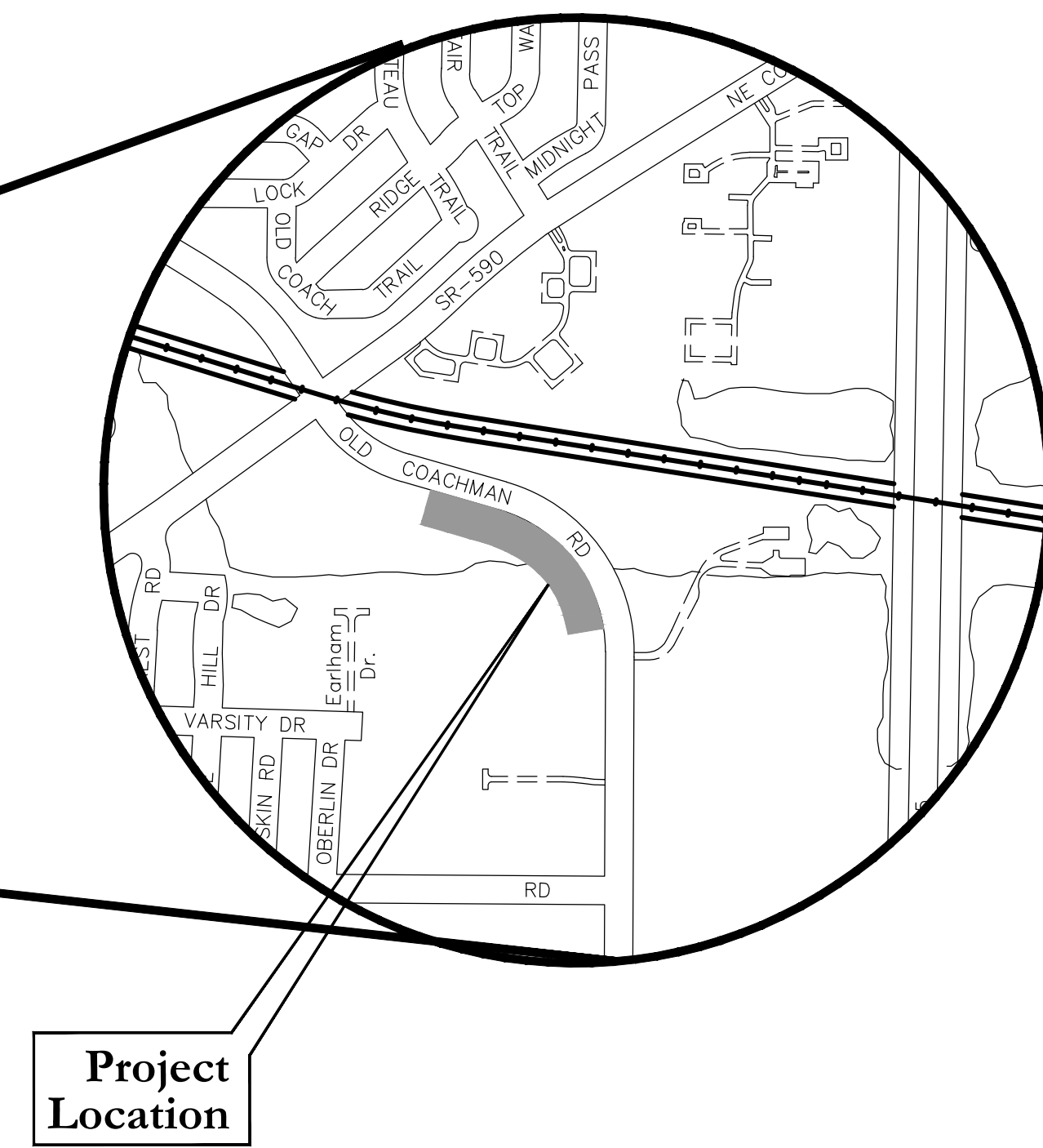
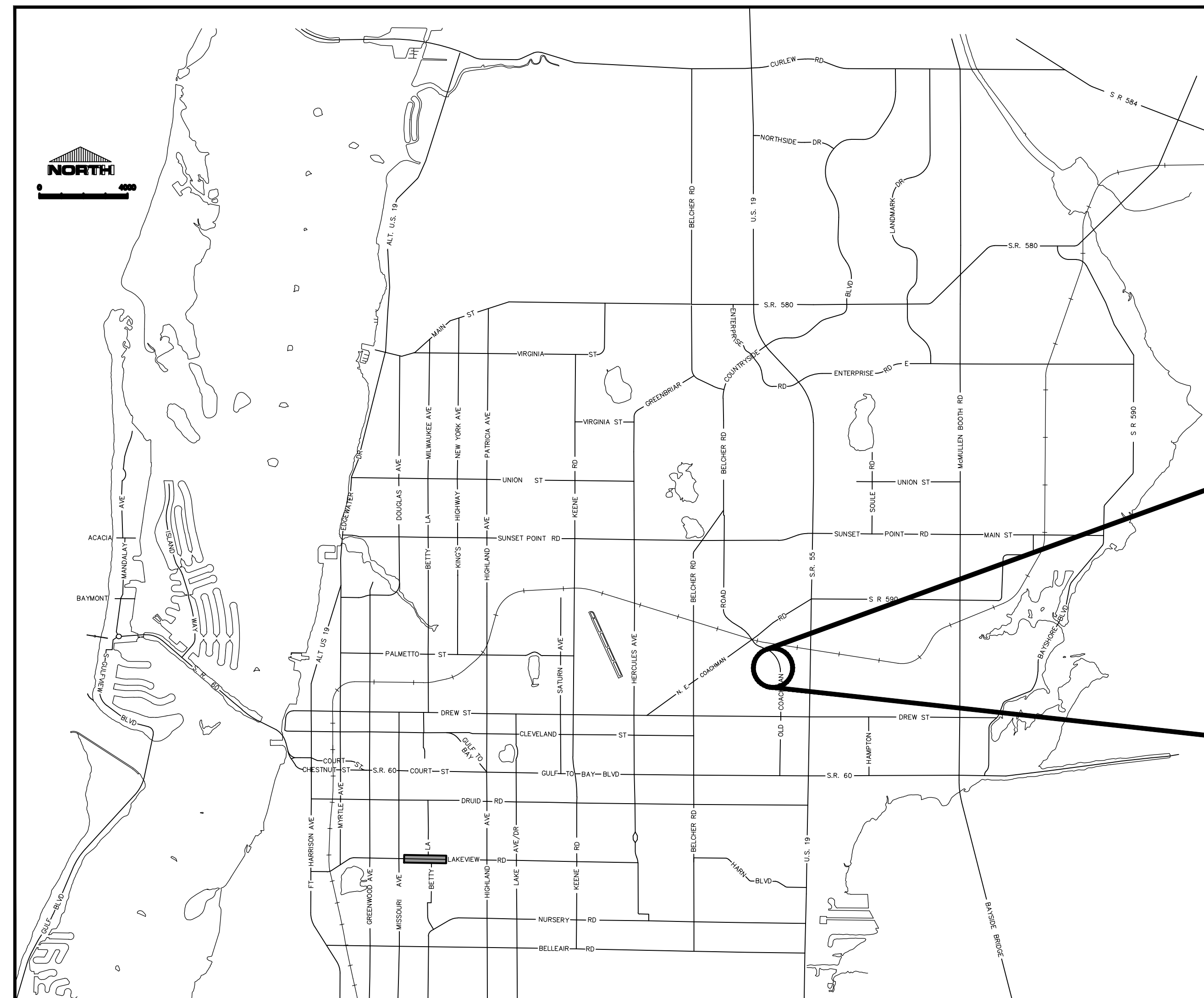


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OLD COACHMAN / SPECTRUM FIELD RCW PIPE REPAIR



CITY OFFICIALS

| | |
|------------------|---------------|
| Frank Hibbard | Mayor |
| Mark Bunker | Councilmember |
| Kathleen Beckman | Councilmember |
| David Allbritton | Councilmember |
| Hoyt Hamilton | Councilmember |
| Jon Jennings | City Manager |

Tara L. Kivett, P.E.
City Engineer

Approved For
Construction

CITY ENGINEER Tara L. Kivett, P.E. #86611

Date Approved

ISSUED FOR BID 11/15/2021
City Project No. 17-0056-UT
City Plan Set No. 2020008

AS-BUILT DRAWINGS NOTES

1. AS-BUILT DRAWINGS

THE CONTRACTOR SHALL KEEP AND MAINTAIN ONE SET OF BLUEPRINTS, AS-BUILT DRAWINGS, IN GOOD ORDER AND LEGIBLE CONDITION TO BE CONTINUOUSLY MARKED-UP AT THE JOB SITE. THE CONTRACTOR SHALL MARK AND ANNOTATE NEATLY AND CLEARLY ALL PROJECT CONDITIONS, LOCATIONS, CONFIGURATIONS AND ANY OTHER CHANGES OR DEVIATIONS WHICH MAY VARY FROM THE DETAILS REPRESENTED ON THE ORIGINAL CONTRACT PLANS, INCLUDING REVISIONS MADE NECESSARY BY ADDENDA, SHOP DRAWINGS, AND CHANGE ORDERS DURING THE CONSTRUCTION PROCESS. THE CONTRACTOR SHALL RECORD THE HORIZONTAL AND VERTICAL LOCATIONS, IN THE PLAN AND PROFILE, OF ALL BURIED UTILITIES THAT DIFFER FROM THE LOCATIONS INDICATED OR WHICH WERE NOT INDICATED ON THE CONTRACT PLANS AND BURIED (OR CONCEALED), CONSTRUCTION AND UTILITY FEATURES WHICH ARE REVEALED DURING THE CONSTRUCTION PERIOD.

THE AS-BUILT DRAWINGS SHALL BE AVAILABLE FOR INSPECTION BY THE ENGINEER, ENGINEER'S CONSULTANT, AND THE OWNER'S REPRESENTATIVE AT ALL TIMES DURING THE PROGRESS OF THE PROJECT.

THE AS-BUILT DRAWINGS SHALL BE REVIEWED BY THE OWNER'S REPRESENTATIVE, OR HIS DESIGNEE, FOR ACCURACY AND COMPLIANCE WITH THE REQUIREMENTS OF "AS-BUILT DRAWINGS" PRIOR TO SUBMITTAL OF THE MONTHLY PAY REQUESTS. THE PAY REQUESTS SHALL BE REJECTED IF THE MARKED-UP REDLINE PRINTS DO NOT CONFORM TO THE "AS-BUILT DRAWINGS" REQUIREMENTS. AS-BUILT DRAWINGS SHALL BE SUBMITTED TO THE OWNER INSPECTOR FOR APPROVAL UPON COMPLETION OF THE PROJECT AND PRIOR TO ACCEPTANCE OF FINAL PAY REQUEST. FINAL PAY REQUEST SHALL NOT BE PROCESSED UNTIL AS-BUILT DRAWINGS HAVE BEEN REVIEWED BY THE ENGINEER OR THE ENGINEER'S CONSULTANT FOR ACCURACY AND COMPLETENESS.

PRIOR TO PLACING NEW POTABLE WATER MAINS IN SERVICE, THE CONTRACTOR SHALL PROVIDE THE ENGINEER INTERSECTION DRAWINGS, AS SPECIFIED FOR THE WATER MAINS.

THE OWNER'S ACCEPTANCE OF THE "AS-BUILT DRAWINGS" DOES NOT RELIEVE THE CONTRACTOR OF THE SOLE RESPONSIBILITY FOR THE ACCURACY AND COMPLETENESS OF THE AS-BUILT DRAWINGS.

