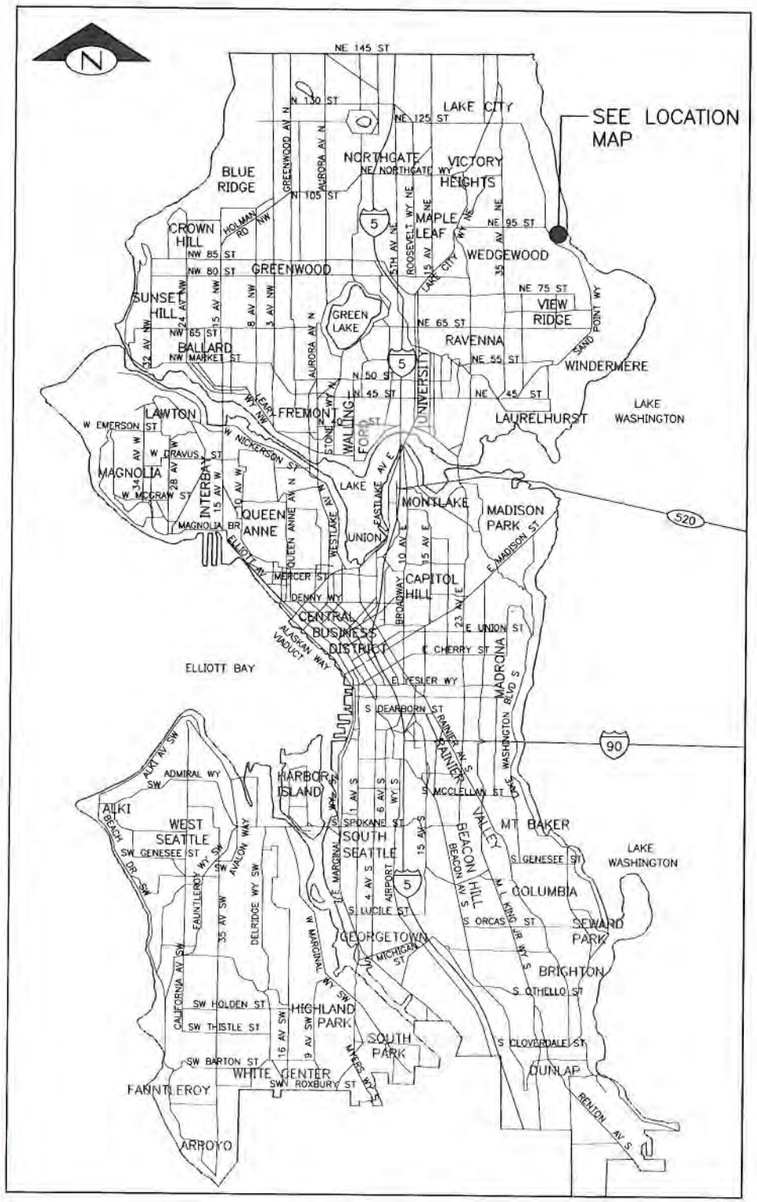
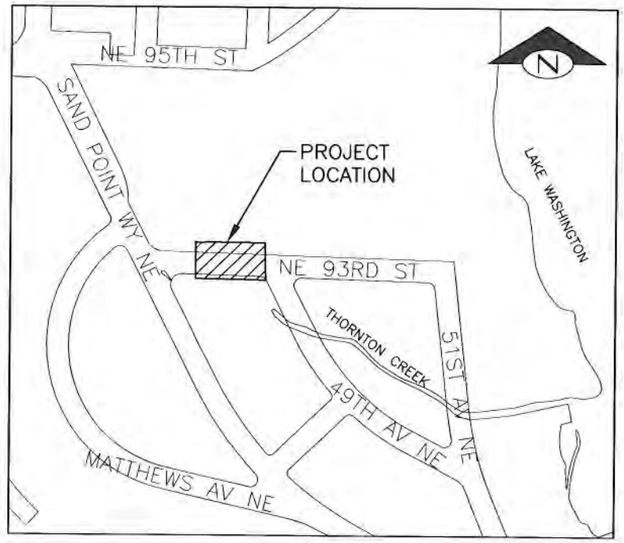


VICINITY MAP

SCALE: 1" = 1 MILE



LOCATION MAP

SCALE: 1" = 200'

SHEET INDEX

SHEET NO.	SHEET DECRIPTION
1	COVER
2	GENERAL NOTES
3	GENERAL NOTES
4	EXISTING SITE PLAN & CONDITIONS
5	CESC AND REMOVAL
6	STRUCTURAL PLAN
7	RESTORATION
8	SECTION
9	DETAILS

DRAFT

Under revision.

Changes will be incorporated into next level of design.

DETAIL AND SECTION REFERENCING

4 / 9 — DETAIL REFERENCE NUMBER / SHEET ON WHICH DETAIL APPEARS

(TITLE) (SCALE) 4 / 9 — DETAIL REFERENCE NUMBER / SHEET FROM WHICH DETAIL WAS TAKEN

("TYP" SPECIFIES THAT DETAIL IS UNIFORMLY TYPICAL THROUGHOUT PROJECT EXCEPT WHERE OTHERWISE NOTED.)
("VAR" SPECIFIES THAT DETAIL WAS TAKEN FROM SEVERAL SHEETS.)

A A 32 — SECTION A-A IS SHOWN ON SHEET 32.

SECTION A-A 30 — SECTION A-A IS TAKEN FROM SHEET 30.

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

VINICITY MAP, LOCATION MAP
SHEET INDEX, DATUM AND
DETAIL AND SECTION REFERENCING

OSBORN CONSULTING INCORPORATED

CIVILTECH engineering

APPROVED FOR ADVERTISING
NANCY LOCKE
DEPARTMENT OF FINANCE & ADMINISTRATIVE SERVICES
SEATTLE, WASHINGTON 20
BY:
PURCHASING & CONTRACTING SERVICES DIRECTOR

NAME OR INITIALS AND DATE
DESIGNED RDP 3.5.13
CHECKED TJO 3.5.13
DRAWN RDH 3.5.13
CHECKED TJO 3.5.13

INITIALS AND DATE
REVIEWED:
DES. CONST.
SDOT PROJ. MGR.
RECEIVED
REVISED AS BUILT

ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE CITY OF SEATTLE STANDARD PLANS AND SPECIFICATIONS AND OTHER DOCUMENTS CALLED FOR IN SECTION 0-02.3 OF THE PROJECT MANUAL.

ROBERT D.E. PARISH — STATE OF WASHINGTON — 39306 — REGISTERED PROFESSIONAL ENGINEER

Seattle Public Utilities
City of Seattle
Ray Hoffman, Director
ORDINANCE NO.
FUND:
SCALE: NONE
APPROVED
INSPECTOR'S BOOK

NE 93RD CULVERT REPAIR

JOB NO. PC C312066
R/W
CO
VAULT PLAN NO.
SHEET 1 OF 9

VAULT SERIAL NO.	DATE	MARK	NATURE REVISIONS	MADE	CHK'D	REV'D

O:\Projects\10-120023 SPU Separated System On-Call\WA-04_93rd Culvert\3 CADD\04-Design\A-Plot Files\1 C312066-P-Cover-93rd Culvert.dwg
Robert Mar-06-13 1:47pm

#PRELIMINARY/50%#

DRAFT

GENERAL NOTES

THE FOLLOWING NOTES APPLY UNLESS SHOWN OTHERWISE ON THE DRAWINGS

BACKGROUND:

PURPOSE

THE PILE SYSTEM IS TO PROVIDE SUPPLEMENTAL STRUCTURAL SUPPORT FOR THE EXISTING CULVERT NORTH WALL.

REFERENCES

- GEOTECHNICAL RECOMMENDATIONS – THORNTON CREEK CULVERT REPAIR PROJECT, KING COUNTY, WASHINGTON, DATE JANUARY 23, 2013

DESIGN CRITERIA:

CODES AND STANDARDS: ALL MATERIALS, WORKMANSHIP, DESIGN, AND CONSTRUCTION SHALL CONFORM TO THE DRAWINGS, SPECIFICATIONS AND THE FOLLOWING ITEMS:

- CITY OF SEATTLE STANDARD SPECIFICATIONS FOR ROAD, BRIDGE AND MUNICIPAL CONSTRUCTION, 2011 EDITION
- CITY OF SEATTLE STANDARD PLANS FOR MUNICIPAL CONSTRUCTION, 2011 EDITION
- CITY OF SEATTLE RIGHT OF WAY IMPROVEMENTS MANUAL
- CITY OF SEATTLE STORMWATER MANUAL VOLUME 2 AND 3 SPU DR 2009-004 & 2009-005
- CITY OF SEATTLE ENVIRONMENTAL (SEPA) CHECKLIST
- STREET AND SIDEWALK PAVEMENT OPENING AND RESTORATION SDOT DR 5-2009
- WSDOT GEOTECHNICAL DESIGN MANUAL, 2011 EDITION
- WDFW -HYDRAULIC PROJECT APPROVAL (HPA) PER CHAPTER 77.55 RCW AND CHAPTER 220-110 WAC
- AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS FOR ROAD, BRIDGE, AND MUNICIPAL CONSTRUCTION 2011 EDITION, AS MODIFIED BY STATE AND LOCAL JURISDICTION

DESIGN LOADS

DEAD:

CONCRETE	150 PCF
STEEL	490 PCF

LIVE:

UNIFORM DISTRIBUTION	85 PSF
VEHICLE	HL-93

NOTE: UNIFORM DISTRIBUTION AND VEHICLE LOAD ARE NOT CONCURRENTLY APPLIED

SEISMIC:

HORIZONTAL ACCELERATION 1/2 PGA = 0.17G

WIND:

N/A

SOIL:

HORIZONTAL PRESSURE	40 PSF
VERTICAL PRESSURE	180 PSF

MATERIALS AND CONSTRUCTION:

GENERAL

ALL MATERIAL AND EQUIPMENT INCORPORATED INTO THIS PROJECT SHALL BE NEW UNLESS OTHERWISE NOTED ON THE DRAWINGS. MATERIAL NOT SPECIFICALLY NOTED IN THE GENERAL NOTES OR ELSEWHERE ON THE DRAWINGS SHALL BE SUBMITTED BY THE SUPPLIER TO THE ENGINEER FOR APPROVAL. APPROVAL WILL BE BASED ON CONFORMANCE TO CURRENT STANDARDS UTILIZED BY THE OWNER. ALL MATERIALS AND METHODS SHALL CONFORM TO GOOD WORKMANSHIP, ACCEPTABLE INDUSTRY STANDARDS, AND MANUFACTURER'S RECOMMENDATIONS. DEBRIS BOOMS SHALL BE USED FOR ANY WORK WHICH MAY RELEASE DEBRIS INTO NEARBY WATERWAYS. CONSTRUCTION SHALL BE IN ACCORDANCE WITH CITY OF SEATTLE AND KING COUNTY BEST MANAGEMENT PRACTICES (BMP) FOR OVER-WATER CONSTRUCTION ACTIVITY.

