

# BRANDON'S RESERVE AS BUILT PLANS

## AS-BUILT DRAWINGS

AS-BUILT PLANS ARE COMPLETED FROM SURVEYED RIM AND INVERT/FLOWLINE ELEVATIONS COMBINED WITH INFORMATION FROM THE CONTRACTOR. BISHOP ENGINEERING SHALL NOT BE HELD LIABLE FOR ANY CHANGES TO STRUCTURES SINCE THE DATE OF FIELD WORK OR CHANGES TO THE AS-BUILT DRAWINGS WITHOUT WRITTEN KNOWLEDGE. FURTHER SURVEY WORK AND FIELD VERIFICATION IS RECOMMENDED FOR ANY WORK TYING INTO AS-BUILT UTILITIES.

## GENERAL NOTES:

- ALL WORK SHALL BE DONE IN ACCORDANCE WITH CITY OF WAUKEE STANDARD SPECIFICATIONS AND THE 2016 EDITION OF SUDAS. THE CITY OF WAUKEE MUST BE NOTIFIED BY ALL CONTRACTORS 48 HOURS PRIOR TO COMMENCING WORK AND AT LEAST 48 HOURS PRIOR TO ANY PLANNED WEEKEND OR HOLIDAY WORK.
- IN EVENT OF A DISCREPANCY BETWEEN THE QUANTITY ESTIMATES AND THE DETAILED PLANS, THE DETAILED PLANS SHALL GOVERN.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE LOCATION OF ALL UTILITIES. ANY DAMAGE TO SAID UTILITIES SHALL BE REPAIRED AT THE CONTRACTORS EXPENSE.
- ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE CURRENT O.S.H.A. CODES AND STANDARDS. NOTHING INDICATED ON THESE PLANS SHALL RELIEVE THE CONTRACTOR FROM COMPLYING WITH THE APPROPRIATE SAFETY REGULATIONS.
- ALL NECESSARY CONSTRUCTION SIGNS, BARRICADES AND OTHER TRAFFIC CONTROL DEVICES REQUIRED DURING CONSTRUCTION WILL BE FURNISHED BY THE CONTRACTOR. SIGNS, BARRICADES AND OTHER TRAFFIC CONTROL DEVICES MUST BE IN CONFORMANCE WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS."
- BISHOP ENGINEERING SHALL NOT BE LIABLE FOR ANY INJURIES THAT HAPPEN ON SITE. THIS SHALL INCLUDE BUT NOT BE LIMITED TO TRENCH COLLAPSES FROM VARYING SOIL CONDITIONS OR INJURIES CAUSED BY UNDERGROUND UTILITIES INCLUDING UTILITIES THAT ARE NOT SHOWN ON PLAN.
- THE CONTRACTOR IS LIABLE FOR ALL DAMAGES TO PUBLIC OR PRIVATE PROPERTY CAUSED BY THEIR ACTION OR INACTION IN PROVIDING FOR STORM WATER FLOW DURING CONSTRUCTION. DO NOT RESTRICT FLOWS IN EXISTING DRAINAGE CHANNELS, STORM SEWER, OR FACILITIES.
- THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER A SCHEDULE FOR PERFORMANCE OF WORK ITEMS. THIS SCHEDULE SHALL BE PROVIDED BY THE CONTRACTOR AT THE PROJECT PRECONSTRUCTION CONFERENCE. NO WORK SHALL BEGIN UNTIL A SCHEDULE HAS BEEN SUBMITTED AND ACCEPTED. THE CONTRACTOR SHALL THEN PERFORM WORK TO CONFORM TO THE ACCEPTED SCHEDULE.
- LABORATORY TESTS SHALL BE PERFORMED BY THE OWNER UNLESS OTHERWISE NOTED. THE CONTRACTOR SHALL PROVIDE SAMPLES OF MATERIAL REQUIRED FOR LABORATORY TESTS AND TESTING IN ACCORDANCE WITH THE URBAN STANDARD SPECIFICATIONS FOR PUBLIC IMPROVEMENTS.
- SOIL IMPORT OR EXPORT ON THIS PROJECT SHALL BE CONSIDERED INCIDENTAL AND WILL NOT BE MEASURED OR PAID FOR SEPARATELY. FURTHERMORE SOIL IMPORT SHALL BE TESTED AND APPROVED PER THE SOILS REPORT RECOMMENDATIONS.
- THE CONTRACTOR SHALL PROTECT ALL STRUCTURES NOT SHOWN AS REMOVALS ON THE PLANS.
- THE CONTRACTOR SHALL OBTAIN ANY AND ALL NECESSARY PERMITS PRIOR TO ANY CONSTRUCTION. CONTRACTOR SHALL WORK WITH OWNER OR OWNERS REPRESENTATIVE ON ALL REQUIRED STORM WATER DISCHARGE PERMITS FROM THE IOWA DEPARTMENT OF NATURAL RESOURCES AND THE CITY OF WAUKEE.
- GRADING AND EROSION CONTROL SHALL BE DONE IN ACCORDANCE WITH THE APPROVED GRADING PLAN, SWPPP, NPDES DOCUMENTS, COSESCO PERMIT, AND IOWA DEPARTMENT OF NATURAL RESOURCES REQUIREMENTS.
- THE CONTRACTOR SHALL PICK UP ANY DEBRIS SPILLED ONTO THE ADJACENT RIGHT OF WAY OR ABUTTING PROPERTIES AS THE RESULT OF CONSTRUCTION, AT THE END OF EACH WORK DAY AND PRIOR TO A RAIN EVENT.
- THE CONTRACTOR IS RESPONSIBLE FOR THE PROMPT REMOVAL OF ALL MUD THAT HAS BEEN TRACKED OR WASHED UNTO ADJACENT PROPERTY OR RIGHT OF WAY UNTIL SUCH TIME THAT PERMANENT VEGETATION HAS BEEN ESTABLISHED.
- DISPOSE OF ALL EXCESS MATERIALS AND TRASH IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL REQUIREMENTS. PROVIDE WASTE AREAS OR DISPOSAL SITES FOR EXCESS MATERIALS NOT DESIRABLE FOR INCORPORATION INTO THE PROJECT.
- CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING PROJECT MANAGER CONTACT INFORMATION TO THE CITY OF WAUKEE AFTER BID LETTING.
- ANY PROPOSED CHANGES TO THE APPROVED PLAN SET DURING CONSTRUCTION MUST RECEIVE WRITTEN APPROVAL FROM THE CITY OF WAUKEE ENGINEERING DEPARTMENT AND DESIGN ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY CHANGES MADE DURING CONSTRUCTION THAT HAVE NOT RECEIVED WRITTEN APPROVAL FROM THE CITY OF WAUKEE ENGINEERING DEPARTMENT.
- CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING WAUKEE ENGINEERING DEPARTMENT AT LEAST 1 WEEK PRIOR TO ANY PLANNED WORK TO SCHEDULE A PRE-CONSTRUCTION MEETING.
- ANY ESTABLISHED LAWNS THAT ARE DISTURBED BY CONSTRUCTION ACTIVITIES SHALL BE REPLACED WITH SOD AND BE WATERED UNTIL ESTABLISHED. SAID WORK SHALL BE CONSIDERED INCIDENTAL TO CONSTRUCTION.
- PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL SUBMIT THE MANUFACTURER'S SPECIFICATION SHEETS FOR ALL MATERIALS BEING USED IN THE CONSTRUCTION OF THE IMPROVEMENTS TO THE WAUKEE ENGINEERING DEPARTMENT.
- CONSTRUCTION STAKING INCLUDING PEDESTRIAN FACILITIES SHALL BE PERFORMED BY A LICENSED ENGINEER OR LAND SURVEYOR.
- CONTRACTOR SHALL PROVIDE SUBMITTALS OF CONSTRUCTION MATERIALS TO THE CITY OF WAUKEE ENGINEERING DEPARTMENT PRIOR TO CONSTRUCTION.
- ANY CHANGES PROPOSED TO THE PLAN SET DURING CONSTRUCTION ARE TO RECEIVE WRITTEN APPROVAL FROM THE CITY OF WAUKEE ENGINEERING DEPARTMENT. THE CONTRACTOR IS RESPONSIBLE FOR ANY CHANGES MADE DURING CONSTRUCTION THAT HAVE NOT RECEIVED WRITTEN PERMISSION FROM THE CITY OF WAUKEE ENGINEERING DEPARTMENT.