1.1. GENERAL

THE CONTRACTOR SHALL PREPARE AN "AS-BUILT SURVEY" PER CHAPTER 5J-17.052, FLORIDA ADMINISTRATIVE CODE (SEE DEFINITION BELOW), SIGNED AND SEALED BY A FLORIDA REGISTERED LAND SURVEYOR. THE CONTRACTOR WILL DELIVER TO THE OWNER TWO HARD COPIES OF SIGNED AND SEALED AS-BUILT DRAWINGS AND AN AUTOCAD FILE.

5J-17.050 DEFINITION: (10)(A) AS-BUILT SURVEY: A SURVEY PERFORMED TO OBTAIN HORIZONTAL AND/OR VERTICAL DIMENSIONAL DATA SO THAT CONSTRUCTED IMPROVEMENTS MAY BE LOCATED AND DELINEATED; ALSO KNOWN AS RECORD SURVEY.

THIS SURVEY SHALL BE CLEARLY TITLED "AS-BUILT SURVEY" AND SHALL BE SIGNED AND SEALED BY A FLORIDA REGISTERED LAND SURVEYOR. THE SURVEY MUST BE DELIVERED TO THE OWNER OF CLEARWATER CONSTRUCTION DIVISION UPON SUBSTANTIAL COMPLETION OF THE PROJECT.

1.2. SANITARY AND STORM SEWER PIPING SYSTEMS

MANHOLES AND INLETS SHALL BE LOCATED BY SURVEY COORDINATES (NORTHING, EASTING AND ELEVATION) BASED ON THE APPROVED HORIZONTAL AND VERTICAL DATUM OR UTILIZE THE STATIONING SUPPLIED ON THE CONSTRUCTION PLANS. NEW AND REPLACED SERVICE CONNECTIONS SHALL BE DIMENSIONED TO THE NEAREST DOWNSTREAM MANHOLE. ALL MANHOLES, CLEANOUTS AND CATCH BASIN INVERT AND RIM ELEVATIONS, MANHOLE AND CATCH BASIN DIMENSIONS, PIPE SIZES, AND PIPE MATERIAL SHALL ALSO BE NOTED ON THE PLAN VIEW AND ALSO ON THE PROFILE IF ONE EXISTS. THE TERMINAL ENDS OF ALL SUBDRAINS, INVERTS OF ALL PIPE IN STRUCTURES, AND THE FLOW LINE OF INLETS SHALL ALSO BE NOTED ON THE PLAN VIEW AND ALSO ON THE PROFILE IF ONE EXISTS.

PIPE MATERIALS AND AREAS OF SPECIAL CONSTRUCTION SHALL BE NOTED.

1.3. PRESSURE PIPE CONSTRUCTION (WATER, RECLAIMED WATER, FORCEMAIN)

ALL PIPES SHALL BE LOCATED BY SURVEY COORDINATES (NORTHING, EASTING AND ELEVATION) BASED ON THE APPROVED HORIZONTAL AND VERTICAL DATUM OR UTILIZE THE STATIONING SUPPLIED ON THE CONSTRUCTION PLANS. COORDINATES SHALL BE AT ALL PIPE BENDS, TEES, VALVES, REDUCERS, AND DEFLECTIONS. ALSO ALL NEW AND REPLACED SERVICE CONNECTIONS FOR POTABLE AND RECLAIMED WATER WILL BE LOCATED AS DESCRIBED ABOVE. ADDITIONALLY THERE MUST BE SURVEY COORDINATES NO FURTHER THAN 100 FEET APART ON LINEAR TYPE CONSTRUCTION AND SHALL DENOTE TOP OF PIPE ELEVATION AT THOSE POINTS.

1.4. HORIZONTAL AND VERTICAL CONTROL

THE AS-BUILT SURVEY SHALL BE BASED ON THE ORIGINAL DATUM USED FOR THE CONSTRUCTION DESIGN PLANS OR IF REQUIRED BY THE OWNER THE DATUM SHALL BE REFERENCED TO THE NORTH AMERICAN DATUM OF 1983/90 (HORIZONTAL) AND THE NORTH AMERICAN VERTICAL DATUM OF 1988. THE UNIT OF MEASUREMENT SHALL BE THE UNITED STATES FOOT. ANY DEVIATION OR USE OF ANY OTHER DATUM, (HORIZONTAL AND OR VERTICAL), MUST BE APPROVED BY THE OWNER OF CLEARWATER ENGINEERING DEPARTMENT.

1.5. STANDARDS

THE AS-BUILT SURVEY SHALL MEET THE MINIMUM TECHNICAL STANDARDS PER CHAPTER 5J-17 AND THE CLEARWATER CAD STANDARDS SET FORTH BELOW. IN ADDITION TO LOCATING ALL IMPROVEMENTS THAT PERTAIN TO THE AS-BUILT SURVEY IT IS THE REQUIREMENT OF THE OWNER TO HAVE MINIMUM LOCATION POINTS AT EVERY CHANGE IN DIRECTION AND NO MORE THAN 100 FEET APART ON ALL PRESSURE PIPES.

1.6. OTHER

THE AS-BUILT DRAWINGS SHALL REFLECT ANY DIFFERENCES FROM THE ORIGINAL CONTRACT PLANS, IN THE SAME LEVEL OF DETAIL AND UNITS OF DIMENSIONS AS THE PLANS.

2. CAD STANDARDS

2.1. LAYER NAMING

2.1.1. PREFIXES AND SUFFIXES

Table with 2 columns: Prefix/Suffix and Description. Includes DI (Digitized/Scanned), EP (Existing Points), EX (Existing Entities), PR (Proposed Entities), FU (Future Entities), TX (Text).

2.1.2. LAYER NAMING DEFINITIONS:

Table mapping layer names to descriptions: GAS (Gas Lines), ELEC (Power Lines), PHONE (Telephone Lines), CABLE (Cable TV Lines), BOC (Curbs), WALK (Sidewalk), WATER (Water Lines), STORM (Storm Lines), TREES (Trees, Bushes), SANITARY (Sanitary Lines), FENCE (All Fences), BLDG (Buildings), DRIVE (Driveways), EOP (Edge of Pavement), TRAFFIC (Signal Poles), TOPBANK (Top of Bank), TOESLOPE (Toe of Slope), TOPBERM (Top of Berm), TOEBERM (Toe of Berm), SEAWALL (Seawall), CONCSLAB (Concrete Slabs), WALL (Walls), SHORE (Shoreline), CL (Centerline of Road), CLD (Centerline of Ditch), CLS (Centerline of Swale), CORNER (Property Corners), BENCH (Benchmark).

OTHER LAYERS MAY BE CREATED AS REQUIRED, USING ABOVE FORMAT.

2.2. LAYER PROPERTIES

ALL LAYERS WILL USE STANDARD AUTOCAD LINETYPES, BYLAYER.

ALL LAYERS WILL USE STANDARD AUTOCAD COLORS, BYLAYER.

ALL TEXT WILL USE STANDARD AUTOCAD FONTS.

2.3. TEXT STYLES

TEXT STYLE FOR EX LAYERS WILL USE THE SIMPLEX FONT, OBLIQUE ANGLE OF 0°, AND A TEXT HEIGHT OF .008 TIMES THE PLOT SCALE.

TEXT STYLE FOR PR AND FU LAYERS WILL USE THE SIMPLEX FONT, OBLIQUE ANGLE OF 22.5°, AND A TEXT HEIGHT OF .010 TIMES THE PLOT SCALE.

2.4. DELIVERABLES

THE AS-BUILT SURVEY SHALL BE PRODUCED ON BOND MATERIAL, 24" X 36" AT A SCALE OF 1"=20' UNLESS APPROVED OTHERWISE. THE CONSULTANT SHALL DELIVER TWO HARD COPIES AND ONE DIGITAL COPY OF ALL DRAWINGS. REQUESTED FILE FORMATS ARE: AUTODESK DWG AND ADOBE PDF FILES.

PLEASE ADDRESS ANY QUESTIONS REGARDING FORMAT TO MR. TOM MAHONY, AT (727) 562-4762 OR E-MAIL ADDRESS THOMAS.MAHONY@MYCLEARWATER.COM.

TREE PROTECTION

- 1. THE CONTRACTOR WILL BE RESPONSIBLE FOR ADHERING TO ALL TREE PROTECTION MEASURES REQUIRED BY THE CITY OF CLEARWATER CODES, ORDINANCES AND STANDARD SPECIFICATIONS. THIS WILL INCLUDE ALL TREE BARRICADES, ROOT PRUNING AND TREE TRIMMING/PRUNING ACTIVITIES. THESE REQUIREMENTS WILL APPLY WITHIN THE SPECIFIED "LIMITS OF WORK" AND WILL ALSO BE APPLICABLE IN ALL AREAS WHERE THE CONTRACTOR AND/OR HIS SUBCONTRACTORS STAGE, STORE OR PARK VEHICLES, EQUIPMENT, MATERIALS AND DEBRIS.
2. ALL TREE PRUNING AND/OR ROOT PRUNING ON EXISTING TREES TO BE PRESERVED WILL ONLY BE PERFORMED BY OR UNDER THE DIRECT SUPERVISION OF AN INTERNATIONAL SOCIETY OF ARBORICULTURE (ISA) CERTIFIED ARBORIST. FURTHERMORE, ALL TREE WORK SHALL CONFORM TO THE AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI) 2001, AMERICAN NATIONAL STANDARD FOR TREE CARE OPERATIONS - TREE, SHRUB AND OTHER WOODY PLANT MAINTENANCE - STANDARD PRACTICES (PRUNING) ANSI A-300.
3. WHERE CALLED FOR ON THE PLANS, INSTALL TREE BARRICADES, EROSION CONTROL/SILT FENCING OR OTHER APPROVED PROTECTIVE BARRIERS AROUND ALL TREES TO BE PRESERVED, PER CITY STANDARD DETAIL. WHERE APPLICABLE, AND SPECIFICALLY APPROVED BY THE CITY'S ENGINEERING REPRESENTATIVE PROTECTIVE BARRIERS MAY BE PLACED IN ROOT PRUNE TRENCHES.
4. PRIOR TO ANY FIELD CHANGES TAKING PLACE, IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO REVIEW THE POTENTIAL IMPACTS TO EXISTING TREES WITH HIS CERTIFIED ARBORIST, AND INCLUDE ANY AND ALL RECOMMENDED TREE PROTECTION MEASURES IN HIS PROPOSAL TO MODIFY THE APPROVED DESIGN. THE CITY'S ENGINEERING REPRESENTATIVE MUST APPROVE, IN WRITING, ANY CHANGES TO THE APPROVED DESIGN PRIOR TO IMPLEMENTATION OF SAID CHANGE.
5. THE CONTRACTOR WILL AVOID ANY OPEN EXCAVATIONS, FILL OR OTHER CONSTRUCTION ACTIVITIES WHENEVER POSSIBLE WITHIN THE "CRITICAL ROOT ZONE" OF ANY EXISTING TREE (I.E., UNDER THE DRIP LINE/CANOPY).
6. NO VEHICLES, EQUIPMENT OR MATERIALS SHALL BE PARKED OR STORED UNDER/WITHIN THE DRIP LINE/PROTECTIVE BARRIER AREA OF ANY TREE.
7. WHERE CONSTRUCTION ACTIVITIES ARE ANTICIPATED TO LAST FOR AN EXTENDED PERIOD OF TIME NEAR EXISTING TREES, THE CONTRACTOR SHALL INSTALL AND MAINTAIN CITY APPROVED TREE BARRICADES AS SHOWN IN THE STANDARD DETAILS AND AS APPROVED BY THE CITY'S ENGINEERING REPRESENTATIVE.
8. WOODCHIPS, MULCH OR ANOTHER CUSHIONING SURFACE MATERIAL APPROVED BY THE CITY'S ENGINEERING REPRESENTATIVE SHALL BE PLACED TO A MINIMUM DEPTH OF TEN (10) INCHES OVER AREAS WHERE ROOTS ARE PRESENT AND CONSTRUCTION TRAFFIC OCCURS.
9. ALL TREE PROTECTION MEASURES SHALL REMAIN IN PLACE AT ALL TIMES DURING CONSTRUCTION UNTIL THE CITY'S ENGINEERING REPRESENTATIVE AUTHORIZES REMOVAL.
10. THE CONTRACTOR WILL COORDINATE WITH THE CITY'S ENGINEERING REPRESENTATIVE, TIM KURTZ, AT (727) 562-4737, TO OBTAIN APPROVAL IN ADVANCE OF ANY AND ALL WORK WITHIN THE CRITICAL ROOT ZONE OF ANY EXISTING TREE.