DRAWINGS INDICATE GENERAL AND TYPICAL DETAILS OF CONSTRUCTION. WHERE CONDITIONS ARE NOT SPECIFICALLY INDICATED, BUT ARE OF SIMILAR CHARACTER TO DETAILS SHOWN, SIMILAR CONSTRUCTION DETAILS SHALL BE USED SUBJECT TO REVIEW BY THE ENGINEER.

CONSTRUCTION ACCESS AND STAGING AREAS SHALL BE PROTECTED BY THE CONTRACTOR AGAINST ANY DAMAGE FROM THE CONSTRUCTION ACTIVITIES. ANY DAMAGE TO THESE AREAS INCURRED DURING CONSTRUCTION SHALL BE REPAIRED AND RESTORED TO ITS ORIGINAL CONDITION AT NO COST TO THE OWNER.

UTILITY LOCATION

THE CONTRACTOR SHALL UTILIZE THE SERVICES OF THE "UTILITY LOCATOR SERVICE" (1-800-424-5555) TO VERIFY THE EXTENT AND LOCATIONS OF SITE UTILITIES PRIOR TO COMMENCING WORK. CONTRACTOR SHALL POTHOLE TO LOCATE ALL UTILITIES WHICH MAY IMPACT CONSTRUCTION.

PERMITS

ALL REQUIRED PERMITS SHALL BE OBTAINED BY THE CITY OF SEATTLE PRIOR TO CONSTRUCTION.

MATERIAL DISPOSAL

DEMOLISHED OR EXCAVATED MATERIAL SHALL BE DISPOSED OF IN ACCORDANCE TO ALL APPLICABLE STATE AND LOCAL LAWS.

FENCING & FALL PROTECTION

THE CONTRACTOR SHALL BE RESPONSIBLE FOR FENCING THE STAGING AREA AND ANY WORK RELATED AREAS TO PREVENT PUBLIC ENTRY INTO THE SITE. FENCING SHALL BE MAINTAINED THROUGHOUT THE ENTIRE CONSTRUCTION SEQUENCE. THE CONTRACTOR SHALL PLACE CONSTRUCTION SIGNS AND BARRICADES AS REQUIRED TO PREVENT PUBLIC ENTRY INTO THE SITE. FENCING SHALL BE IN ACCORDANCE TO THE WASHINGTON ADMINISTRATIVE CODE (WAC) 296-155-505 SAFETY STANDARDS FOR CONSTRUCTION WORK.

VERIFICATION

CONTRACTOR SHALL VERIFY ALL EXISTING AND PROPOSED DIMENSIONS, MEMBER SIZES AND CONDITIONS PRIOR TO FABRICATION OR COMMENCING ANY WORK. DIMENSIONS OF EXISTING STRUCTURES SHOWN ON THE DRAWINGS ARE INTENDED AS GUIDELINES ONLY AND SHALL BE VERIFIED. THE EXISTING CONDITIONS SHOWN ON THE DRAWINGS ARE BASED ON EITHER SITE OBSERVATION, ORIGINAL DRAWINGS, OR WERE ASSUMED BASED ON EXPECTED CONDITIONS. IF THE EXISTING CONDITIONS DO NOT CLOSELY MATCH THE CONDITIONS SHOWN ON THE DRAWINGS, OR IF THE EXISTING MATERIALS ARE OF QUESTIONABLE OR SUBSTANDARD QUALITY, THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO COMMENCING ANY WORK.

STRUCTURAL STEEL

PILES SHALL CONFORM WITH ASTM A992 OR A572
CASING SHALL CONFORM WITH ASTM A53, GR. B

BOLTS AND OTHER HARDWARE

BOLTS AND RODS SHALL CONFORM WITH ASTM A307 WITH MATCHING HEAVY HEX NUTS AND WASHERS OR AS OTHERWISE SHOWN IN THE DRAWINGS.
HEADED STUDS SHALL CONFORM WITH ASTM A108

WASHERS ARE REQUIRED UNDER BOTH HEAD AND NUT OF ALL BOLTS UNLESS OTHERWISE NOTED.

STEEL WELDING

ALL FIELD AND SHOP STEEL WELDING SHALL CONFORM PER AWS D1.1 STRUCTURAL WELDING CODE – STEEL, CURRENT EDITION. ELECTRODES SHALL BE E70XX SERIES.

DEPOSITED FILLER METAL SHALL MEET CHARPY REQUIREMENTS OF 20 FT-LBS AT 0 DEGREES F AND HAVE CHEMISTRY SIMILAR TO THE BASE METAL AS APPROVED BY THE ENGINEER. FILLER METALS SHALL ONLY BE USED IN WELDING POSITIONS RECOMMENDED BY THE MANUFACTURER. WELDING CONSUMABLES SHALL BE STORED AND THE CONDITION SHALL BE MAINTAINED PER AWS SECTION 5.

PRE-HEAT SHALL BE BASED ON MATERIAL GRADE AND THICKNESS SHOWN HEREWITH, PER AWS TABLES. UNIFORMITY OF PRE-HEAT SHALL CONFORM TO AWS STIPULATIONS.

WELDING PERSONNEL SHALL BE QUALIFIED PER AWS TO WELD PROCEDURES AND WELD POSITIONS NECESSARY FOR THE JOINT DETAILS SPECIFIED HEREWITH. ALL STEEL FABRICATION SHOP DRAWINGS SHALL REFERENCE THE WELD PROCEDURE SPECIFICATION FOR EACH WELD DETAILED. WELD PROCEDURE SPECIFICATIONS SHALL BE SUBMITTED WITH THE SHOP DRAWINGS. SUBMITTALS VERIFYING WELDER QUALIFICATIONS SHALL BE TRANSMITTED TO THE OWNER FOR APPROVAL PRIOR TO ANY WELDING.

WELDING THROUGH GALVANIZED COATING SHALL NOT BE PERFORMED. GALVANIZING WITHIN 2-INCHES OF THE WELD SHALL BE REMOVED PRIOR TO WELDING AND REPAIRED AS DISCUSSED IN COATING REPAIR.

ALL WELDS SHALL BE VISUALLY INSPECTED TO COMPLY WITH VISUAL INSPECTION CRITERIA FOR STATICALLY LOAD NON-TUBULAR AND TUBULAR CONNECTIONS PER AWS SECTION 6.

CONCRETE

PREPARATION AND WORKMANSHIP OF CONCRETE CONSTRUCTION SHALL BE IN ACCORDANCE WITH WSDOT STANDARD SPECIFICATIONS.

CEMENT SHALL CONFORM TO ASTM C150 TYPE II, OR TYPE I OR III WITH TRI-CALCIUM ALUMINATE CONTENT BELOW 8%. AGGREGATE SHALL CONFORM TO ASTM C33 WITH MAXIMUM SIZE OF 3/4-INCH. CONCRETE SHALL BE STANDARD WEIGHT, PORTLAND CEMENT CONCRETE APPROPRIATELY PROPORTIONED TO MEET OR EXCEED THE FOLLOWING MINIMUM REQUIREMENTS FOR STRENGTH AND SERVICEABILITY:

1. MINIMUM 28 DAY COMPRESSIVE STRENGTH, $F'c$ = 4,000 PSI
2. MINIMUM CEMENT CONTENT = 6.0 SACKS PER CUBIC YARD
3. MAXIMUM WATER CEMENT RATIO = 0.40
4. AIR ENTRAINMENT = 5% – 8%

CONTROLLED DENSITY FILL (CDF)

CDF SHALL BE IN ACCORDANCE WITH WSDOT STANDARD SPECIFICATION SECTION 2-09.3(1)E. CDF SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH, $F'c$ = 100 PSI, AND SHALL BE PUMPABLE. CONTRACTOR SHALL PROVIDE A MIX DESIGN IN WRITING TO THE ENGINEER ON WSDOT FORM 350-040 AND UTILIZE ACI 229 AS A GUIDE TO DEVELOP THE CDF MIX DESIGN. NO CDF SHALL BE PLACED UNTIL THE ENGINEER HAS REVIEWED THE MIX DESIGN.

DRILLED SHAFT

PILE SHAFTS SHALL BE DRILLED WITHOUT LOSS OF GROUND MATERIAL AND WITHOUT ENDANGERING PREVIOUSLY INSTALLED PILES OR EXISTING UTILITIES. SHAFTS SHALL BE SUPPORTED IN A MANNER TO PREVENT CAVING OR COLLAPSE.

