.
- PROVIDE EQUIPMENT ONLY UNDER BASE BID. UNDER ALTERNATE BID PROVIDE SPARE BREAKER IN PANEL.



# ELECTRICAL ONE LINE DIAGRAM - CONSTRUCTION

SCALE: DIAGRAMMATIC

2

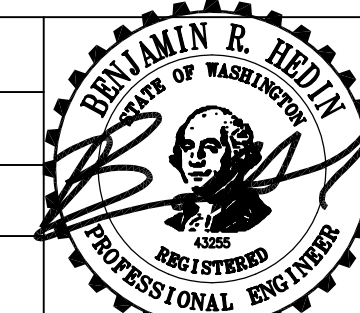


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FINAL CONSTRUCTION CHECKED	DATE	SCALE
	02/08/2024	NTS
DESIGNED	CHECKED	
JL	BH	
DATE	DRAWN	PROJECT NAME
	JL	221-322
FIELD BOOKS	DRAWING NAME	
	ONE LINE DIAGRAM	



CITY OF TACOMA  
PUBLIC WORKS DEPARTMENT  
ASPHALT BATCH PLANT STORAGE TANKS  
ONE LINE DIAGRAM  
BASE BID

SPEC. NO.  
WBS NO.  
SHEET NO. **E3**  
SHEET 14 OF 16

BID SET

GENERAL NOTES

- 1. SEE NEW PANEL SCHEDULES ON SHEET E5.

CONSTRUCTION NOTES

- ① REPLACE EXISTING 20A-3P CIRCUIT BREAKER WITH A 100A-3P. MATCH EXISTING AIC RATING OF PANEL.
- ② REPLACE EXISTING 15A-3P CIRCUIT BREAKER WITH A 225A-3P. MATCH EXISTING AIC RATING OF PANEL.

LOAD TYPE		PANEL: MDP (EXISTING) 3 PH 4 WIRE VOLTAGE: 480Y/277V 600A MLO											LOAD TYPE		
		MOUNT: SURFACE FEED: BOTTOM						SF MAINS: NO						MINIMUM	
		POLES: 66													
LOAD TYPE	LOAD	CIR. NO.	CIR. BRKR P	AMP	A	B	C	CIR. BRKR P	AMP	CIR. NO.	CIRCUIT DIRECTORY	LOAD	LOAD TYPE		
	ASPH. #1	1	3					3		2	PG PUMP (SPARE)		①		
		3								4					
		5		50						6					
	AIR COMPRESSOR	7	3					3		8	MC PUMP				
		9								10					
		11		60				20		12					
	HOT ELEV.	13	3					3		14	AUGER				
		15								16					
		17		20				20		18					
	FUEL PUMP	19	3					3		20	DRUM DRIVE				
		21								22					
		23		20				40		24					
	BURNER BLOWER	25	3					3		26	EXHAUST FAN				
		27								28					
		29		50				50		30					
	HEAT EXCHANGE	31	3					3		32	SCREEN				
		33								34					
		35		50				50		36					
	PUG MILL	37	3					3		38	ASPH. #2				
		39								40					
		41		125				70		42					
MO	3326	43	3		3326			3		44	TERTIARY AIR				
MO	3326	45				3326				46					
MO	3326	47		15			3326	30		48					
	UKNOWN	49	3					3		50	PRESSURE WASHER				
		51								52					
		53		15				125		54					
	PANEL 'A' VIA XFMR	55	3					3		56	R.A.P./R.A.S. BRKR				
		57								58					
		59		200				50		60					
	TOOL WORK SHED	61	3					3		62	4 BIN				
		63								64					
		65		70				125		66					
9977 TOTAL		THIS PANEL->						TOTAL							
		3326 3326 3326													
		LARGEST MOTOR(125%) = 0.00						TOTAL CONNECTED LOAD (VA): 9,976.61							
		RECEPTS<=10000(100%) = 0.00						TOTAL CONNECTED CURRENT (A): 12.00							
		RECEPTS>10000(50%) = 0.00						TOTAL DEMAND LOAD (VA): 9,976.61							
		RECEPTS TOTAL = 0.00						TOTAL DEMAND CURRENT (A) 12.00							
		ELECTRIC HEAT(100%) = 0.00													