SEDIMENT & EROSION CONTROL

- 1. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CONTROL AND PREVENT EROSION AND THE TRANSPORTATION OF SEDIMENT TO SURFACE DRAINS AND OUTFALLS.
2. THE CONTRACTOR SHALL PREPARE AND SUBMIT A STORMWATER POLLUTION PREVENTION PLAN (SWPPP) IN ACCORDANCE WITH FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION (FDEP) CRITERIA FOR A NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES) ACTIVITIES PERMIT.
3. THE CONTRACTOR MUST OBTAIN A FDEP GENERIC PERMIT FOR THE DISCHARGE OF PRODUCED GROUND WATER, IF DEWATERING WITH OFFSITE DISCHARGE WILL BE REQUIRED. THE CONTRACTOR IS RESPONSIBLE FOR ALL REQUIRED PRELIMINARY WATER SAMPLES TO SATISFY THE FDEP GENERIC PERMIT FOR THE DISCHARGE OF PRODUCED GROUND WATER. SAMPLING SHALL OCCUR THIRTY (30) DAYS PRIOR TO THE START OF DEWATERING.
4. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER THAT EROSION AND POLLUTION SHALL BE MINIMIZED. THE SUBMITTED SWPPP SHALL BE COMPLIED WITH. ALL APPLICABLE FEDERAL, STATE, AND LOCAL LAWS SHALL BE COMPLIED WITH AT ALL TIMES. PLEASE NOTE THAT NO HAY BALES ARE ALLOWED ON CITY OF CLEARWATER PROJECTS.

ROOT PRUNING

- 1. ROOT PRUNING SHALL ONLY BE PERFORMED BY OR UNDER THE DIRECT SUPERVISION OF AN INTERNATIONAL SOCIETY OF ARBORICULTURE (ISA) CERTIFIED ARBORIST.
2. ANY PROPOSED ROOT PRUNING TRENCHES SHALL BE IDENTIFIED (I.E., STAKED OR PAINTED) ON SITE, INSPECTED AND APPROVED BY THE CITY'S ENGINEERING REPRESENTATIVE PRIOR TO ACTUAL ROOT PRUNING.
3. ROOT PRUNING SHALL BE PERFORMED AS FAR IN ADVANCE OF OTHER CONSTRUCTION ACTIVITIES AS IS FEASIBLE, BUT AT A MINIMUM SHALL BE PERFORMED PRIOR TO ANY IMPACTS TO THE SOIL. ASSOCIATED TREE PROTECTION MEASURES SHOULD BE IMPLEMENTED UPON COMPLETION OF SAID ROOT PRUNING.
4. IF THERE IS A LIKELIHOOD OF EXCESSIVE WIND AND/OR RAIN, AN EXCEPTIONAL CARE SHALL BE TAKEN ON ANY ROOT PRUNING ACTIVITIES.
5. ROOT PRUNING SHALL BE LIMITED TO A MINIMUM OF TWELVE INCHES PER ONE INCH TRUNK DIAMETER FROM THE TREE BASE. ANY EXCEPTION MUST BE APPROVED BY THE CITY'S ENGINEERING REPRESENTATIVE PRIOR TO SAID ROOT PRUNING.
6. ROOTS SHALL BE CUT CLEANLY, AS FAR FROM THE TRUNK OF THE TREE AS POSSIBLE. ROOT PRUNING SHALL BE DONE TO A MINIMUM DEPTH OF EIGHTEEN (18) INCHES FROM EXISTING GRADE, OR TO THE DEPTH OF THE DISTURBANCE IF LESS THAN EIGHTEEN (18) INCHES.
7. ROOT PRUNING SHALL BE PERFORMED USING A ROOT CUTTING MACHINE DESIGNED SPECIFICALLY FOR THIS PURPOSE. ALTERNATE EQUIPMENT OR TECHNIQUES MUST BE APPROVED BY THE CITY'S ENGINEERING REPRESENTATIVE, PRIOR TO ANY WORK ADJACENT TO TREES TO BE PRESERVED.
8. ROOT PRUNING SHALL BE COMPLETED, INSPECTED AND ACCEPTED PRIOR TO THE COMMENCEMENT OF ANY EXCAVATION OR OTHER IMPACTS TO THE CRITICAL ROOT ZONES OF TREES TO BE PROTECTED.
9. EXCAVATIONS IN AN AREA WHERE ROOT ARE PRESENT SHALL NOT CAUSE THE TEARING OR RIPPING OF TREE ROOTS. ROOTS MUST FIRST BE CLEANLY SEVERED PRIOR TO CONTINUING WITH THE EXCAVATION, OR TUNNELED AROUND TO PREVENT DAMAGE TO THE ROOT.
10. TREE ROOTS SHALL NOT BE EXPOSED TO DRYING OUT. ROOT ENDS SHALL BE COVERED WITH NATIVE SOIL OR BURLAP AND KEPT MOIST UNTIL FINAL BACKFILL OR FINAL GRADES HAVE BEEN ESTABLISHED.
11. WHEN DEEMED APPROPRIATE (E.G. DURING PERIODS OF DROUGHT) THE CITY REPRESENTATIVE MAY REQUIRE A TEMPORARY IRRIGATION SYSTEM BE UTILIZED IN THE REMAINING CRITICAL ROOT ZONES OF ROOT PRUNED TREES.

UTILITY OWNERS

SPECTRUM
Attention: Mr. Ted Bingham
700 Corillon Parkway, Suite 6
St. Petersburg, Florida 33716-1123
Phone: (727) 329-2847

FRONTIER COMMUNICATIONS, INC.
Attention: Mr. Chris Blauvelt
MC: FLCW5033
1280 Cleveland Street
Clearwater, Florida 33782
Phone: (727) 562-1130

WIDE OPEN WEST (WOW!)
FLSP2144
Attention: Mr. James Sandman - Construction Project Coordinator
3001 Gandy Boulevard North
Pinellas Park, Florida 33782
Phone: (727) 239-0224 Office

DUKE ENERGY
Attention: Mr. Rico Ashley
2166 Palmetto Street, Bldg. F
Clearwater, Florida 33765
Phone: (727) 562-5767
City of Clearwater

CLEARWATER GAS SYSTEM
Attention: Mr. Robert Joeger
401 North Myrtle Avenue
Clearwater, Florida 33755
Phone: (727) 562-4900 Ext. 7438

CITY OF CLEARWATER
Engineering Department - Traffic Division
Attention: Mr. Paul Bertels
100 South Myrtle Avenue, Room 220
Clearwater, Florida 33756-4748
Phone: (727) 562-4794

CITY OF CLEARWATER
Engineering Department - Survey Division
Attention: Mr. Tom Mahony
100 South Myrtle Avenue, Room 220
Clearwater, Florida 33756-4748
Phone: (727) 562-4762

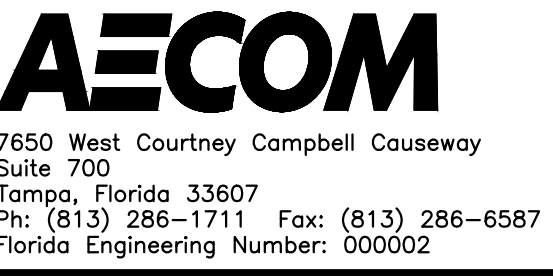
CITY OF CLEARWATER
Engineering Department - Public Utilities
Attention: Mr. David Porter
1650 North Arcturos Avenue
Clearwater, Florida 33755
Phone: (727) 562-4960 Ext. 7248

CITY OF CLEARWATER
Engineering Department - Construction Management
Attention: Mr. Tim Kurtz
100 South Myrtle Avenue, Room 220
Clearwater, Florida 33756
Phone: (727) 562-4737

IN THESE DRAWINGS, ALL TEXT AND DIMENSIONS SHALL BE IN INCHES UNLESS OTHERWISE SPECIFIED. THE CITY OF CLEARWATER ENGINEERING DEPARTMENT IS NOT RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION PROVIDED BY THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES.

Table for RECORD DRAWINGS and REVISION. Includes columns for SURVEYED BY, DRAWN BY, PROJECT ENGINEER, DATE, and REVISION.

CITY OF CLEARWATER, FLORIDA
ENGINEERING DEPARTMENT
100 S. MYRTLE AVE.
CLEARWATER, FL 33756

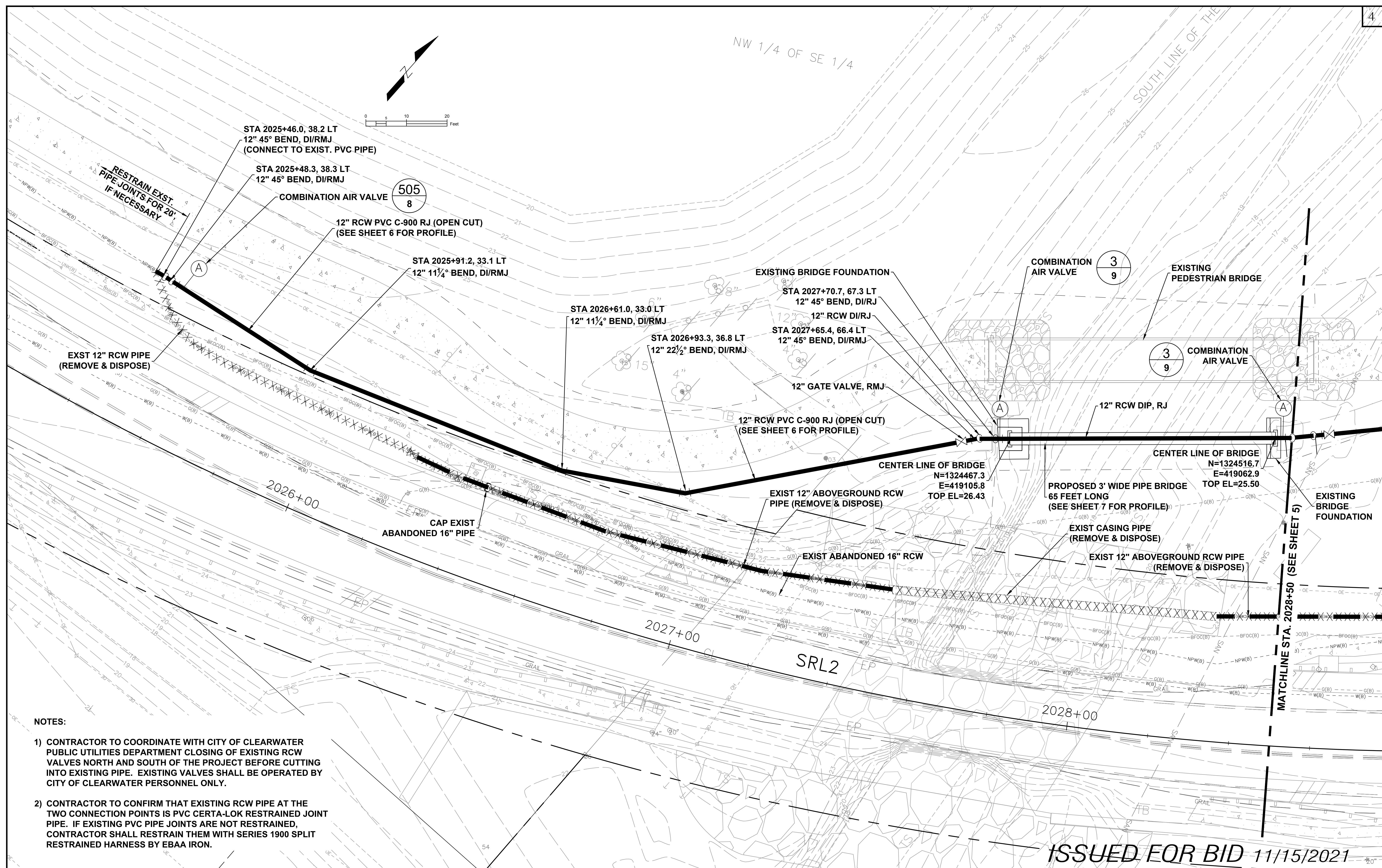


OLD COACHMAN / SPECTRUM FIELD
RCW PIPE REPAIR
GENERAL NOTES

Table with project details: DWG NAME (2 GENERAL NOTES.DWG), FIELD BOOK (N/A), SURVEYED BY (N/A), SCALE (VERT. SEE ABOVE), CONTRACT NO. (17-0056-UT), DATE DRAWN (11/15/21), DRAWN BY (J. SCHEUERMAN), JOB NO. (60620148), DESIGNED BY (B. HANDJIEV), CHECKED BY (D. WILCOX), SHEET NO. (2 OF 9), APPROVED FOR CONSTRUCTION.