VIBRATION MONITORING PLAN

THE CONTRACTOR SHALL COORDINATE WITH SEATTLE PUBLIC UTILITIES (SPU) TO DEVELOP A PLAN TO MONITOR AND CONTROL VIBRATION AS A RESULT OF CONSTRUCTION. THE PLAN SHALL BE DEVELOPED TO PREVENT DAMAGE TO NEIGHBORING PROPERTIES. COORDINATION WITH OWNERS OF NEIGHBORING PROPERTIES MAY BE REQUIRED. THE CONTRACTOR SHALL WORK WITH SPU TO COORDINATE WITH OWNERS OF NEIGHBORING PROPERTIES. THE CONTRACTOR AND SPU SHALL COORDINATE WITH THE ENGINEER PRIOR TO IMPLEMENTATION OF THE VIBRATION MONITORING PLAN.

GENERAL CONSTRUCTION SEQUENCE

STAGE 1:

1. DRILL HOLE FOR PILE #1
2. INSTALL PILE #1 AND CASING #1
3. FILL LOWER PORTION OF DRILLED SHAFT WITH CONCRETE OR CDF (ABANDON CASING AS SHOWN)
4. FILL UPPER PORTION OF DRILLED SHAFT WITH TEMPORARY GRAVEL BACKFILL TO PREVENT SHAFT FROM COLLAPSING
5. INSTALL TRENCH PLATE ON ROADWAY SURFACE
6. REPEAT STEPS 1-5 FOR REMAINING PILES UNTIL ALL PILES ARE INSTALLED

STAGE 2:

1. PROVIDE ACCESS AREA FOR PILE #1
2. REMOVE TEMPORARY GRAVEL BACKFILL
3. CAST STRUCTURAL CONCRETE PER DIMENSIONS SHOWN IN PILE CONNECTION DETAIL 3
4. DRILL HOLES FOR BOLTS. FIELD MEASURE BOLT HOLE SPACING INSIDE OF CULVERT AND FABRICATE BEARING PLATE ACCORDINGLY. BOTTOM BOLT SHALL NOT BE CLOSER THAN 6" FROM THE BOTTOM OF CULVERT WALL. SEE PLATE DETAIL 2.
5. INSTALL SILICONE, BEARING PLATE, AND THRU-RODS AS SHOWN. SNUG TIGHT RODS BEFORE WELDING NUTS.
6. FILL TRENCH ACCESS AREA PER CITY OF SEATTLE SPECIFICATION FOR ROADWAY BACKFILL. COMPACT EACH 6" LIFT TO 95% DRY DENSITY. USE HAND ROLLER TO COMPACT SOIL WITHIN THREE FEET OF PILE OR CULVERT WALL. PROVIDE AND COMPACT ALL ROAD SUBGRADE ABOVE THE CULVERT AND PILE PER CITY OF SEATTLE SPECIFICATIONS.
7. REPEAT STEPS 1-6 FOR REMAINING PILES

DRAFT

needs to be refined for level of permit required

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O:\Projects\10-120023 SPU Separated System On-Call\WA-04_93rd Culvert\3 CADD\04-Design\A-Plot Files\2 C312066-P-General Notes-93rd Culvert.dwg
Robert Mar-06-13 2:14pm

* PRELIMINARY/50%2*

VAULT SERIAL NO.	DATE	MARK	NATURE / REVISIONS	MADE	CHK'D	REV'D

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CIVILTECH engineering

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DEPARTMENT OF FINANCE & ADMINISTRATIVE SERVICES
SEATTLE, WASHINGTON 20
BY:
PURCHASING & CONTRACTING SERVICES DIRECTOR

NAME OR INITIALS AND DATE
DESIGNED B. PIERMATTEI 3/5/2013
CHECKED M. HELMINGER 3/5/2013
DRAWN J. SALISBURY 3/5/2013
CHECKED M. HELMINGER 3/5/2013

INITIALS AND DATE
REVIEWED:
DES. ---- CONST. ----
SDOT ---- PROJ. MGR. ----
RECEIVED ----
REVISED AS BUILT ----

ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE CITY OF SEATTLE STANDARD PLANS AND SPECIFICATIONS AND OTHER DOCUMENTS CALLED FOR IN SECTION 0-02.3 OF THE PROJECT MANUAL

DUSTIN QUONG ONG — STATE OF WASHINGTON — 35684 — REGISTERED PROFESSIONAL ENGINEER

Seattle Public Utilities
ORDINANCE NO.
FUND:
SCALE: NONE

City of Seattle
Ray Hoffman, Director
APPROVED
INSPECTOR'S BOOK

GENERAL NOTES

NE 93RD CULVERT REPAIR

JOB NO. PC C312066
R/W
CO
VAULT PLAN NO.

SHEET 2 OF 9

GENERAL NOTES
UNLESS OTHERWISE NOTED:

1. ALL WORK SHALL CONFORM TO THE 2011 EDITION OF CITY OF SEATTLE STANDARD SPECIFICATIONS, THE 2011 EDITION OF THE CITY OF SEATTLE STANDARD PLANS; AND SEATTLE DEPARTMENT OF TRANSPORTATION DIRECTOR'S RULE 05-2009 FOR STREET AND SIDEWALK PAVEMENT OPENING AND RESTORATION. A COPY OF THESE DOCUMENTS SHALL BE ON SITE DURING CONSTRUCTION.
2. A COPY OF THE APPROVED PLAN MUST BE ON SITE WHENEVER CONSTRUCTION IS IN PROGRESS.
3. ~~ERRORS AND OMISSIONS~~ CHANGES ON THE PERMITTED PLANS MUST BE CORRECTED BY THE ENGINEER AND APPROVED BY THE CITY OF SEATTLE.
4. ALL PERMITS REQUIRED FOR WORK WITHIN THE PUBLIC RIGHT OF WAY MUST BE OBTAINED PRIOR TO THE START OF CONSTRUCTION.
5. PRIOR TO THE START OF CONSTRUCTION WITHIN THE RIGHT OF WAY, THE PERMITTEE SHALL SCHEDULE AND ATTEND A PRECONSTRUCTION MEETING WITH THE CITY OF SEATTLE DEPARTMENT OF TRANSPORTATION.
6. PERMITTEE SHALL CONTACT SEATTLE DEPARTMENT OF TRANSPORTATION, STREET USE INSPECTOR A MINIMUM OF 2 BUSINESS DAYS PRIOR TO NEEDING AN INSPECTION.
7. ALL DAMAGE TO CITY INFRASTRUCTURE CAUSED BY THE CONSTRUCTION SHALL BE REPAIRED AS REQUIRED BY THE SEATTLE DEPARTMENT OF TRANSPORTATION.
8. THE APPROVED PLANS SHOW THE APPROXIMATE AREA OF PAVEMENT RESTORATION BASED ON THE DEPTH OF UTILITY CUTS AND/OR THE AREA OF CURB AND/OR PAVEMENT TO BE REMOVED AND REPLACED. THE ACTUAL LIMITS OF THE PAVEMENT RESTORATION SHALL BE PER THE STREET AND SIDEWALK PAVEMENT OPENING AND RESTORATION DIRECTOR'S RULE 05-2009 AND WILL BE DETERMINED IN THE FIELD BY THE SEATTLE DEPARTMENT OF TRANSPORTATION STREET USE INSPECTOR PRIOR TO THE PAVEMENT RESTORATION.
9. DATUM: NAVD 88 AND NAD83 (1991).
10. SURVEYING AND STAKING OF ALL IMPROVEMENTS IN THE PUBLIC RIGHT OF WAY SHALL BE COMPLETED PRIOR TO CONSTRUCTION. SURVEY CUT SHEETS MUST BE SUBMITTED AND APPROVED BY THE SEATTLE DEPARTMENT OF TRANSPORTATION AT LEAST 5 DAYS PRIOR TO CONSTRUCTION. ASBU
11. IF AN EXISTING CURB IS TO BE REMOVED AND REPLACED IN THE SAME LOCATION THE PERMITTEE SHALL PROVIDE THE STREET USE INSPECTOR A PLAN WITH EXISTING FLOW LINE AND TOP OF CURB ELEVATIONS IDENTIFIED. PERMITTEE TO STAKE THE LOCATION OF THE EXISTING CURB PRIOR TO DEMOLITION.
12. THE PERMITTEE SHALL BE RESPONSIBLE FOR REFERENCING AND REPLACING ALL MONUMENTS THAT MAY BE DISTURBED, DESTROYED OR REMOVED BY THE PROJECT AND SHALL FILE AN APPLICATION FOR PERMIT TO REMOVE OR DESTROY A SURVEY MONUMENT WITH THE WASHINGTON STATE DEPARTMENT OF NATURAL RESOURCES, PURSUANT TO RCW 58.24.040(8). ASBU
13. THE PERMITTEE SHALL SUBMIT ALL APPLICABLE DOCUMENTS REQUIRED UNDER SECTION 1-05.3 OF THE STANDARD SPECIFICATIONS PRIOR TO CONSTRUCTION. A MATERIAL SOURCE FORM FOR ALL MATERIALS TO BE PLACED IN THE RIGHT OF WAY AND MIX DESIGNS FOR ALL ASPHALT, CONCRETE AND AGGREGATES TO BE PLACED IN THE RIGHT OF WAY MUST BE SUBMITTED TO THE SEATTLE DEPARTMENT OF TRANSPORTATION FOR REVIEW AND APPROVAL PRIOR TO BEGINNING CONSTRUCTION. A REVISED MATERIAL SOURCE FORM AND MIX DESIGNS MUST BE SUBMITTED FOR REVIEW AND APPROVAL PRIOR TO PLACEMENT OF ANY SUBSTITUTE MATERIALS.
14. THE PERMITTEE SHALL NOTIFY THE SEATTLE FIRE DEPARTMENT DISPATCHER (206-386-1495) AT LEAST TWENTY-FOUR (24) HOURS IN ADVANCE OF ALL WATER SERVICE INTERRUPTIONS, HYDRANT SHUTOFFS, AND STREET CLOSURES OR OTHER ACCESS BLOCKAGE. THE PERMITTEE SHALL ALSO NOTIFY THE DISPATCHER OF ALL NEW, RELOCATED, OR ELIMINATED HYDRANTS RESULTING FROM THIS WORK.
15. THE PERMITTEE SHALL LOCATE AND PROTECT ALL CASTINGS AND UTILITIES DURING CONSTRUCTION.
16. THE PERMITTEE SHALL CONTACT THE UNDERGROUND UTILITIES LOCATOR SERVICE (1-800-424-5555) AT LEAST 48 HOURS PRIOR TO CONSTRUCTION.