LOAD TYPE		PANEL: MDP (REVISED) 3 PH 4 WIRE VOLTAGE: 480Y/277V 600A MLO											LOAD TYPE		
		MOUNT: SURFACE FEED: BOTTOM						SF MAINS: NO						14,000AIC MINIMUM	
		POLES: 66													
LOAD TYPE	LOAD	CIR. NO.	CIR. BRKR P	AMP	A	B	C	CIR. BRKR P	AMP	CIR. NO.	CIRCUIT DIRECTORY	LOAD	LOAD TYPE		
	ASPH. #1	1	3		3326			3		2	PANEL 'B'	3326	SF		
		3				3326				4		3326	SF		
		5		50			3326	100		6		3326	SF		
	AIR COMPRESSOR	7	3					3		8	MC PUMP				
		9								10					
		11		60				20		12					
	HOT ELEV.	13	3					3		14	AUGER				
		15								16					
		17		20				20		18					
	FUEL PUMP	19	3					3		20	DRUM DRIVE				
		21								22					
		23		20				40		24					
	BURNER BLOWER	25	3					3		26	EXHAUST FAN				
		27								28					
		29		50				50		30					
	HEAT EXCHANGE	31	3					3		32	SCREEN				
		33								34					
		35		50				50		36					
	PUG MILL	37	3					3		38	ASPH. #2				
		39								40					
		41		125				70		42					
SF	35772	43	3		35772			3		44	TERTIARY AIR				
SF	37955	45				37955				46					
SF	37775	47		225			37775	30		48					
	UNKNOWN	49	3					3		50	PRESSURE WASHER				
		51								52					
		53		15				125		54					
	PANEL 'A' VIA XFMR	55	3					3		56	R.A.P./R.A.S. BRKR				
		57								58					
		59		200				50		60					
	TOOL WORK SHED	61	3					3		62	4 BIN				
		63								64					
		65		70				125		66					
111502 TOTAL		THIS PANEL->						TOTAL							
		39098 41281 41101													
		LARGEST MOTOR(125%) = 477.50						TOTAL CONNECTED LOAD (VA): 121,478.61							
		RECEPTS<=10000(100%) = 180.00						TOTAL CONNECTED CURRENT (A): 146.12							
		RECEPTS>10000(50%) = 0.00						TOTAL DEMAND LOAD (VA): 121,574.11							
		RECEPTS TOTAL = 180.00						TOTAL DEMAND CURRENT (A) 146.23							
		ELECTRIC HEAT(100%) = 48000.00													