ISSUED FOR BID 11/15/2021

L:\DCS\Projects\Legacy\H2O\WaterWaste\City of Clearwater\RCW Pipe Repair - Old Coachman and Spectrum Field\900-CAD_GIS\DESIGN\3 UTILITY PIPELINE.dwg, Nov 15, 2021 - 3:39pm



- NOTES:**
- 1) CONTRACTOR TO COORDINATE WITH CITY OF CLEARWATER PUBLIC UTILITIES DEPARTMENT CLOSING OF EXISTING RCW VALVES NORTH AND SOUTH OF THE PROJECT BEFORE CUTTING INTO EXISTING PIPE. EXISTING VALVES SHALL BE OPERATED BY CITY OF CLEARWATER PERSONNEL ONLY.
 - 2) CONTRACTOR TO CONFIRM THAT EXISTING RCW PIPE AT THE TWO CONNECTION POINTS IS PVC CERTA-LOK RESTRAINED JOINT PIPE. IF EXISTING PVC PIPE JOINTS ARE NOT RESTRAINED, CONTRACTOR SHALL RESTRAIN THEM WITH SERIES 1900 SPLIT RESTRAINED HARNESS BY EBAA IRON.

ISSUED FOR BID 11/15/2021

| RECORD DRAWINGS | | REVISION | |
|-----------------|---|----------|------|
| SURVEYED BY: | DRAWN BY: | BY | DATE |
| REVIEWED BY: | PROJECT ENGINEER | DATE | |
| APPROVED BY: | CITY ENGINEER TARA L. KIVETT, P.E. #66811 | DATE | |

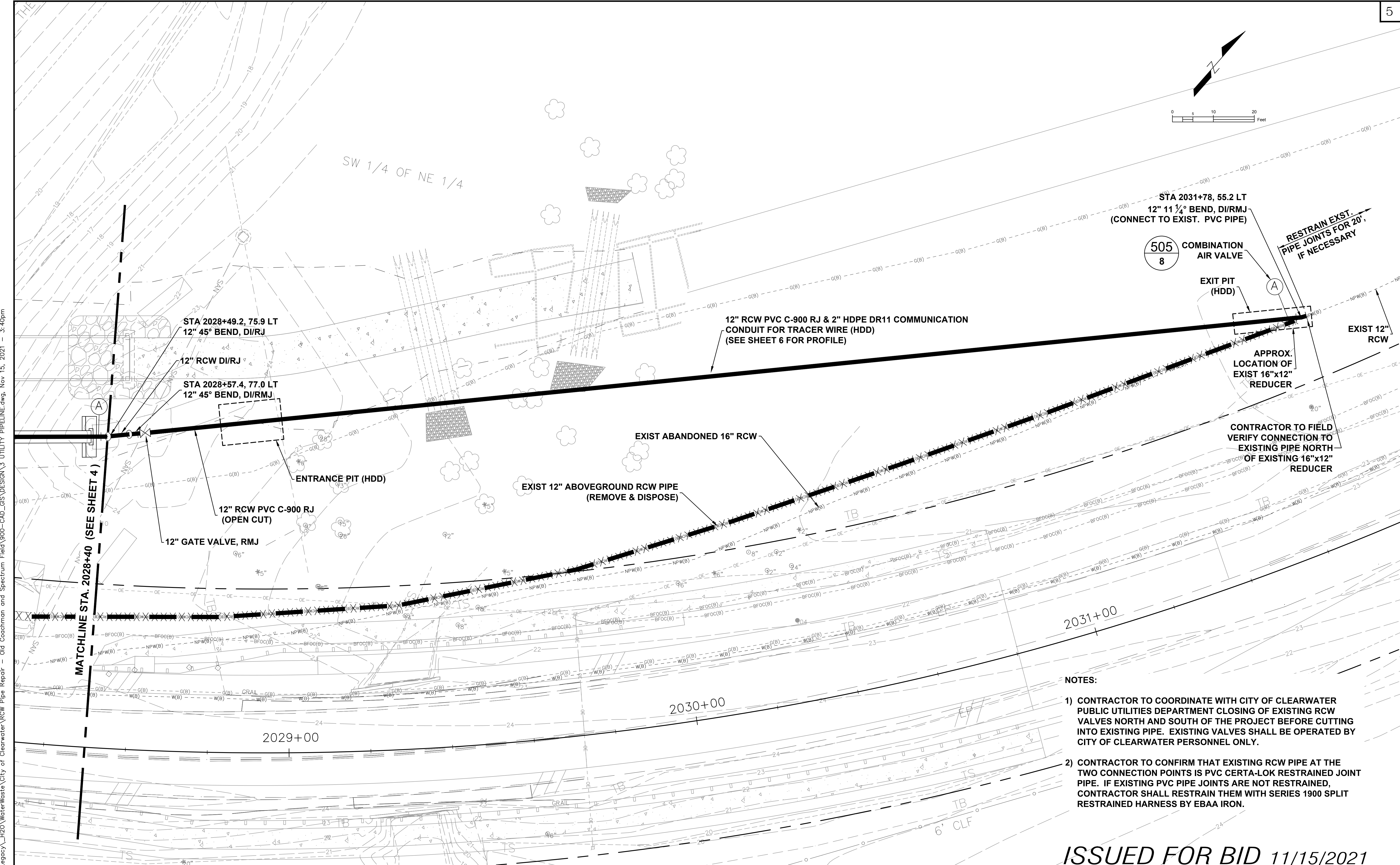
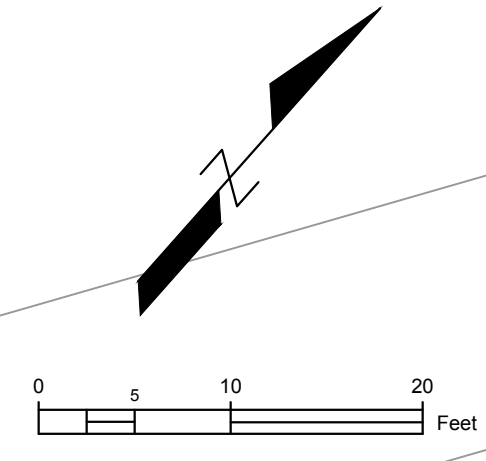
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 Florida Engineering Number: 000002

OLD COACHMAN / SPECTRUM FIELD
 RCW PIPE REPAIR
 PLAN VIEW (1)

| | | | |
|-------------------------------------|-----------------------------|----------------------------|---------------------------|
| DWG NAME: 3 UTILITY PIPELINE.DWG | FIELD BOOK: N/A | SURVEYED BY: N/A | SCALE: VERT. SEE ABOVE |
| CONTRACT NO.: 17-0056-UT | DATE DRAWN: 11/15/21 | DRAWN BY: J. SCHEUERMAN | HORIZ. SEE ABOVE |
| JOB NO.: 60620148 | DESIGNED BY: B. HANDJIEV | CHECKED BY: D. WILCOX | SHEET NO.: 4 OF 9 |
| APPROVED FOR CONSTRUCTION | | | |



- NOTES:**
- 1) CONTRACTOR TO COORDINATE WITH CITY OF CLEARWATER PUBLIC UTILITIES DEPARTMENT CLOSING OF EXISTING RCW VALVES NORTH AND SOUTH OF THE PROJECT BEFORE CUTTING INTO EXISTING PIPE. EXISTING VALVES SHALL BE OPERATED BY CITY OF CLEARWATER PERSONNEL ONLY.
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ISSUED FOR BID 11/15/2021

| RECORD DRAWINGS | | REVISION | BY | DATE |
|-----------------|--|----------|----|------|
| SURVEYED BY: | DRAWN BY: | | | |
| REVIEWED BY: | PROJECT ENGINEER | | | |
| APPROVED BY: | CITY ENGINEER TARA L. KIVETT, P.E. #6611 | | | |

CITY OF CLEARWATER, FLORIDA
 ENGINEERING DEPARTMENT
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 CLEARWATER, FL 33756

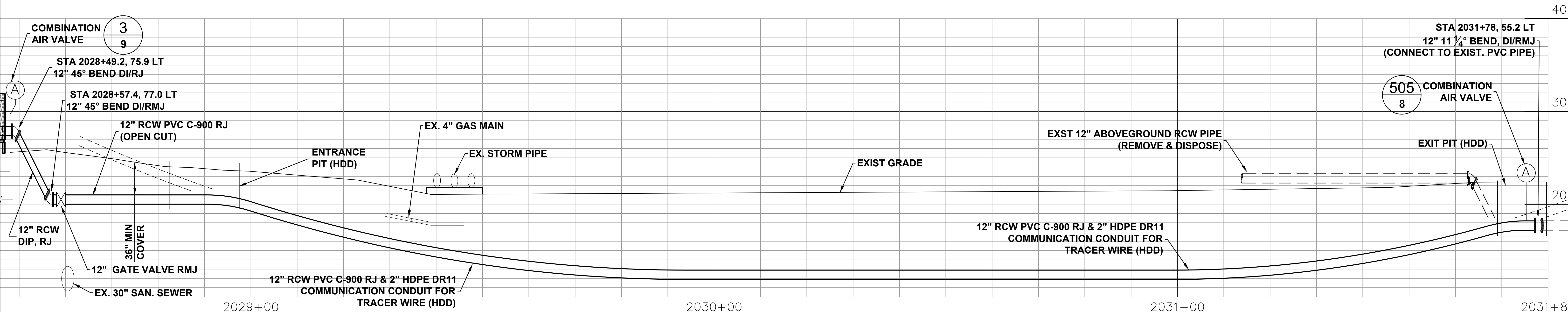
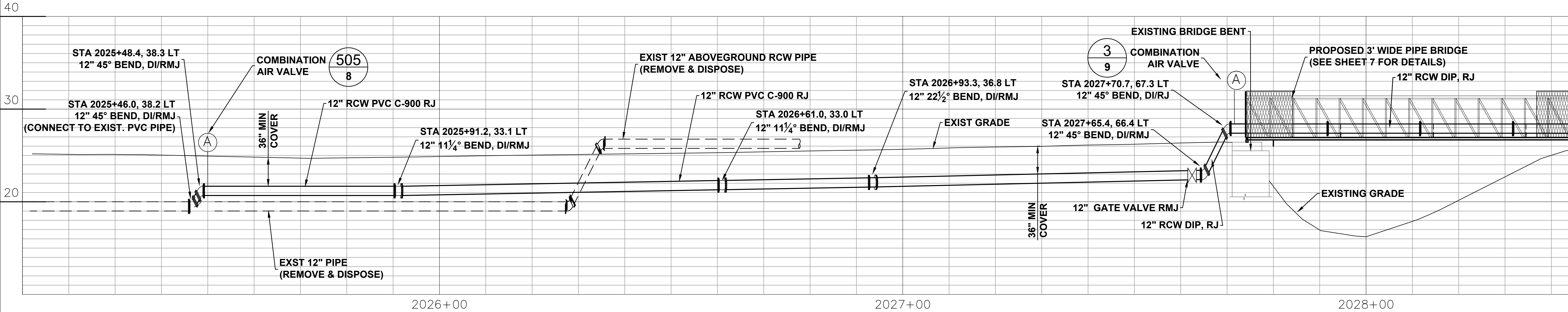
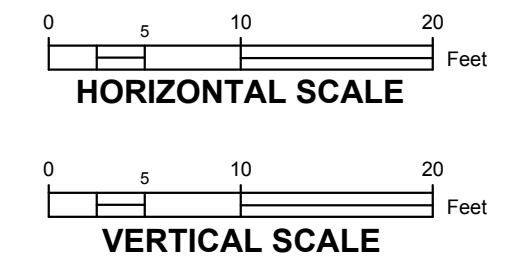
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 7650 West Courtney Campbell Causeway
 Suite 700
 Tampa, Florida 33607
 Ph: (813) 286-1711 Fax: (813) 286-6587
 Florida Engineering Number: 000002