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

GENERAL NOTES (CONT'D)
UNLESS OTHERWISE NOTED:

17. IT IS THE SOLE RESPONSIBILITY OF THE PERMITTEE TO VERIFY THE ACCURACY OF ALL UTILITY LOCATIONS SHOWN AND TO FURTHER DISCOVER AND AVOID ANY OTHER UTILITIES NOT SHOWN WHICH MAY BE AFFECTED BY THE IMPLEMENTATION OF THIS PLAN.
18. THE PERMITTEE SHALL ADJUST ALL EXISTING MANHOLE RIMS, DRAINAGE STRUCTURE LIDS, VALVE BOXES, AND UTILITY ACCESS STRUCTURES TO FINISH GRADE WITHIN AREAS AFFECTED BY THE PROPOSED IMPROVEMENTS.
19. SPU-DWW MUST PERFORM ALL CORE DRILL OPERATIONS INTO EXISTING MAINS OR STRUCTURES. CONTRACTORS ARE NOT ALLOWED TO CORE INTO MAINS OR STRUCTURES WITHOUT PRIOR APPROVAL FROM SPU-DWW. TO SCHEDULE CORE CUTS CONTACT SPU-DWW AT 206-615-0511 A MINIMUM OF 48 HOURS IN ADVANCE.
20. UTILITY SERVICE CONNECTIONS SHOWN ON THIS PLAN REQUIRE SEPARATE PERMITS AND ARE TO BE MAINTAINED PRIVATELY AND NOT BY THE CITY OF SEATTLE.
21. THE PERMITTEE SHALL PROVIDE FOR ALL TESTING AS REQUIRED BY THE STREET USE INSPECTOR.
22. BACKFILL MATERIAL USED IN PUBLIC RIGHT-OF-WAY SHALL MEET STANDARD SPECIFICATIONS AND SHALL BE APPROVED BY SEATTLE DEPARTMENT OF TRANSPORTATION.
23. INSPECTION AND ACCEPTANCE OF ALL WORK IN THE PUBLIC RIGHT-OF-WAY SHALL BE DONE BY REPRESENTATIVES OF THE CITY OF SEATTLE. IT SHALL BE THE PERMITTEE'S RESPONSIBILITY TO COORDINATE AND SCHEDULE APPROPRIATE INSPECTIONS ALLOWING FOR PROPER ADVANCE NOTICE. THE SEATTLE DEPARTMENT OF TRANSPORTATION STREET USE INSPECTOR MAY REQUIRE REMOVAL AND RECONSTRUCTION OF ANY ITEMS PLACED IN THE RIGHT OF WAY THAT DO NOT MEET CITY STANDARDS OR THAT WERE CONSTRUCTED WITHOUT APPROPRIATE INSPECTIONS.
24. THE PERMITTEE SHALL PROVIDE AND MAINTAIN TEMPORARY EROSION CONTROL AND SEDIMENTATION COLLECTION FACILITIES TO ENSURE THAT SEDIMENT-LADEN WATER DOES NOT ENTER THE NATURAL OR PUBLIC DRAINAGE SYSTEM PER SECTION 8-01. AS CONSTRUCTION PROGRESSES AND UNEXPECTED (SEASONAL) CONDITIONS DICTATE, ADDITIONAL CONTROL FACILITIES MAY BE REQUIRED. DURING THE COURSE OF CONSTRUCTION IT SHALL BE THE OBLIGATION AND RESPONSIBILITY OF THE PERMITTEE TO ADDRESS ANY NEW CONDITIONS THAT MAY BE CREATED BY THE PERMITTEE'S ACTIVITIES AND TO PROVIDE ADDITIONAL FACILITIES THAT MAY BE NEEDED TO PROTECT ADJACENT PROPERTIES.
25. THE PERMITTEE SHALL KEEP ALL PAVED SURFACES IN THE RIGHT OF WAY CLEAN BY SWEEPING PER SECTION 8-01.3(16).
26. ALL DISTURBED SOILS MUST BE AMENDED PER STANDARD PLAN 142 AND SECTION 8-02 OF THE STANDARD SPECIFICATIONS UNLESS WITHIN ONE FOOT OF A CURB OR SIDEWALK, THREE FEET OF A UTILITY STRUCTURE (E.G. WATER METER, UTILITY POLE, HAND HOLE, ETC.), OR THE DRIPLINE OF AN EXISTING TREE.
27. ALL TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE CITY OF SEATTLE TRAFFIC CONTROL MANUAL FOR IN-STREET WORK. AN APPROVED TRAFFIC CONTROL PLAN WILL BE REQUIRED FOR ALL ARTERIAL STREETS PRIOR TO BEGINNING CONSTRUCTION.
28. PERMITTEE SHALL NOTIFY KING COUNTY METRO AT 684-2732 FOURTEEN DAYS IN ADVANCE OF ANY IMPACT TO TRANSIT OPERATIONS.
29. COORDINATE SIGN AND PAY STATION AND/OR PARKING METER HEAD REMOVAL AND INSTALLATION WITH SEATTLE DEPARTMENT OF TRANSPORTATION AT 684-5370. SIGNPOSTS ARE TO BE INSTALLED IN ACCORDANCE WITH STANDARD PLANS 616, 620, 621A, 621B, 625, & 626.
30. ALL STREET NAME SIGNS MUST BE INSTALLED BY SEATTLE DEPARTMENT OF TRANSPORTATION AT THE PERMITTEE'S EXPENSE.
31. ALL WORK PERFORMED BY SEATTLE CITY LIGHT, SEATTLE PUBLIC UTILITIES, AND OTHER UTILITIES TO REMOVE OR RELOCATE EXISTING UTILITIES SHALL BE DONE AT THE PERMITTEE'S EXPENSE.
32. PERMITTEE MUST CONTACT THE SEATTLE DEPARTMENT OF PARKS AND RECREATION TO APPLY FOR A SEPARATE PERMIT IF WORKING WITHIN A DESIGNATED PARK BOULEVARD.
33. CARE SHALL BE EXERCISED WHEN EXCAVATING NEAR EXISTING CHARGED WATER MAINS.
34. PERMITTEE SHALL CONTACT SEATTLE DEPARTMENT OF TRANSPORTATION, STREET USE INSPECTOR A MINIMUM OF 2 BUSINESS DAYS PRIOR TO PLANTING FOR INSPECTION OF STREET TREES AND LANDSCAPING.

Replace permittee with contractor

More edits expected.

Not applicable.

NATURE	DATE	MADE CHK'D	REV'D
REVISIONS			

VAULT SPCIAL NO. | DATE | MARK

D:\Projects\10-120023 SPU Separated System On-Call\WA-04_33rd Culvert\3 CAD\04-Design\A-Plot Files\3 C312066-n-General Notes-2sht-Colored.dwg
Robert Mon-06-13 1:49pm

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SEATTLE, WASHINGTON 20
BY: PURCHASING & CONTRACTING SERVICES DIRECTOR

NAME OR INITIALS AND DATE	INITIALS AND DATE
DESIGNED RDP 3.5.13	REVIEWED:
CHECKED TJO 3.5.13	DES. CONST.
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ROBERT D.E. PARISH STATE OF WASHINGTON 39008 REGISTERED PROFESSIONAL ENGINEER

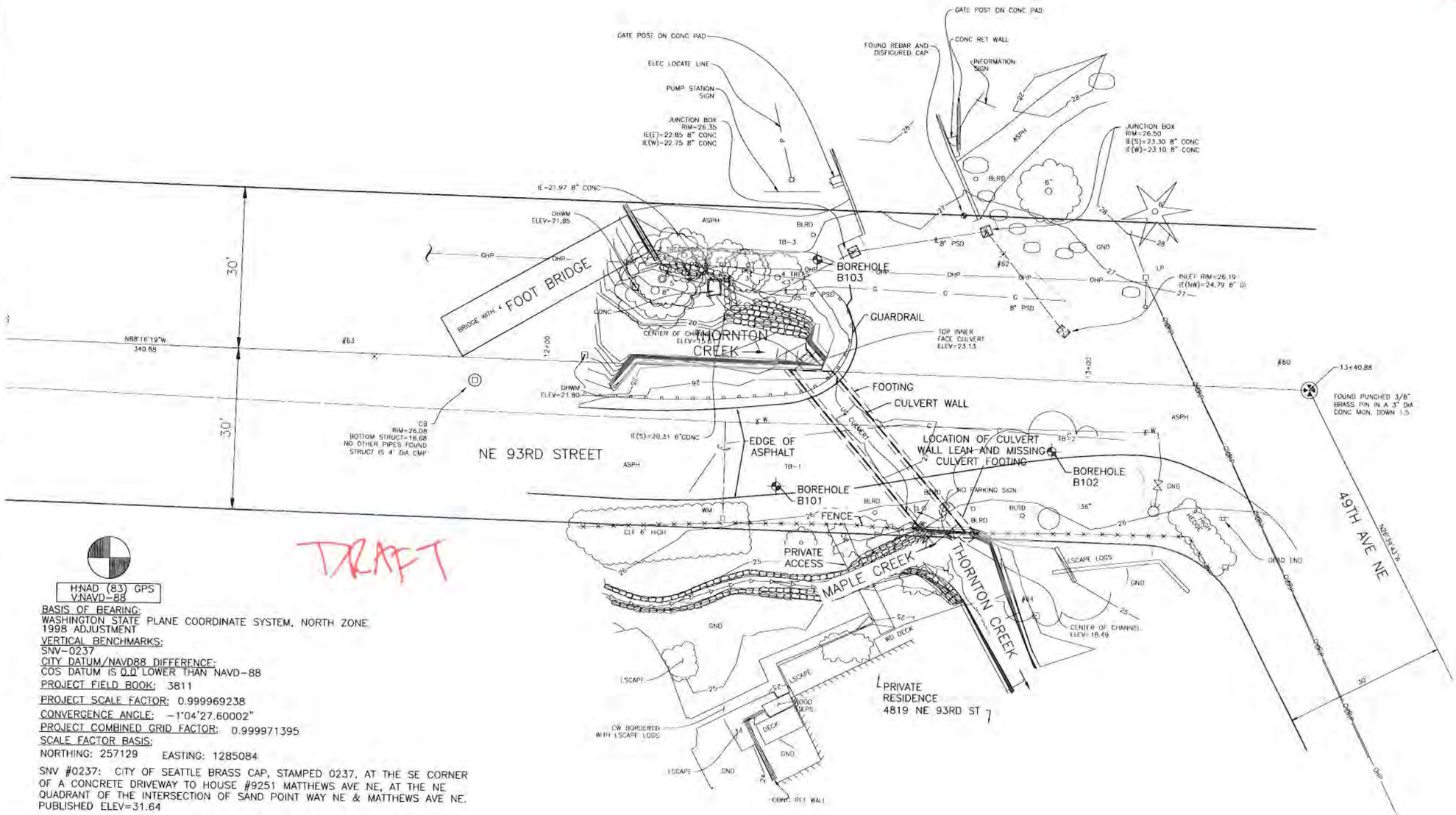
Seattle Public Utilities — City of Seattle — Ray Hoffman, Director
ORDINANCE NO. APPROVED
FUND:
SCALE: NONE INSPECTOR'S BOOK