2407 North 31st Street, Suite 100  
Tacoma, Washington 98407  
(253) 396-0150 Fax (253) 396-0162



NO	REVISION	DATE	APPD

FINAL CONSTRUCTION CHECKED	DATE 02/08/2024	SCALE NTS
DESIGNED	JL	CHECKED
DATE	JL	PROJECT NAME 221-322



CITY OF TACOMA  
PUBLIC WORKS DEPARTMENT  
ASPHALT BATCH PLANT STORAGE TANKS  
PANEL SCHEDULES  
BASE BID

SPEC. NO.	
WBS NO.	
SHEET NO.	E4
SHEET	15 OF 16

BID SET

LOAD TYPE		PANEL: B 3 PH 4 WIRE VOLTAGE: 480Y/277V 100A MCB										LOAD TYPE			
		LOC: MOUNT: SURFACE FEED: TOP					TYPE: NEMA 1 POLES: 42 SF MAINS: NO 14,000AIC MINIMUM								
LOAD TYPE	LOAD	CIRCUIT DIRECTORY	CIR. NO.	CIR. BRKR		A	B	C	CIR. BRKR		CIR. NO.	CIRCUIT DIRECTORY	LOAD	LOAD TYPE	
				P	AMP				P	AMP					
		SPARE	1	1	20						2				
		SPARE	3	1	20						4	PG PUMP (SPARE)			
		SPARE	5	1	20					20	6				
		SPACE	7			3326					8		3326	ML	
		SPACE	9				3326				10	ROTORAY AIR	3326	ML	
		SPACE	11					3326		15	12		3326	ML	
		SPACE	13								14	SPACE			
		SPACE	15								16	SPACE			
		SPACE	17								18	SPACE			
		SPACE	19								20	SPACE			
		SPACE	21								22	SPACE			
		SPACE	23								24	SPACE			
		SPACE	25								26	SPACE			
		SPACE	27								28	SPACE			
		SPACE	29								30	SPACE			
		SPACE	31								32	SPACE			
		SPACE	33								34	SPACE			
		SPACE	35								36	SPACE			
		SPACE	37								38	SPACE			
		SPACE	39								40	SPACE			
		SPACE	41								42	SPACE			
		TOTAL		THIS PANEL->			3326	3326	3326	TOTAL			9977		
				LIGHITNG(125%) = 0.00			3326	3326	3326	TOTAL CONNECTED LOAD (VA): 9,976.61					
				RECEPTS<=1000(100%) = 0.00			LARGEST MOTOR(125%) = 12470.77			KITCHEN LOADS(65%) = 0.00			TOTAL CONNECTED CURRENT (A): 12.00		
				RECEPTS>1000(50%) = 0.00			OTHER MOTORS(100%) = 0.00			APPLIANCES(100%) = 0.00					
				RECEPTS TOTAL = 0.00			MOTOR TOTAL = 12470.77			DEDICATED(100%) = 0.00			TOTAL DEMAND LOAD (VA): 12,470.77		
				ELECTRIC HEAT(100%) = 0.00			WATER HEATERS(100%) = 0.00			MISC(100%) = 0.00			TOTAL DEMAND CURRENT (A) 15.00		

NOTES: L=LIGHTING, R=RECEPTACLES, H=ELECTRIC HEAT, ML=LARGEST MOTOR, MO=OTHER MOTORS, WH=WATER HEATERS, K=KITCHEN LOADS, A=APPLIANCES, D=DEDICATED, X=MISC, SF=SUB FEED

LOAD TYPE		PANEL: TH 3 PH 4 WIRE VOLTAGE: 480Y/277V 225A MCB										LOAD TYPE			
		LOC: MOUNT: SURFACE FEED: BOTTOM					TYPE: NEMA 3R; SUSE RATED POLES: 42 SF MAINS: NO 14,000AIC MINIMUM								
LOAD TYPE	LOAD	CIRCUIT DIRECTORY	CIR. NO.	CIR. BRKR		A	B	C	CIR. BRKR		CIR. NO.	CIRCUIT DIRECTORY	LOAD	LOAD TYPE	
				P	AMP				P	AMP					
H	8000		1	3		16000					2		8000	H	
H	8000	STORAGE TANK #1 (H-1) (NOTE 1)	3				16000				4	STORAGE TANK #2 (H-2)	8000	H	
H	8000		5		40			16000			6		8000	H	
ML	5817		7	3		11634					8		5817	MO	
ML	5817	STORAGE TANK #1 (P-1) (NOTE 1)	9				11634				10	STORAGE TANK #2 (P-2)	5817	MO	
ML	5817		11		40			11634			12		5817	MO	
L	382	20' LIGHTING POLE	13	1	20	4260					14		3878	MO	
SF	2565	PANEL 'TL' VIA 5KVA XFMR	15	2			6443				16	STORAGE TANK #1 (AG-1) (NOTE 1)	3878	MO	
SF	2385		17		20			6263			18		3878	MO	
		SPARE	19	1	20	3878					20		3878	MO	
		SPARE	21	1	20		3878				22	STORAGE TANK #2 (AG-2)	3878	MO	
		SPARE	23	1	20			3878			24		3878	MO	
		SPACE	25								26	SPACE			
		SPACE	27								28	SPACE			
		SPACE	29								30	SPACE			
		SPACE	31								32	SPACE			
		SPACE	33								34	SPACE			
		SPACE	35								36	SPACE			
		SPACE	37								38	SPACE			
		SPACE	39								40	SPACE			
		SPACE	41								42	SPACE			
		TOTAL		THIS PANEL->			35772	37955	37775	TOTAL			64719		
				LIGHITNG(125%) = 477.50			35772	37955	37775	TOTAL CONNECTED LOAD (VA): 111,502.00					
				RECEPTS<=1000(100%) = 180.00			LARGEST MOTOR(125%) = 21813.75			KITCHEN LOADS(65%) = 0.00			TOTAL CONNECTED CURRENT (A): 134.12		
				RECEPTS>1000(50%) = 0.00			OTHER MOTORS(100%) = 40719.00			APPLIANCES(100%) = 0.00					
				RECEPTS TOTAL = 180.00			MOTOR TOTAL = 62532.75			DEDICATED(100%) = 4770.00			TOTAL DEMAND LOAD (VA): 115,960.25		
				ELECTRIC HEAT(100%) = 48000.00			WATER HEATERS(100%) = 0.00			MISC(100%) = 0.00			TOTAL DEMAND CURRENT (A) 139.48		