OLD COACHMAN / SPECTRUM FIELD
 RCW PIPE REPAIR
 PLAN VIEW (2)

| | | | |
|-------------------------------------|-----------------------------|----------------------------|---------------------------|
| DWG NAME: 3 UTILITY PIPELINE.DWG | FIELD BOOK: N/A | SURVEYED BY: N/A | SCALE: VERT. SEE ABOVE |
| CONTRACT NO.: 17-0056-UT | DATE DRAWN: 11/15/21 | DRAWN BY: J. SCHEUERMAN | HORIZ. SEE ABOVE |
| JOB NO.: 60620148 | DESIGNED BY: B. HANDJIEV | CHECKED BY: D. WILCOX | SHEET NO.: 5 OF 9 |
| APPROVED FOR CONSTRUCTION | | | |

L:\DCS\Projects\Legacy\H2O Water\Waste\City of Clearwater\RCW Pipe Repair - Old Coachman and Spectrum Field\900-CAD_GIS\DESIGN\3 UTILITY PIPELINE.dwg, Nov 15, 2021 - 3:40pm



ISSUED FOR BID 11/15/2021

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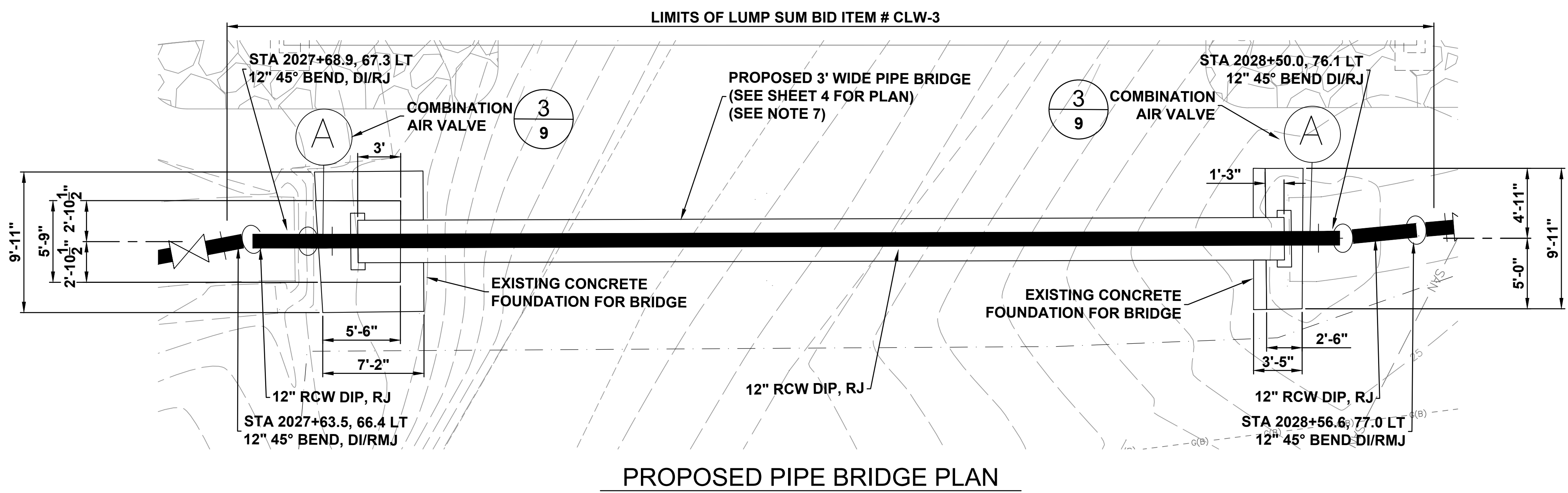
| RECORD DRAWINGS | | REVISION | BY | DATE |
|-----------------|--|----------|----|------|
| SURVEYED BY: | DRAWN BY: | | | |
| REVIEWED BY: | | | | |
| APPROVED BY: | PROJECT ENGINEER | DATE | | |
| | CITY ENGINEER TARA L. KIVETT, P.E. #6611 | DATE | | |

CITY OF CLEARWATER, FLORIDA
 ENGINEERING DEPARTMENT
 100 S. MYRTLE AVE.
 CLEARWATER, FL 33756



OLD COACHMAN / SPECTRUM FIELD
 RCW PIPE REPAIR
 PROFILE

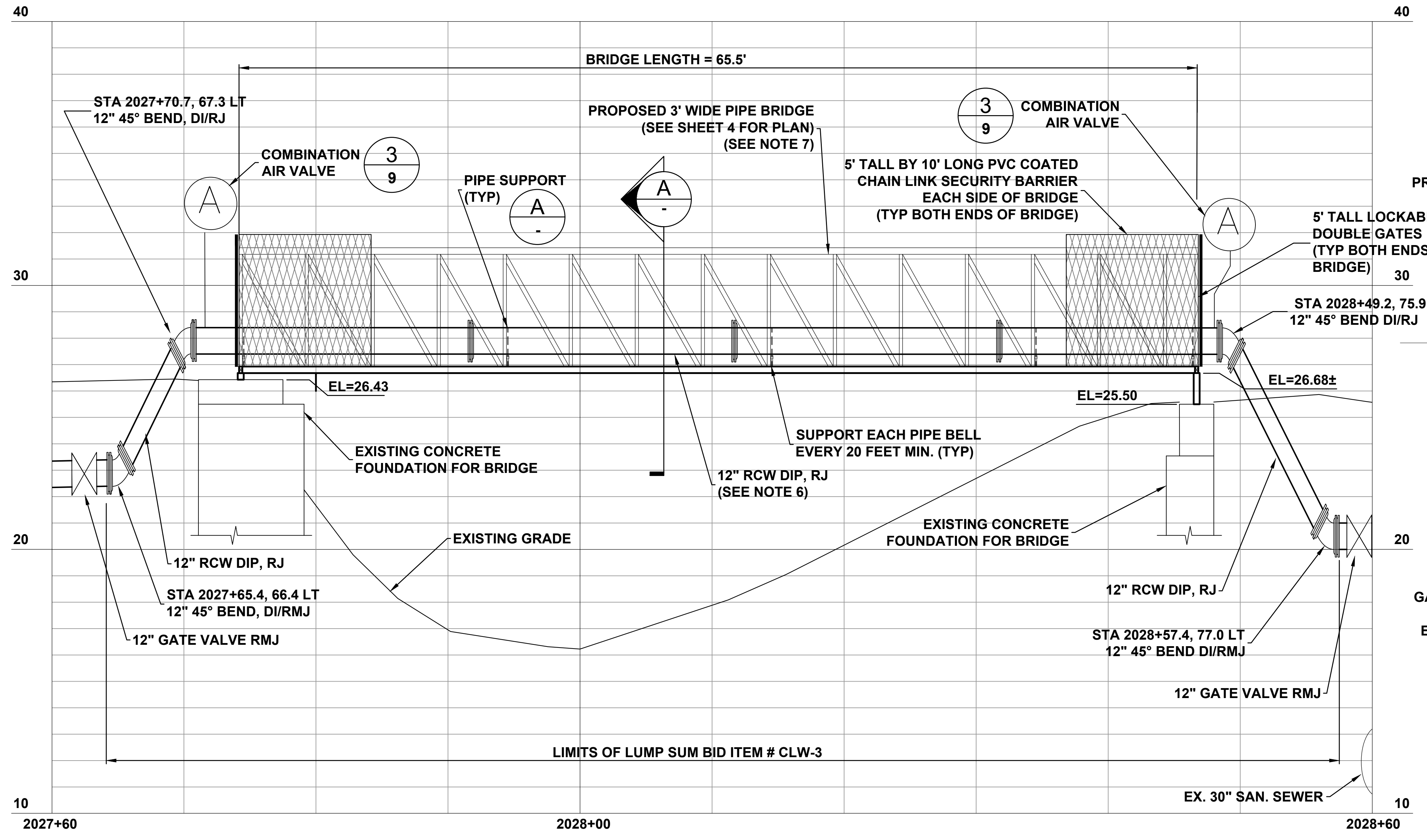
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| DWG NAME: 3 UTILITY PIPELINE.DWG | FIELD BOOK: N/A | SURVEYED BY: N/A | SCALE: VERT. SEE ABOVE |
| CONTRACT NO.: 17-0056-UT | DATE DRAWN: 11/15/21 | DRAWN BY: J. SCHEUERMAN | HORIZ. SEE ABOVE |
| JOB NO.: 60620148 | DESIGNED BY: B. HANDJIEV | CHECKED BY: D. WILCOX | SHEET NO.: 6 OF 9 |
| APPROVED FOR CONSTRUCTION | | | |