NE 93RD CULVERT REPAIR

GENERAL NOTES

JOB NO. PC C312066 R/W CO
VAULT PLAN NO.
SHEET 3 OF 9

DRAFT



DRAFT

H:NAD (83) GPS
V:NAVD-88

BASIS OF BEARING:
WASHINGTON STATE PLANE COORDINATE SYSTEM, NORTH ZONE 1998 ADJUSTMENT

VERTICAL BENCHMARKS:
SNV-0237

CITY DATUM/NAVD88 DIFFERENCE:
COS DATUM IS 0.0' LOWER THAN NAVD-88

PROJECT FIELD BOOK: 3811

PROJECT SCALE FACTOR: 0.999969238

CONVERGENCE ANGLE: -1°04'27.60002"

PROJECT COMBINED GRID FACTOR: 0.999971395

SCALE FACTOR BASIS:

NORTHING: 257129 EASTING: 1285084

SNV #0237: CITY OF SEATTLE BRASS CAP, STAMPED 0237, AT THE SE CORNER OF A CONCRETE DRIVEWAY TO HOUSE #9251 MATTHEWS AVE NE, AT THE NE QUADRANT OF THE INTERSECTION OF SAND POINT WAY NE & MATTHEWS AVE NE. PUBLISHED ELEV=31.64

GEOREGISTRATION NOTES: SE 1/4, SEC 34, TRP 26N, RGE 4E, W.M.

DATE OF SURVEY: 11/29/12

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

VAULT SERIAL NO.	DATE	MARK	MATURE / REVISIONS	MADE CHK'D	REV'D

* PRELIMINARY/50%*

D:\Projects\10-120023.SPU Separated System On-Call\WA-04_93rd Culvert\3 CAD\04-Design\A-Plot Files\4 C312065-P-Existing Conditions-ESTE Current.dwg
Robert Mar-06-13 3:25pm

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SEATTLE, WASHINGTON 20
BY: PURCHASING & CONTRACTING SERVICES DIRECTOR

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CHECKED M. HELMINGER 3/5/13	
DRAWN J. SALISBURY 3/5/13	
CHECKED M. HELMINGER 3/5/13	

INITIALS AND DATE	
REVIEWED:	
DES.	CONST.
SDOT	PROJ. MGR:
RECEIVED	
REVISED AS BUILT	

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DAVID COONG ONG — STATE OF WASHINGTON — 35684 — REGISTERED PROFESSIONAL ENGINEER

Seattle Public Utilities
City of Seattle
Ray Hoffman, Director
ORDINANCE NO.
FUND:
SCALE: H. 1"=10'
APPROVED
INSPECTOR'S BOOK

EXISTING SITE PLAN & CONDITIONS

NE 93RD CULVERT REPAIR

JOB NO. PC C312066 R/W CO
VAULT PLAN NO.
SHEET 4 OF 9

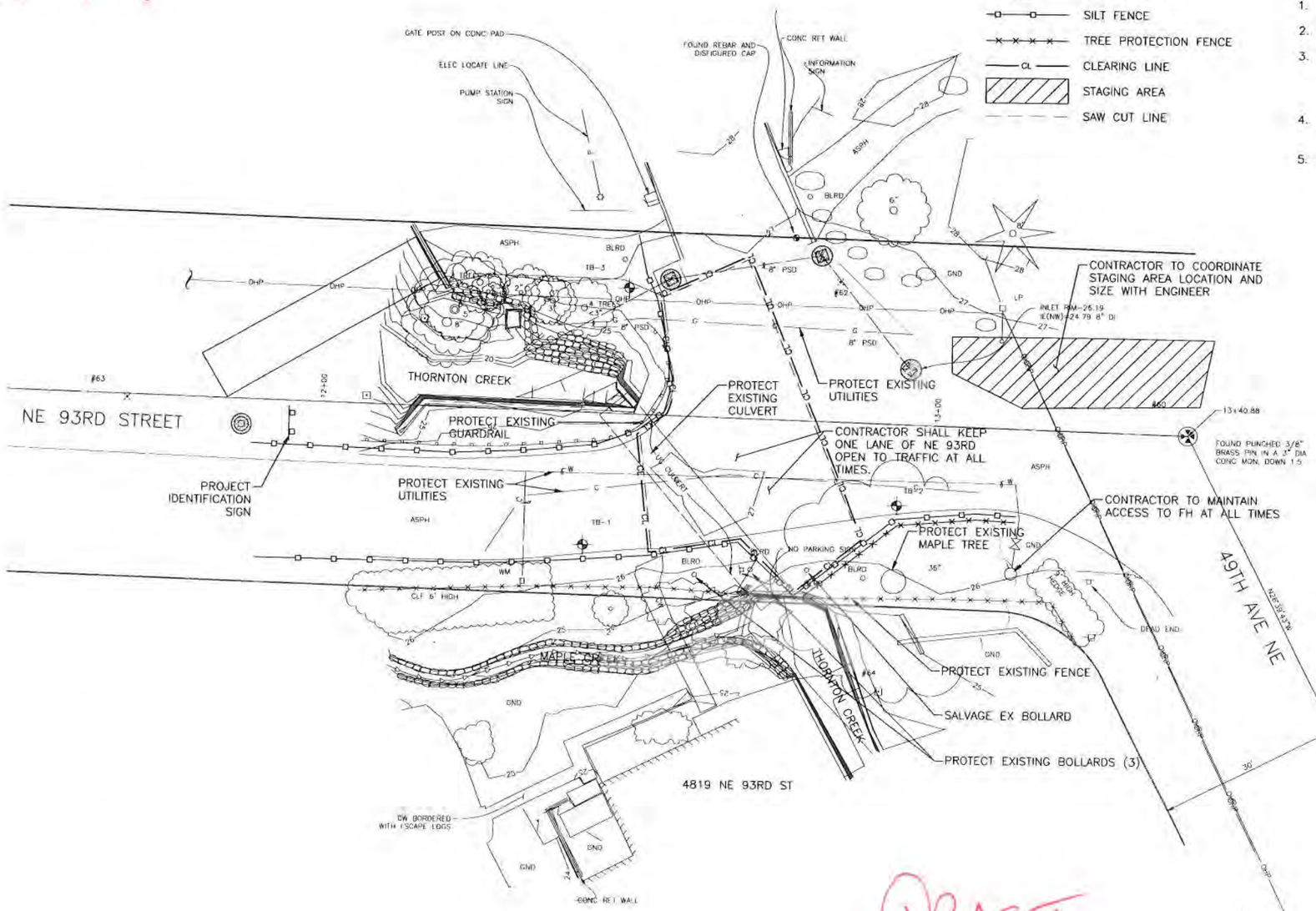
DRAFT

LEGEND

- CB PROTECTION
- SILT FENCE
- TREE PROTECTION FENCE
- CL — CLEARING LINE
- STAGING AREA
- SAW CUT LINE

TESC NOTES
UNLESS OTHERWISE NOTED:

1. TEMPORARY EROSION CONTROL PLAN SHALL BE SUBMITTED BY CONTRACTOR FOR APPROVAL BEFORE ANY CONSTRUCTION ACTIVITY ON SITE BEGINS.
2. ALL EROSION CONTROLS SHALL BE INSPECTED AND MAINTAINED FOR CONTINUED PERFORMANCE OF THEIR INTENDED PURPOSE BY THE ENGINEER ON SITE.
3. NO SEDIMENT SHALL BE TRACKED ONTO PAVED STREETS OR ROADWAYS. SEDIMENT SHALL BE REMOVED FROM TRUCKS AND EQUIPMENT BEFORE LEAVING THE CONSTRUCTION SITE. IN THE EVENT OF A FAILURE OF THE TESC SYSTEM THE CONTRACTOR SHALL IMPLEMENT MEASURES IMMEDIATELY TO CORRECT THE SITUATION. THIS MAY INCLUDE THE EMERGENCY USE OF A STREET SWEEPER.
4. VEGETATION WILL BE PRESERVED WITH CONSTRUCTION FENCING WHEREVER POSSIBLE AND AS NOTED ON THE PLANS. CONSTRUCTION FENCING WILL BE A TEMPORARY CHAIN LINK FENCE ON PIER FOOTINGS, A MIN. OF 4.5' TALL.
5. PLASTIC COVERING WILL BE USED TO PROVIDE IMMEDIATE TEMPORARY EROSION PROTECTION ON SLOPES AND DISTURBED AREAS THAT NEED TO BE "RE-OPENED" AFTER A DELAY IN CONSTRUCTION. SHOULD BE USED WHENEVER RAIN IS IN A WEEKEND OR EVENING FORECAST.