NOTES: L=LIGHTING, R=RECEPTACLES, H=ELECTRIC HEAT, ML=LARGEST MOTOR, MO=OTHER MOTORS, WH=WATER HEATERS, K=KITCHEN LOADS, A=APPLIANCES, D=DEDICATED, X=MISC, SF=SUB FEED

NOTE 1: PROVIDE CONNECTION TO EQUIPMENT UNDER BASE BID. PROVIDE SPARE BREAKER UNDER ALTERNATE BID.

LOAD TYPE		PANEL: TL 1 PH 3 WIRE VOLTAGE: 120/240V 60A MCB										LOAD TYPE		
		LOC: MOUNT: SURFACE FEED: BOTT					TYPE: NEMA 1 POLES: 6 SF MAINS: 10,000AIC MINIMUM							
LOAD TYPE	LOAD	CIRCUIT DIRECTORY	CIR. NO.	CIR. BRKR		A	B	CIR. BRKR		CIR. NO.	CIRCUIT DIRECTORY	LOAD	LOAD TYPE	
				P	AMP			P	AMP					
R	180	CONVENIENCE RECEPTACLE	1	1	20	180				2	SPARE			
D	2385	HT-1 (NOTE 1)	3	1	30		2385			4	SPARE			
D	2385	HT-2	5	1	30	2385				6	SPARE			
		TOTAL		THIS PANEL->			2565	2385	TOTAL					
				LIGHITNG(125%) = 0.00			2565	2385	TOTAL CONNECTED LOAD (VA): 4,950.00					
				RECEPTS<=1000(100%) = 180.00			LARGEST MOTOR(125%) = 0.00			KITCHEN LOADS(65%) = 0.00			TOTAL CONNECTED CURRENT (A): 20.63	
				RECEPTS>1000(50%) = 0.00			OTHER MOTORS(100%) = 0.00			APPLIANCES(100%) = 0.00				
				RECEPTS TOTAL = 180.00			MOTOR TOTAL = 0.00			DEDICATED(100%) = 4770.00			TOTAL DEMAND LOAD (VA): 4,950.00	
				ELECTRIC HEAT(100%) = 0.00			WATER HEATERS(100%) = 0.00			MISC(100%) = 0.00			TOTAL DEMAND CURRENT (A): 20.63	

NOTES: L=LIGHTING, R=RECEPTACLES, H=ELECTRIC HEAT, ML=LARGEST MOTOR, MO=OTHER MOTORS, WH=WATER HEATERS, K=KITCHEN LOADS, A=APPLIANCES, D=DEDICATED, X=MISC, SF=SUB FEED

NOTE 1: PROVIDE CONNECTION TO EQUIPMENT UNDER BASE BID. PROVIDE SPARE BREAKER UNDER ALTERNATE BID.

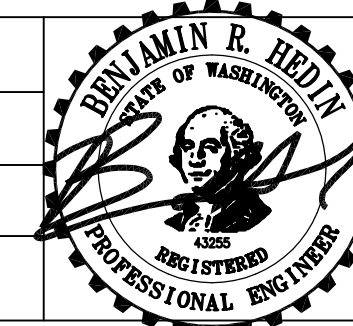


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NO REVISION DATE APPD

FINAL CONSTRUCTION CHECKED	DATE 02/08/2024	SCALE NTS
BY JL	DESIGNED JL	CHECKED BH
DATE	DRAWN JL	PROJECT NAME 221-322
FIELD BOOKS	DRAWING NAME	PANEL SCHEDULES



CITY OF TACOMA  
PUBLIC WORKS DEPARTMENT  
ASPHALT BATCH PLANT STORAGE TANKS  
PANEL SCHEDULES  
BASE BID

BID SET  
SPEC. NO.  
WBS NO.  
SHEET NO. E5  
SHEET 16 OF 16