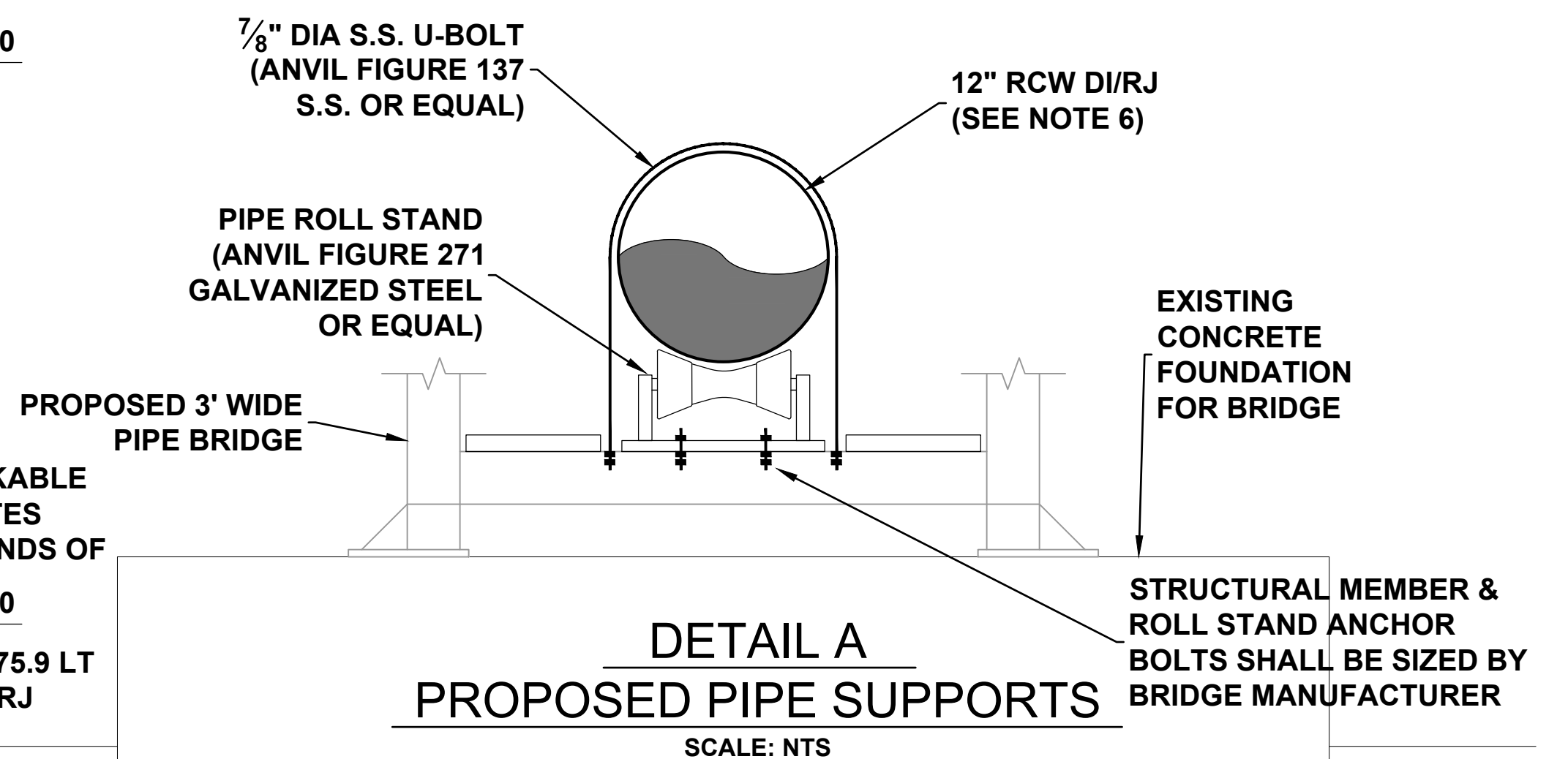
PROPOSED PIPE BRIDGE PLAN

NOTES:

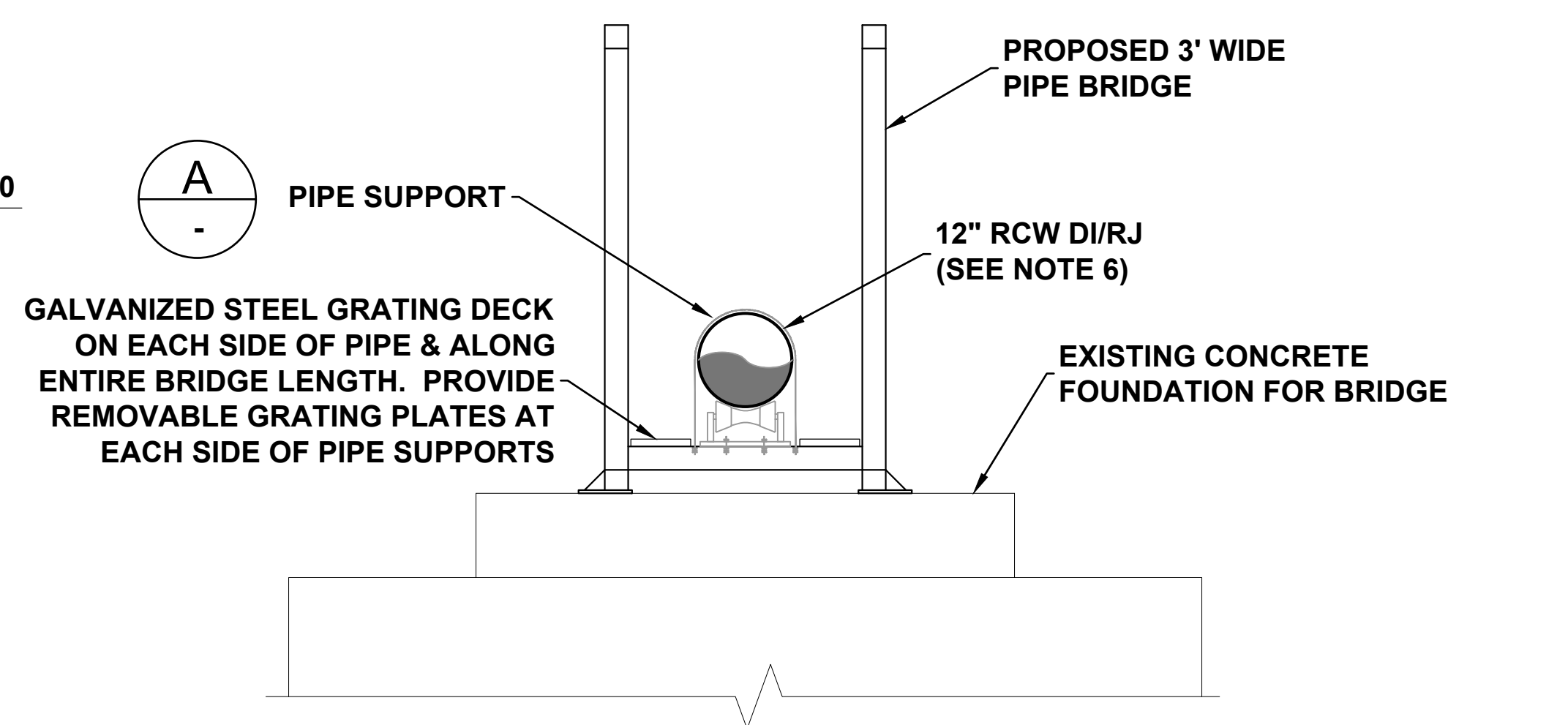
- 1) FOR PLAN VIEW SEE SHEET 4.
- 2) DUCTILE IRON PIPE & FITTINGS ALONG BRIDGE SHALL BE RESTRAINED TR-FLEX PIPE BY US PIPE OR APPROVED EQUAL.
- 3) DURING INSTALLATION EACH TR-FLEX JOINT (OR EQUAL) SHALL BE FULLY EXTENDED TO REMOVE SLACK & ENGAGE RESTRAINT TO PREVENT JOINT DEFLECTION UPON PRESSURIZATION.
- 4) PRESSURIZATION SHALL BE PERFORMED SLOWLY IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATION TO MINIMIZE JOINT DEFLECTION.
- 5) REFER TO TECHNICAL SPECIAL PROVISIONS FOR PIPE COATING REQUIREMENTS.
- 6) LOCATE 12" RCW ALONG CENTERLINE OF BRIDGE.
- 7) FIELD VERIFY BRIDGE LENGTH & EXISTING FOUNDATION ELEVATIONS PRIOR TO FABRICATING BRIDGE.
- 8) REFER TO TECHNICAL SPECIAL PROVISIONS FOR REQUIREMENTS OF THE PROPOSED BRIDGE.
- 9) PROVIDE MINIMUM 5 FT TALL PVC COATED CHAIN LINK LOCKABLE DOUBLE GATES & SECURITY BARRIER AT EACH END OF BRIDGE TO PREVENT UNAUTHORIZED ACCESS. COORDINATE PVC COATED CHAIN LINK BARRIER COLOR WITH CITY OF CLEARWATER PRIOR TO FABRICATION.



PROPOSED PIPE BRIDGE PROFILE



DETAIL A PROPOSED PIPE SUPPORTS



SECTION A-A PROPOSED PIPE BRIDGE

ISSUED FOR BID 11/15/2021

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| APPROVED BY: | CITY ENGINEER TARA L. KIVETT, P.E. #6611 | DATE: | |

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Florida Engineering Number: 000002

OLD COACHMAN / SPECTRUM FIELD
RCW PIPE REPAIR
PIPE BRIDGE PROFILE & SECTION

| | | | |
|-------------------------------------|-----------------------------|----------------------------|---------------------------|
| DWG NAME: 3 UTILITY PIPELINE.DWG | FIELD BOOK: N/A | SURVEYED BY: N/A | SCALE: VERT. SEE ABOVE |
| CONTRACT NO.: | DATE DRAWN: 11/15/21 | DRAWN BY: J. SCHEUERMAN | HORIZ. SEE ABOVE |
| JOB NO.: | DESIGNED BY: B. HANDJIEV | CHECKED BY: D. WILCOX | SHEET NO.: |
| 60620148 | | | 7 OF 9 |

Roadway/Sidewalk Installation

Green Space Installation

NOTES:

- Must center operation nut in box
- C900 Riser to be one continuous section and color coded Pantone 522c.
- Gate Valves shall be open left only.
- Valve key extensions required on valves with operator nut over 3' deep.
- Tracer Wire required in all applications including on D.I.P. and colored Pantone 522c.
- See also City of Clearwater's Technical Specification Section IV.

SECTION VIEW
N.T.S.

| | | | | | | | |
|------|----------------------|-----|--|---|------------------|--------------------|-------------------------------|
| DATE | REVISION DESCRIPTION | APP | CITY OF CLEARWATER ENGINEERING DEPARTMENT RECLAIMED WATER DETAILS | RECLAIMED WATER TYPICAL VALVE & BOX SETTINGS | INDEX NO. 502 | PAGE NO. 1 of 3 | LATEST REVISION 10/21/2019 |
|------|----------------------|-----|--|---|------------------|--------------------|-------------------------------|

NOTES:

- Extension on Valve Box shall be set so as to reserve 1/2 of the adjustment length for future use.
- Valve key extension required on valves with operator nut over 3' deep.
- Install 3" Brass Identification Disk in concrete, per detail below.
- Terminate insulated, solid 12 gauge copper tracer wire at top w/ a minimum 12" of extra wire.
- Reclaimed Water Valve Box lid openings are to be 9" x 9" square.
- Tracer Wire Station - Installed where new construction tie-in to existing pipe. Wire brought up into valve pad on top of pipe.
- Valve Box to be centered in concrete slab in green space only.
- See also City of Clearwater's Technical Specification Section IV.

3" BRASS IDENTIFICATION DISK
N.T.S.

3" BRASS IDENTIFICATION DISK
N.T.S.

**RECLAIMED WATER VALVE BOX
CONCRETE PAD PLAN VIEW
GREEN SPACE ONLY**

| | | | | | | | |
|------|----------------------|-----|--|---|------------------|--------------------|-------------------------------|
| DATE | REVISION DESCRIPTION | APP | CITY OF CLEARWATER ENGINEERING DEPARTMENT RECLAIMED WATER DETAILS | RECLAIMED WATER VALVE BOX CONCRETE PAD PLAN VIEW GREEN SPACE ONLY | INDEX NO. 502 | PAGE NO. 2 of 3 | LATEST REVISION 10/21/2019 |
|------|----------------------|-----|--|---|------------------|--------------------|-------------------------------|

NOTES:

- Extension on Valve Box shall be set so as to reserve 1/2 of the adjustment length for future use.
- Install 3" Brass Identification Disk in concrete per detail below.
- Terminate insulated, solid 12 gauge copper tracer wire at top with 12" of extra wire.
- Reclaimed Water Valve Box lid openings are to be 9" x 9" square.
- Tracing wire Station - Installed where new construction tie-in to existing pipe. Wire brought up into valve pad on top of pipe.
- Valve Box to be centered in concrete slab in green space only.
- See also City of Clearwater's Technical Specification Section IV.

3" BRASS IDENTIFICATION DISK
N.T.S.