N

10 5 0 10 20
SCALE IN FEET

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CHECKED TJO 3.5.13	
DRAWN RDH 3.5.13	RECEIVED
CHECKED TJO 3.5.13	REVISED AS BUILT

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ROBERT D.E. PARISE — STATE OF WASHINGTON — 39006 — REGISTERED PROFESSIONAL ENGINEER

Seattle Public Utilities
ORDINANCE NO.
FUND:
SCALE: H. 1"=10'

City of Seattle
Ray Hoffman, Director
APPROVED
INSPECTOR'S BOOK

CESC AND REMOVAL

NE 93RD CULVERT REPAIR

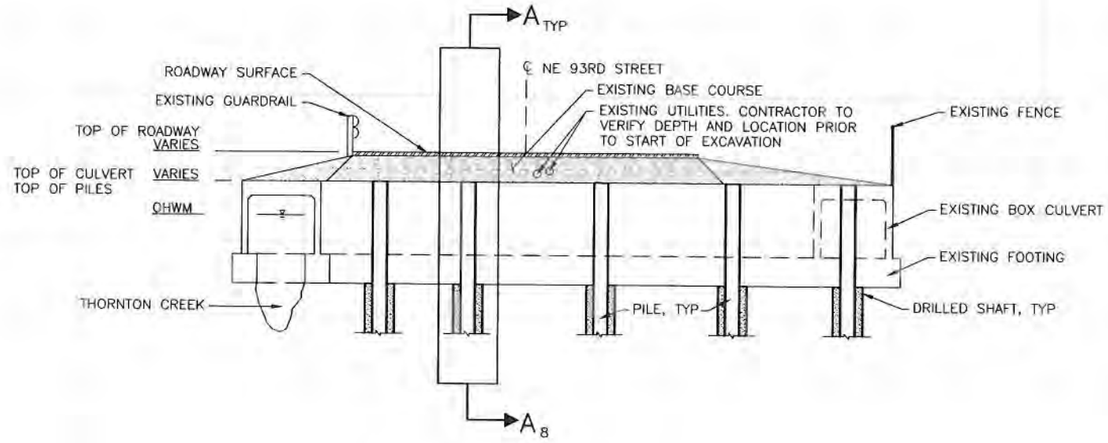
JOB NO. PC C312066 R/W CO
VAULT PLAN NO.
SHEET 5 OF 9

VAULT SERIAL NO.	DATE	MARK	NATURE REVISIONS	MADE CHK'D REV'D

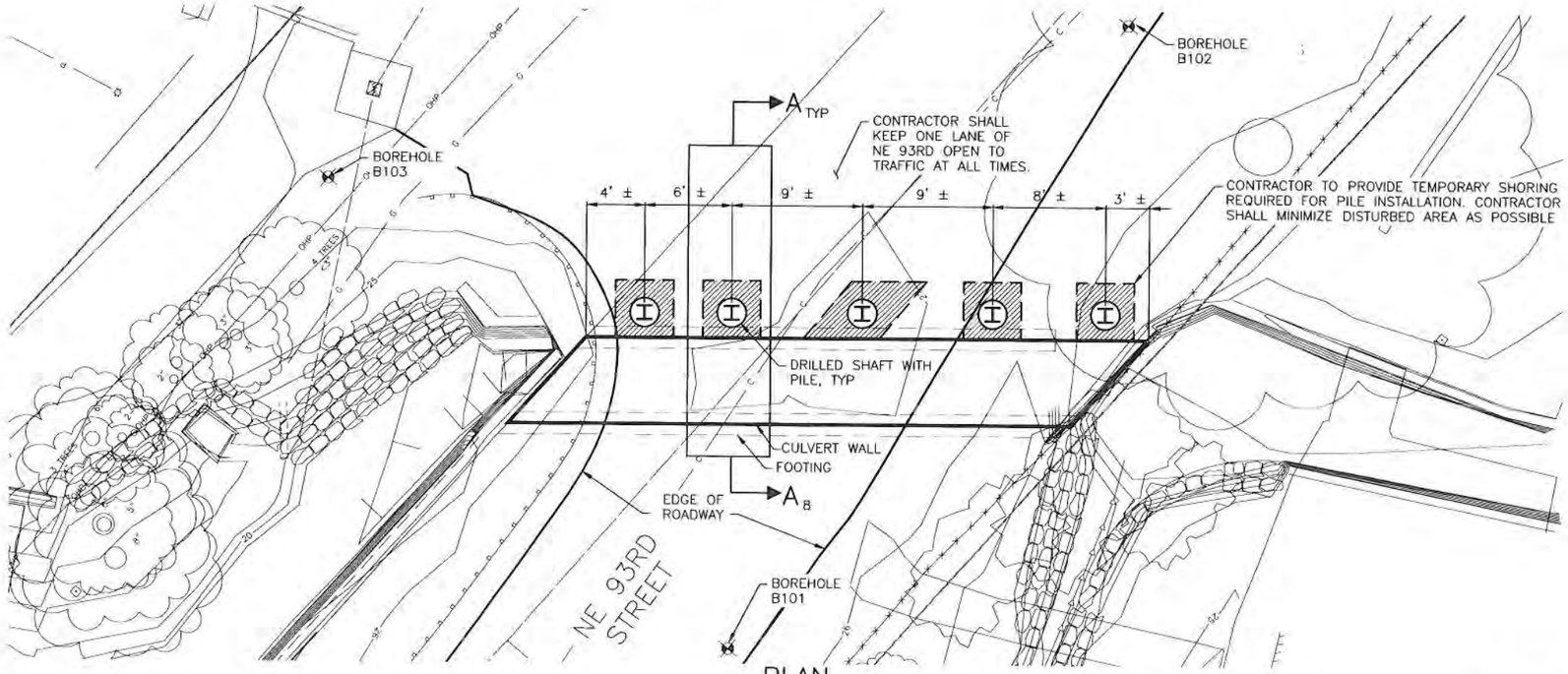
* PRELIMINARY/50%5 *

O:\Projects\10-120023 SPU Separated System On-Call\WA-04_93rd Culvert\3 CADD\04-Design\A-Plot Files\5 C312066-11-Eros-93rd Culvert.dwg
Robert Warr 06-13 1:28pm

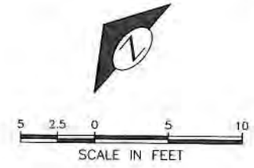
DRAFT



REFLECTED PROFILE
SCALE: 1" = 5'-0"



PLAN
SCALE: 1" = 5'-0"



LEGEND

= TEMPORARY SHORING AREA

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	SDOT PROJ. MGR.
DRAWN J. SALISBURY 3/5/2013	RECEIVED
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ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE CITY OF SEATTLE STANDARD PLANS AND SPECIFICATIONS AND OTHER DOCUMENTS CALLED FOR IN SECTION 2-02.3 OF THE PROJECT MANUAL.

JUSTIN CHONG — STATE OF WASHINGTON — 35684 — REGISTERED PROFESSIONAL ENGINEER

Seattle Public Utilities
City of Seattle
Ray Hoffman, Director

ORDINANCE NO. APPROVED
FUND:
SCALE: H. 1"=5', V. 1"=5' INSPECTOR'S BOOK

STRUCTURAL PLAN AND PROFILE

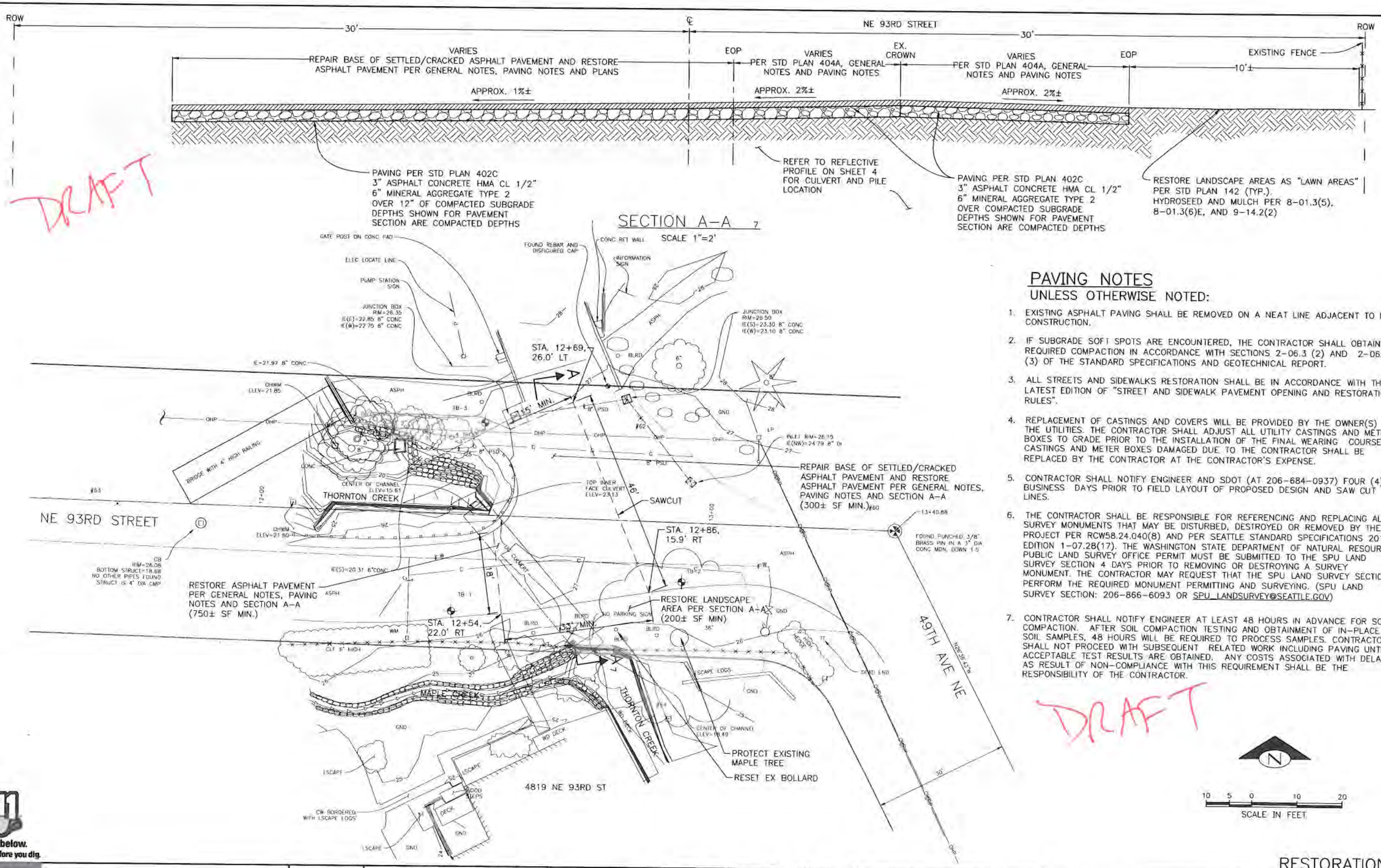
NE 93RD CULVERT REPAIR

JOB NO. PC C312066
R/W
CO
VAULT PLAN NO.
SHEET 6 OF 9

VAULT	SERIAL NO.	DATE	MARK	NATURE REVISIONS

* PRELIMINARY/50%6 *

D:\Projects\10-120223 SPU Separated System Dn-Col\WA-04_93rd Culvert\3 CADD\04-Design\A-Plot Files\6 C312066-P-Structural Robert Mar-05-13 3:26pm



PAVING NOTES

UNLESS OTHERWISE NOTED:

1. EXISTING ASPHALT PAVING SHALL BE REMOVED ON A NEAT LINE ADJACENT TO NEW CONSTRUCTION.
2. IF SUBGRADE SOFT SPOTS ARE ENCOUNTERED, THE CONTRACTOR SHALL OBTAIN REQUIRED COMPACTION IN ACCORDANCE WITH SECTIONS 2-06.3 (2) AND 2-06.3 (3) OF THE STANDARD SPECIFICATIONS AND GEOTECHNICAL REPORT.
3. ALL STREETS AND SIDEWALKS RESTORATION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF "STREET AND SIDEWALK PAVEMENT OPENING AND RESTORATION RULES".
4. REPLACEMENT OF CASTINGS AND COVERS WILL BE PROVIDED BY THE OWNER(S) OF THE UTILITIES. THE CONTRACTOR SHALL ADJUST ALL UTILITY CASTINGS AND METER BOXES TO GRADE PRIOR TO THE INSTALLATION OF THE FINAL WEARING COURSE. CASTINGS AND METER BOXES DAMAGED DUE TO THE CONTRACTOR SHALL BE REPLACED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE.
5. CONTRACTOR SHALL NOTIFY ENGINEER AND SDOT (AT 206-684-0937) FOUR (4) BUSINESS DAYS PRIOR TO FIELD LAYOUT OF PROPOSED DESIGN AND SAW CUT LINES.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REFERENCING AND REPLACING ALL SURVEY MONUMENTS THAT MAY BE DISTURBED, DESTROYED OR REMOVED BY THE PROJECT PER RCW58.24.040(8) AND PER SEATTLE STANDARD SPECIFICATIONS 2011 EDITION 1-07.28(17). THE WASHINGTON STATE DEPARTMENT OF NATURAL RESOURCES PUBLIC LAND SURVEY OFFICE PERMIT MUST BE SUBMITTED TO THE SPU LAND SURVEY SECTION 4 DAYS PRIOR TO REMOVING OR DESTROYING A SURVEY MONUMENT. THE CONTRACTOR MAY REQUEST THAT THE SPU LAND SURVEY SECTION PERFORM THE REQUIRED MONUMENT PERMITTING AND SURVEYING. (SPU LAND SURVEY SECTION: 206-866-6093 OR SPU_LANDSURVEY@SEATTLE.GOV)
7. CONTRACTOR SHALL NOTIFY ENGINEER AT LEAST 48 HOURS IN ADVANCE FOR SOIL COMPACTION. AFTER SOIL COMPACTION TESTING AND OBTAINMENT OF IN-PLACE SOIL SAMPLES, 48 HOURS WILL BE REQUIRED TO PROCESS SAMPLES. CONTRACTOR SHALL NOT PROCEED WITH SUBSEQUENT RELATED WORK INCLUDING PAVING UNTIL ACCEPTABLE TEST RESULTS ARE OBTAINED. ANY COSTS ASSOCIATED WITH DELAYS AS RESULT OF NON-COMPLIANCE WITH THIS REQUIREMENT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

DRAFT

N

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PURCHASING & CONTRACTING SERVICES DIRECTOR

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CHECKED TJO 3.5.13	DES. CONST.
DRAWN RDH 3.5.13	SDOT PROJ. MGR.
CHECKED RDH 3.5.13	RECEIVED
ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE CITY OF SEATTLE STANDARD PLANS AND SPECIFICATIONS AND OTHER DOCUMENTS CALLED FOR IN SECTION 0-02.5 OF THE PROJECT MANUAL.	REVISED AS BUILT

ROBERT D.E. PARISH STATE OF WASHINGTON 39306 REGISTERED PROFESSIONAL ENGINEER

Seattle Public Utilities
City of Seattle
Ray Hoffman, Director
ORDINANCE NO.
APPROVED
FUND:
SCALE: H. 1"=10', V. 1"=2'
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RESTORATION

NE 93RD CULVERT REPAIR

JOB NO. PC C312066 R/W CO
VAULT PLAN NO.
SHEET 7 OF 9

NO	DATE	MARK	NATURE REVISIONS	MADE	CHK'D	REV'D
VAULT SERIAL NO						

PRELIMINARY/50%

O:\Projects\10-120023 SPU Separated System On-Call\WA-04_93rd Culvert\3 CADD\04-Design\A-Plot Files\7 C312066-P-Road-93rd Culvert.dwg
Robert Mar-06-13 3:41pm

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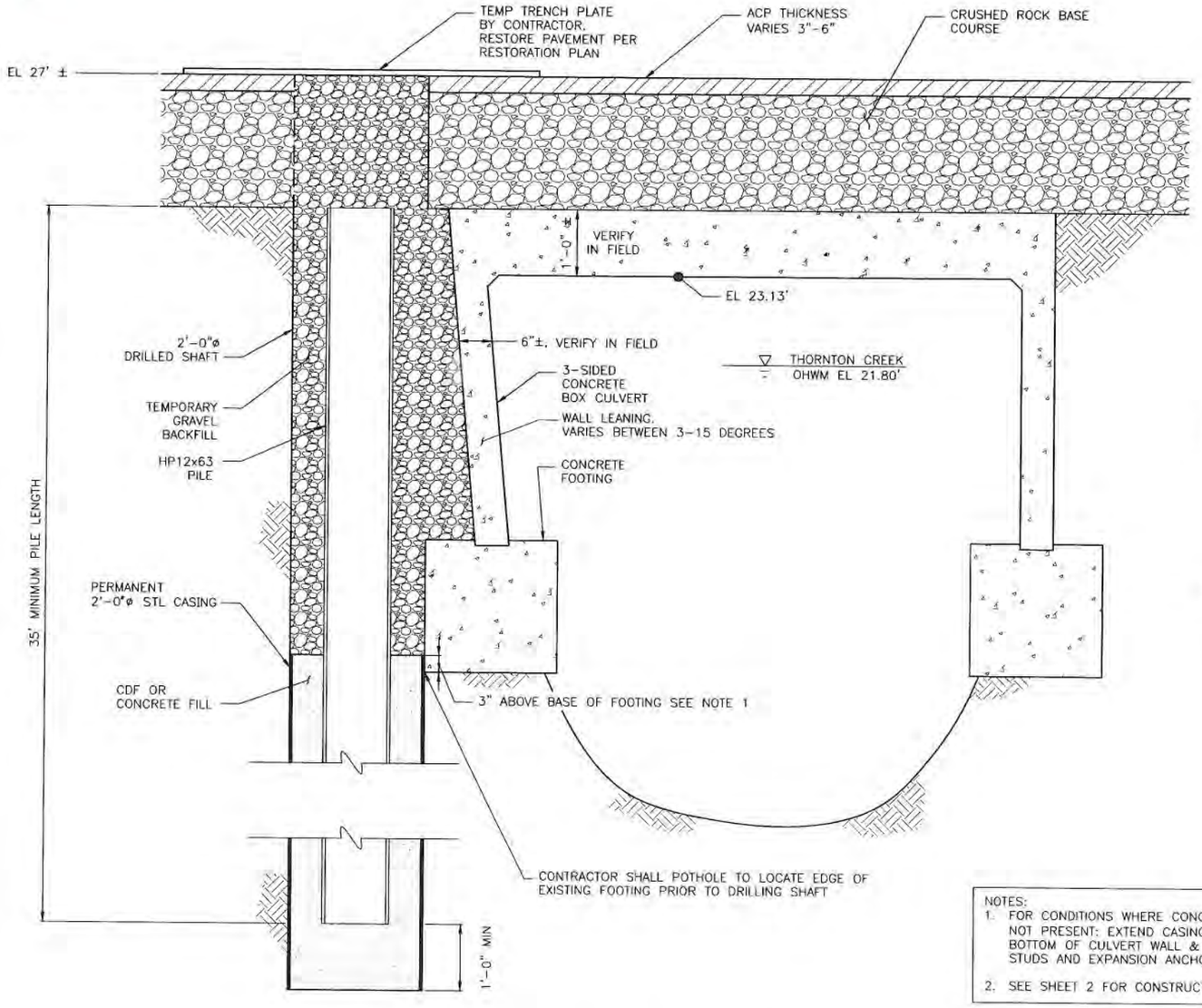