3" BRASS IDENTIFICATION DISK
N.T.S.

**RECLAIMED WATER TRACING WIRE STATION
CONCRETE PAD PLAN VIEW
GREEN SPACE ONLY**

| | | | | | | | |
|------|----------------------|-----|--|--|------------------|--------------------|-------------------------------|
| DATE | REVISION DESCRIPTION | APP | CITY OF CLEARWATER ENGINEERING DEPARTMENT RECLAIMED WATER DETAILS | RECLAIMED WATER TRACING WIRE STATION CONCRETE PAD PLAN VIEW GREEN SPACE ONLY | INDEX NO. 502 | PAGE NO. 3 of 3 | LATEST REVISION 10/21/2019 |
|------|----------------------|-----|--|--|------------------|--------------------|-------------------------------|

DO NOT USE FOR VERTICAL OFFSETS

L = Minimum length to be restrained on each side of fitting (ft.)
Figures based on 30" bury depth, 150 PSI test pressure
Figures apply to poly wrapped pipe

N.T.S.

The following joints must be restrained in all applications:

- Bend - Inlet and outlet
- Tee - Inlet and outlets
- Offsets - Inlet and outlet
- Caps
- Plugs
- Dead ends
- Hydrant runouts shall be restrained as dead ends

NOTES:

- Water mains larger than 8" will be ductile iron pipe only.
- Thrust restraint on slip joint ductile iron pipe shall be U.S. Pipe Field Lock Gaskets for Tyton Joint Pipe or American Fast-Grip Gaskets for American Fastite Pipe, witnessed by Construction Inspector.
- Thrust restraints on slip joint PVC pipe shall be EBBA Iron 1500 Series restrainers, or approved equal.
- Thrust restraint on Ductile Iron Fittings shall be provided by the use of Megalug Retainers and mechanical joint fittings.
- No thrust blocks allowed.
- See also City of Clearwater's Technical Specification Section IV.

| NOM. PIPE SIZE | ELBOWS (deg.) | | | | VALVES TEES | | DEAD END |
|--------------------|---------------|-------|----|-----|-------------|-----|----------|
| | 11.25 | 22.50 | 45 | 90 | | | |
| LENGTH IN FEET (L) | | | | | | | |
| 4" | 22 | 22 | 22 | 42 | 50 | 50 | |
| 6" | 22 | 22 | 25 | 50 | 67 | 67 | |
| 8" | 22 | 22 | 35 | 60 | 85 | 85 | |
| 12" | 22 | 22 | 42 | 100 | 125 | 125 | |
| 16" | 22 | 30 | 55 | 130 | 150 | 150 | |
| 20" | 22 | 33 | 65 | 150 | 160 | 160 | |

**RESTRAINED JOINT DETAIL
(PVC & DIP)**

| | | | | | | | |
|------|----------------------|-----|--|--|------------------|--------------------|-------------------------------|
| DATE | REVISION DESCRIPTION | APP | CITY OF CLEARWATER ENGINEERING DEPARTMENT POTABLE WATER DETAILS | RESTRAINED JOINT DETAIL (PVC & DIP) | INDEX NO. 403 | PAGE NO. 1 of 1 | LATEST REVISION 10/21/2019 |
|------|----------------------|-----|--|--|------------------|--------------------|-------------------------------|

NOTES:

- Final enclosure shall be coordinated with and approved by City of Clearwater.
- Air Release Valve enclosure shall not be located in drainage swale or other areas where it is subject to submergence.
- Air Release Valve enclosure shall be located outside of clear recovery zone.
- Downward facing elbow to be screened.
- Insert stiffeners at Corporation Stop and Curb Stop. Stiffeners shall be manufactured by Mars Company P.O. Box 830340, Ocala, FL 34483.
- See also City of Clearwater's Technical Specification Section IV.

**AIR RELEASE VALVE
CONCRETE PAD PLAN VIEW**
N.T.S.

| | | | | | | | |
|------|----------------------|-----|--|--|------------------|--------------------|-------------------------------|
| DATE | REVISION DESCRIPTION | APP | CITY OF CLEARWATER ENGINEERING DEPARTMENT RECLAIMED WATER DETAILS | TYPICAL AIR RELEASE VALVE RECLAIMED WATER APPLICATION | INDEX NO. 505 | PAGE NO. 1 of 1 | LATEST REVISION 10/21/2019 |
|------|----------------------|-----|--|--|------------------|--------------------|-------------------------------|

SPECIFICATIONS - WOOD BARRIER

- Minimum radius to be protected:
 - Hardwoods - 2/3 drip line
 - Conifers & Sabal Palms - Entire drip line.
- Uprights - No less than 2" X 2" lumber.
- Horizontals - No less than 1" X 4" lumber.
- Barriers shall be erected around all protected trees and palms, and inspected by city representative before construction begins.
- Upright posts are to be at least 4 feet in length with a minimum of 1 foot anchored in ground and 3 feet above ground.
- Barriers to remain in place until all paving, construction and heavy equipment is out of area.

Further information may be obtained from the Land Resource Specialists at 562-4575 and 562-4558.

TREE BARRICADES

| | | | | | | | |
|----------|---------------|----|--|-----------------|------------------|--------------------|-----------------------------|
| 10/22/18 | PHONE NUMBERS | JS | CITY OF CLEARWATER ENGINEERING DEPARTMENT LANDSCAPE DETAILS | TREE BARRICADES | INDEX NO. 909 | PAGE NO. 1 of 1 | LATEST REVISION 10/22/18 |
|----------|---------------|----|--|-----------------|------------------|--------------------|-----------------------------|

PLOTTED November 15, 2021 3:44 PM PLOTTED BY: SONNENBERG, TERENCE L:\GIS\PROJECTS\LEGACY\100 WATERMAIN\100 WATERMAIN\CITY OF CLEARWATER\RCW PIPE REPAIR - OLD COACHMAN AND SPECTRUM FIELD\100-COALD-RCW\DESIGN & DETAILING

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| RECORD DRAWINGS | | DATE | BY |
|-----------------|---|------|----|
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| REVIEWED BY: | PROJECT ENGINEER | DATE | |
| APPROVED BY: | CITY ENGINEER TARA L. KIVETT, P.E. #86811 | DATE | |

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OLD COACHMAN / SPECTRUM FIELD
RCW PIPE REPAIR
DETAILS (1)

| | | | |
|-----------------------------|-----------------------------|----------------------------|---------------------------|
| DWG NAME: 8 DETAILS.DWG | FIELD BOOK: N/A | SURVEYED BY: N/A | SCALE: VERT. SEE ABOVE |
| CONTRACT NO.: 17-0056-UT | DATE DRAWN: 11/15/21 | DRAWN BY: J. SCHEUERMAN | HORIZ. SEE ABOVE |
| JOB NO.: 60620148 | DESIGNED BY: B. HANDJIEV | CHECKED BY: D. WILCOX | SHEET NO.: 8 OF 9 |
| APPROVED FOR CONSTRUCTION | | | |

CONTRACTOR'S RESPONSIBILITY
Erosion and Sedimentation controls are performance based criteria. If the BMPs provided do not prevent soils from leaving a construction site, then the Contractor is required to employ additional procedures to provide clean runoff from a site.

ATTACHING TWO SILT FENCES

1st Fence 2nd Fence

Place the end post of the second fence inside the end post of the first fence.

Rotate both post at least 180 degrees in a clockwise direction to create a tight seal with the fabric material.

Drive both posts into the ground and bury the flap.

N.T.S.

Filter fabric material securely fastened to the posts or wire mesh if used.

Approximately 8 inches of filter fabric material must extend into a trench and be anchored with compacted backfill material.

Runoff

10" (Min.)

N.T.S.

4" x 4" trench

Approximate

5/18/15 CONTRACTOR NOTE ADDED S.R. CITY OF CLEARWATER ENGINEERING DEPARTMENT EROSION AND SILTATION CONTROL POLICY INDEX NO. 607 PAGE NO. 1 OF 3 LATEST REVISION 2/22/2016

INSTALLING A FILTER FABRIC SILT FENCE

CONTRACTOR'S RESPONSIBILITY
Erosion and Sedimentation controls are performance based criteria. If the BMPs provided do not prevent soils from leaving a construction site, then the Contractor is required to employ additional procedures to provide clean runoff from a site.

INSTALLING A FILTER FABRIC SILT FENCE

STEP 1. Set stakes 6' Max.

STEP 2. Excavate a 4" x 4" trench upslope along the line of stakes

STEP 3. Staple filter material to stakes and extend it into the trench

STEP 4. Backfill and compact the excavated soil

N.T.S.

N.T.S.

N.T.S.

N.T.S.

PLAN VIEW

SECTION VIEW

Points A should be higher than Point B

N.T.S.

5/18/15 CONTRACTOR NOTE ADDED S.R. CITY OF CLEARWATER ENGINEERING DEPARTMENT EROSION AND SILTATION CONTROL POLICY INDEX NO. 607 PAGE NO. 2 OF 3 LATEST REVISION 2/22/2016

INSTALLING A FILTER FABRIC SILT FENCE

CONTRACTOR'S RESPONSIBILITY
Erosion and Sedimentation controls are performance based criteria. If the BMPs provided do not prevent soils from leaving a construction site, then the Contractor is required to employ additional procedures to provide clean runoff from a site.

INSTALLING A FILTER FABRIC SILT FENCE

Ponding height

Steel or wood post 36" high Max.

Filter fabric attached securely to upstream side of post

Runoff

12" Min.

4" x 6" Trench with compacted backfill

N.T.S.

STANDARD DETAIL TRENCH WITH NATIVE BACKFILL

Ponding height

9" Max. (Recommended) storage height

Runoff

12" Min.

Gravel

8"

N.T.S.