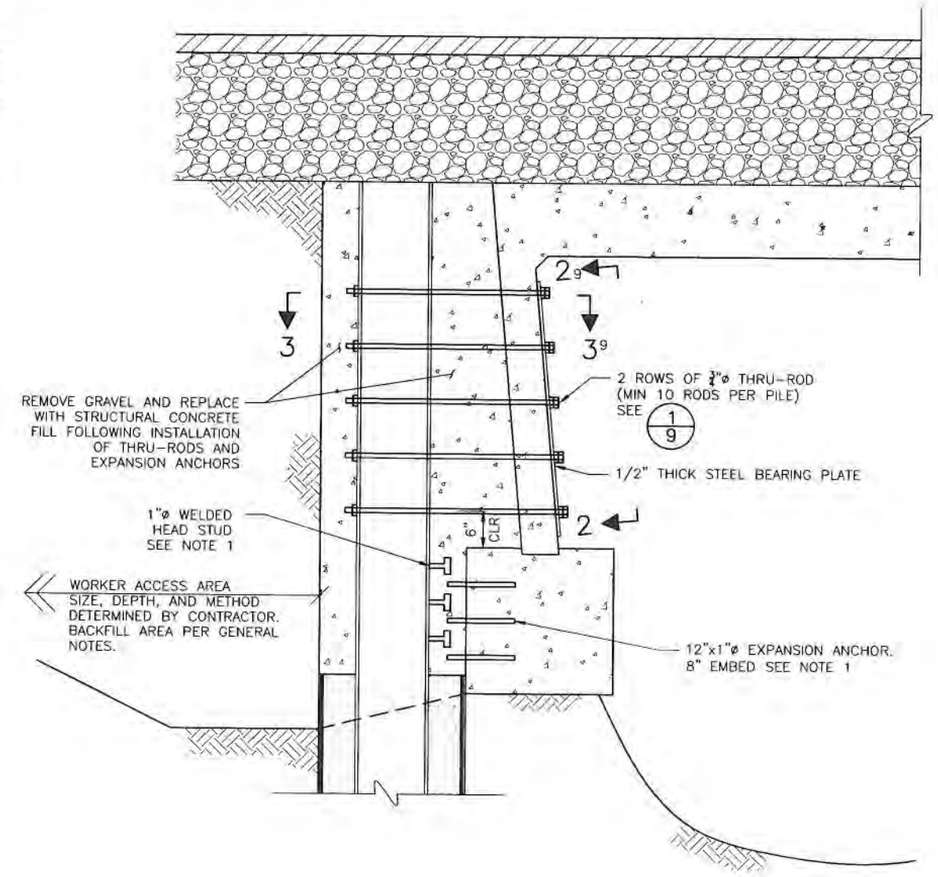

NOTES:
1. FOR CONDITIONS WHERE CONCRETE FOOTING IS NOT PRESENT: EXTEND CASING TO 3" ABOVE BOTTOM OF CULVERT WALL & OMIT WELDED STUDS AND EXPANSION ANCHORS.
2. SEE SHEET 2 FOR CONSTRUCTION SEQUENCE.

DRAFT

STAGE 1 SECTION A-A 6
SCALE: 1" = 1'-0"

STAGE 2 SECTION A-A 6
SCALE: 1" = 1'-0"

NOTE: DETAILS NOT SHOWN SIMILAR TO STAGE 1

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VAULT SERIAL NO.	DATE	MARK	NATURE REVISIONS	MADE	CHK'D	REV'D

* PRELIMINARY/50%8*

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Robert Mar-06-13 3:11pm

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DRAWN J. SALISBURY 3/5/2013	RECEIVED
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DISTRICT COUNCIL 1 STATE OF WASHINGTON 35684 REGISTERED PROFESSIONAL ENGINEER

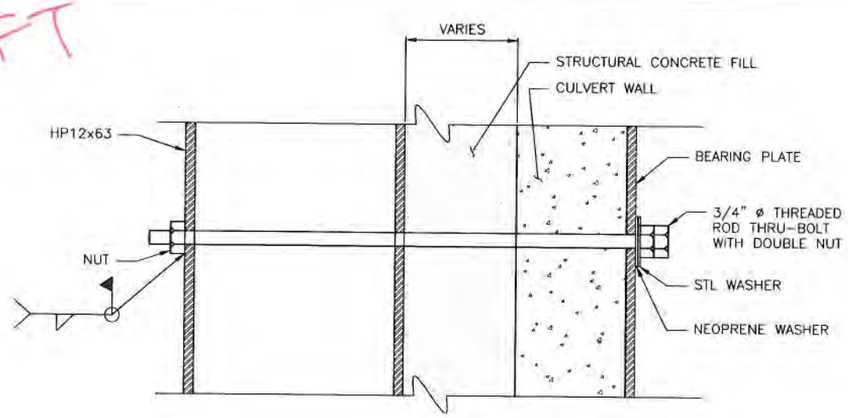
Seattle Public Utilities
City of Seattle
Ray Hoffman, Director
ORDINANCE NO. APPROVED
FUND:
SCALE: H. 1"=1', V. 1"=1' INSPECTOR'S BOOK

NE 93RD CULVERT REPAIR

SECTION

JOB NO. PC C312066
R/W
CO
VAULT PLAN NO.
SHEET 8 OF 9

DRAFT



THRU-ROD CONNECTION 1/8
3" = 1'-0"

NOTES:
1. FIELD LOCATE BOLT HOLES IN BEARING PLATE.
2. MODIFY BEARING PLATE WIDTH AS REQUIRED TO MAINTAIN EDGE DISTANCE.
3. FIELD VERIFY BEARING PLATE HEIGHT WILL NOT EXCEED HEIGHT OF CULVERT WALL.

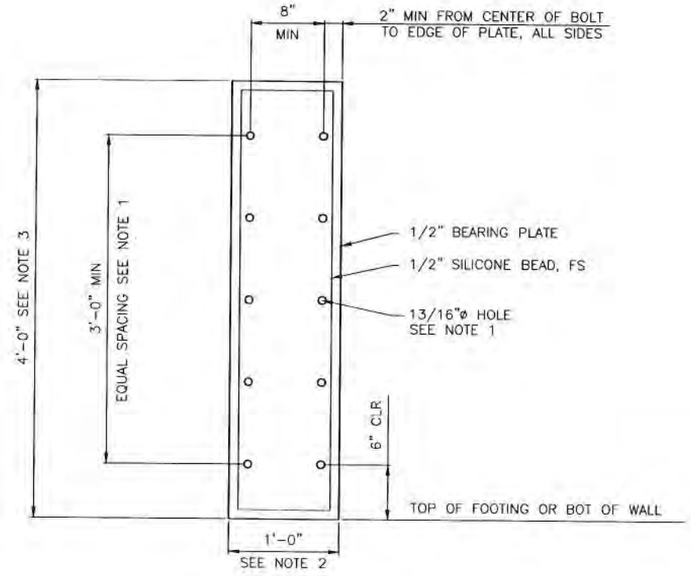
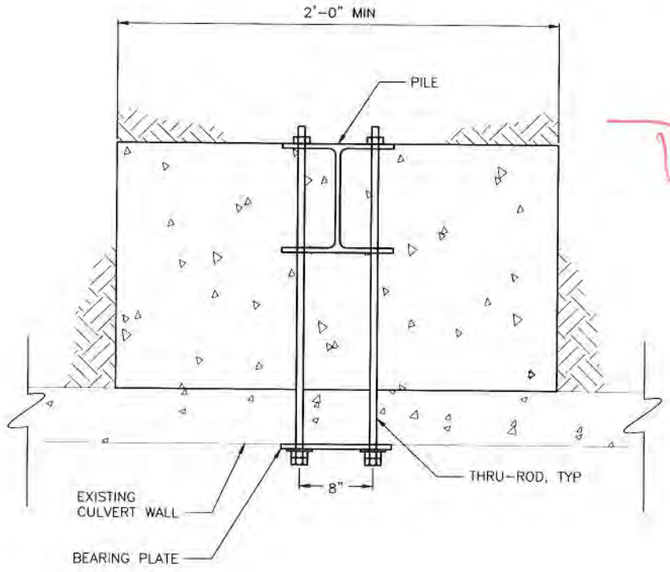


PLATE DETAIL 2/8
1-1/2" = 1'-0"



DRAFT

PILE CONN DETAIL 3/8
NTS

PRELIMINARY/50%9*

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DRAWN J. SALISBURY 3/5/2013	RECEIVED
CHECKED M. HELMINGER 3/5/2013	REVISED AS BUILT

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DUSTIN CHONG STATE OF WASHINGTON 35684 REGISTERED PROFESSIONAL ENGINEER

Seattle Public Utilities
City of Seattle
Ray Hoffman, Director
ORDINANCE NO.
FUND:
SCALE: AS NOTED
APPROVED
INSPECTOR'S BOOK

NE 93RD CULVERT REPAIR

DETAILS

JOB NO. PC C312066 R/W CO
VAULT PLAN NO.
SHEET 9 OF 9

VAULT SERIAL NO.	DATE	MARK	NATURE REVISIONS	MADE CHK'D	REV'D

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Robert Mar-06-13 3:12pm