ALTERNATE DETAIL TRENCH WITH GRAVEL

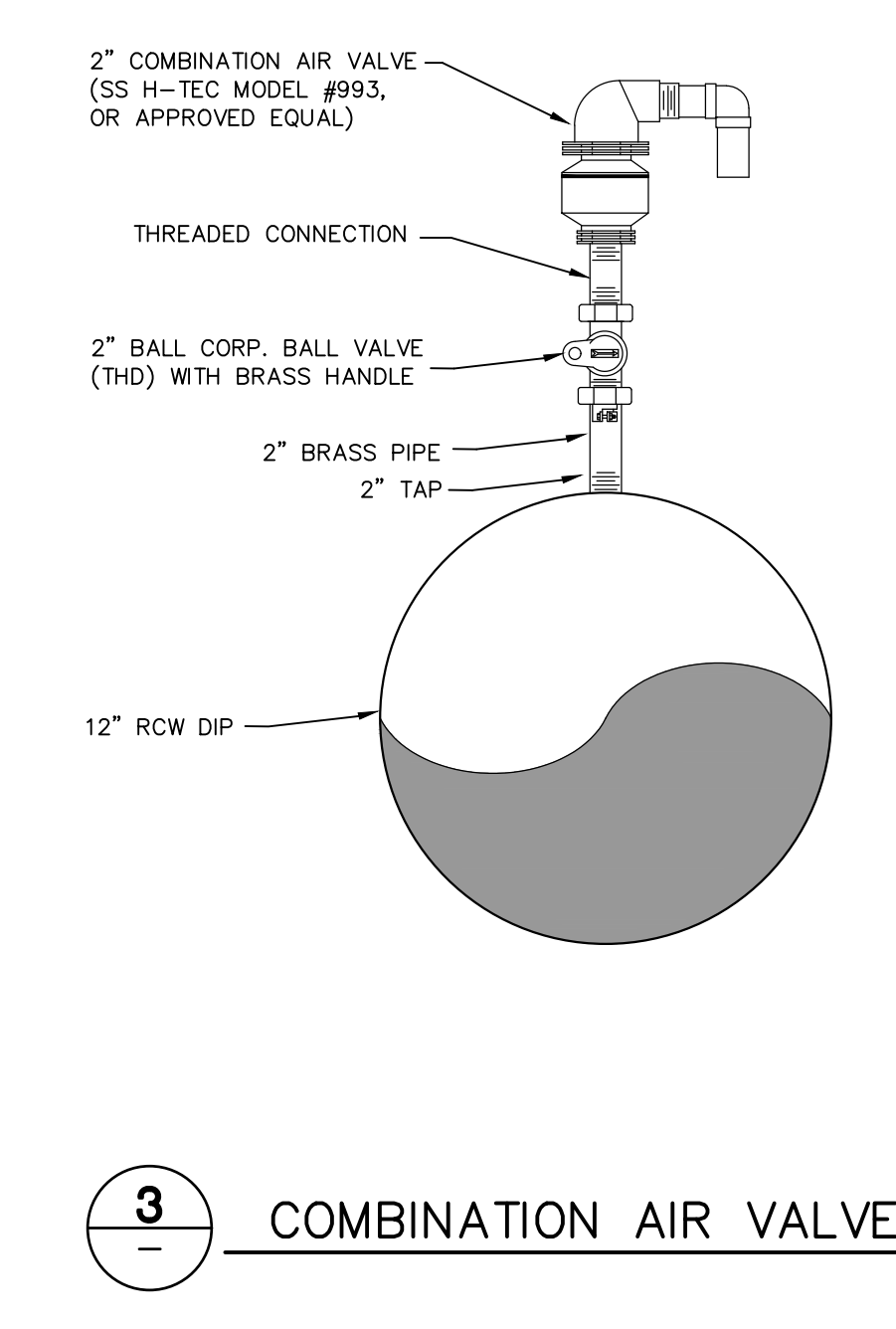
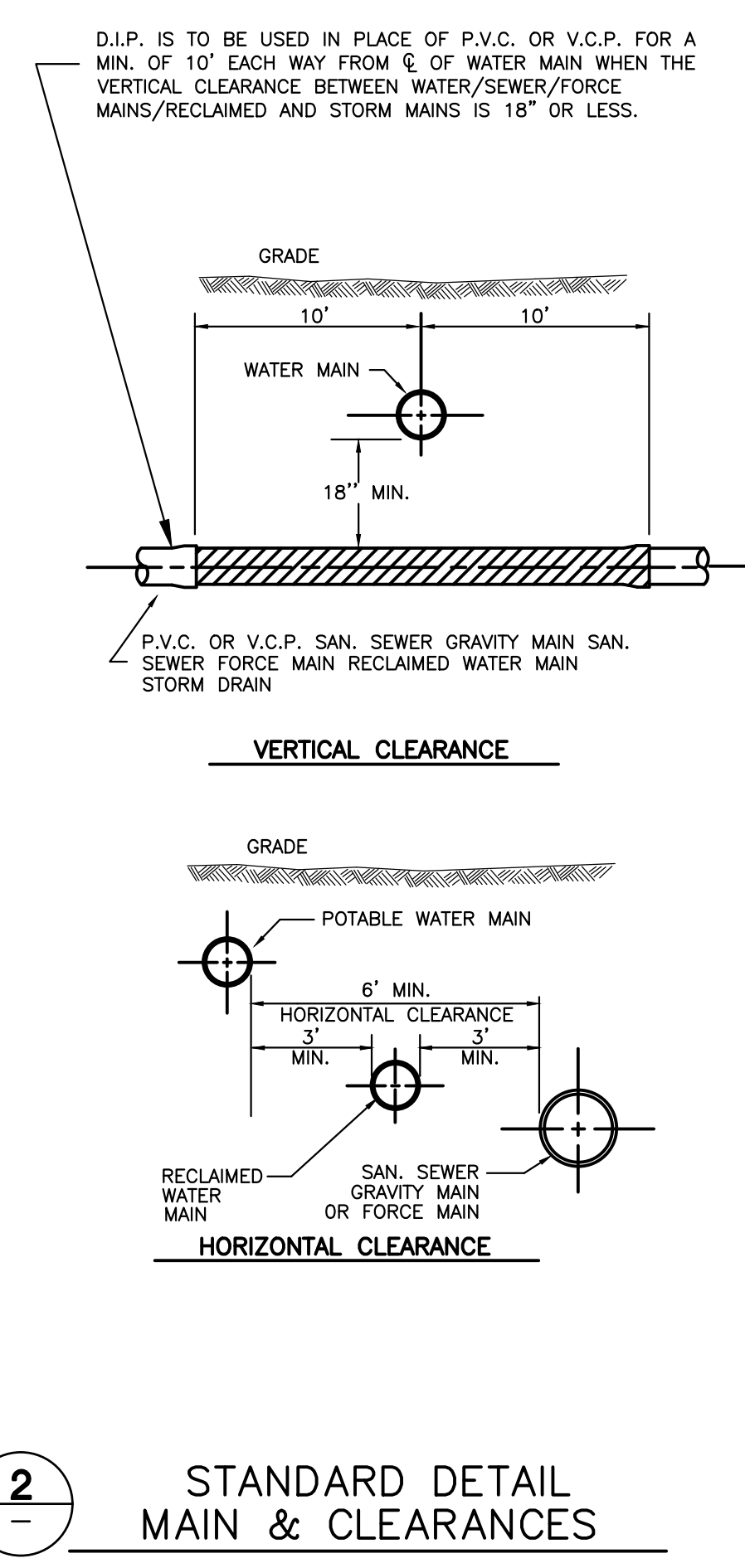
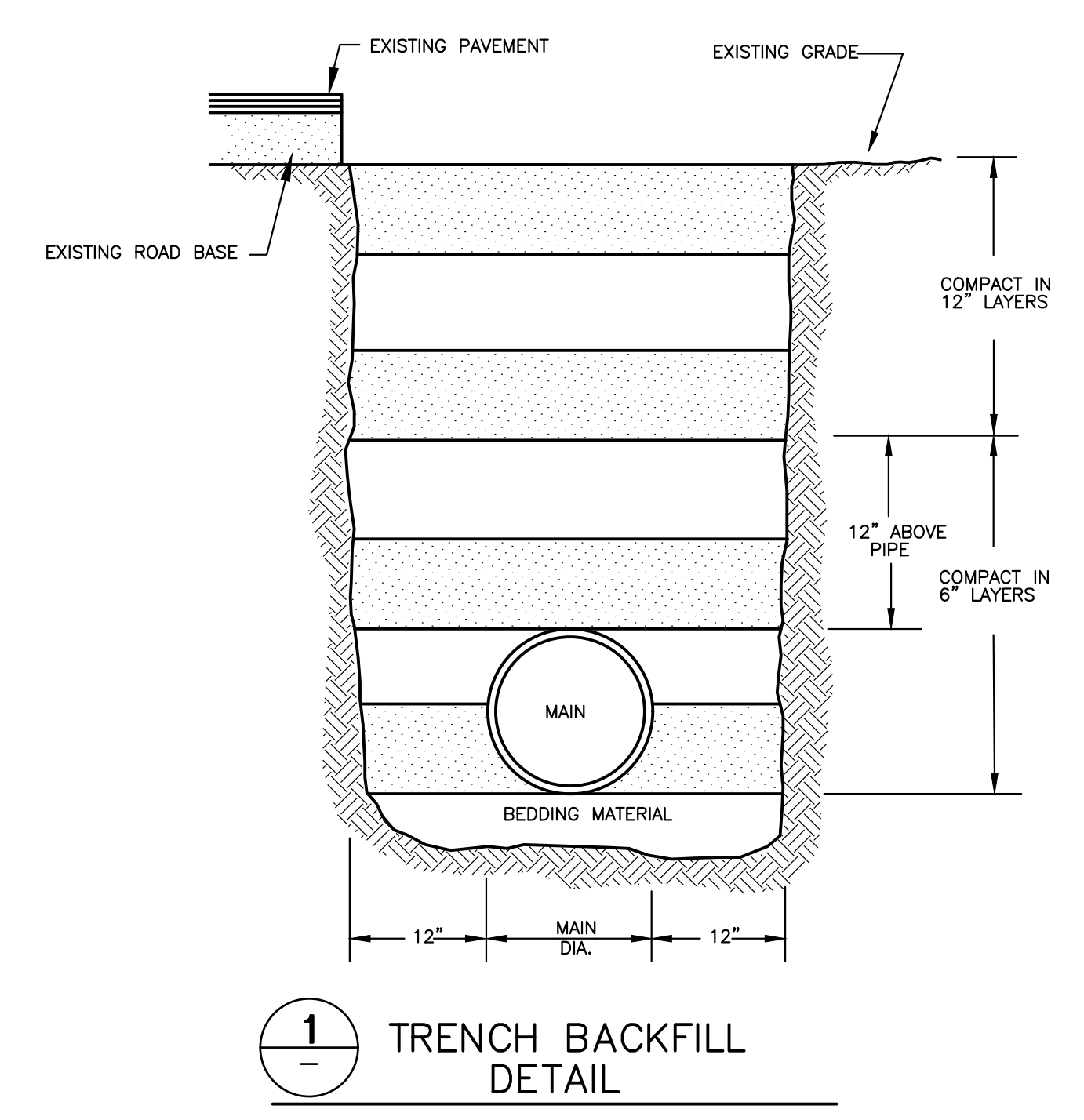
NOTES:

- Inspect and repair fence after each storm event and remove sediment when necessary.
- Removed sediment shall be deposited to an area that will not contribute sediment off-site and can be permanently stabilized.
- Silt fence shall be placed on slope contours to maximize ponding efficiency.

5/18/15 CONTRACTOR NOTE ADDED S.R. CITY OF CLEARWATER ENGINEERING DEPARTMENT EROSION AND SILTATION CONTROL POLICY INDEX NO. 607 PAGE NO. 3 OF 3 LATEST REVISION 2/22/2016

INSTALLING A FILTER FABRIC SILT FENCE

- NOTE:**
- TRENCHES LOCATED UNDER PAVEMENT OR INSIDE THE 2" HORIZONTAL TO 1' VERTICAL SLOPE, DOWNWARD FROM ROADWAY SHOULDER OR THE BACK OF CURB AND, FROM SPRING LINE TO BOTTOM OF SUB-GRADE OR THE FINISHED SURFACE OF THE EMBANKMENT, AS APPROPRIATE, SHALL BE COMPACTED TO A DENSITY OF 100% AS DETERMINED BY AASHTO T-99 METHOD C.
 - TRENCHES LOCATED OUTSIDE OF THE 2" HORIZONTAL TO 1' VERTICAL SLOPE DOWNWARD FROM ROADWAY SHOULDER OR THE BACK OF CURB AND WHERE NO VEHICULAR TRAFFIC WILL PASS OVER THE TRENCHES, BACK FILL SHALL BE COMPACTED TO A DENSITY APPROXIMATELY EQUAL TO THAT SOIL ADJACENT TO THE TRENCH BUT NOT LESS THAN 95 PERCENT OF THE MAXIMUM DENSITY AS DETERMINED BY AASHTO T-99 METHOD-C.
 - REPLACEMENT OF THE PAVED SURFACES SHALL BE MADE IN ACCORDANCE TO APPLICABLE LOCAL REGULATIONS.



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| APPROVED BY: | CITY ENGINEER TARA L. KIVETT, P.E. #86611 | DATE | |
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RCW PIPE REPAIR
DETAILS (2)

| DWG NAME: | FIELD BOOK: | SURVEYED BY: | SCALE: |
|---------------------------|--------------|---------------|------------------|
| 8 DETAILS.DWG | N/A | N/A | VERT. SEE ABOVE |
| CONTRACT NO.: | DATE DRAWN: | DRAWN BY: | HORIZ. SEE ABOVE |
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