## PAVING NOTES:

- THE PAVING/ GRADING CONTRACTOR SHALL BACKFILL THE PAVING SLAB AND FINE GRADE THE RIGHT OF WAY AS SOON AFTER THE PAVING AS POSSIBLE. ALL AREAS SHALL BE SEEDED IN ACCORDANCE WITH CITY OF WAUKEE STANDARD SPECIFICATIONS AND THE CURRENT VERSION OF SUDAS.
- SUBGRADE PREPARATION AND PAVEMENTS WILL BE CONSTRUCTED FOLLOWING RECOMMENDATIONS IN THE SOILS REPORT. APPROVED SOILS ENGINEER MUST SIGN OFF ON SUBBASE PRIOR TO ANY PAVEMENT BEING PLACED.
- SEE DETAILS FOR ALL PAVEMENT THICKNESS.
- ALL PEDESTRIAN WALKWAYS THAT UNLOAD INTO A VEHICLES TRAVELED PATH MUST HAVE A D.A. DETECTABLE WARNING PANEL(S) AS PER A.D.A. REGULATIONS. PANEL TYPE & COLOR SHALL BE PER CITY STANDARD.
- ALL WALKS, RAMPS, ETC. SHALL COMPLY WITH ALL A.D.A. AND PROWAG REQUIREMENTS. IN EVENT OF A DISCREPANCY BETWEEN THE PLANS AND THE A.D.A./ PROWAG REQUIREMENTS THE A.D.A./ PROWAG REQUIREMENTS SHALL GOVERN. CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING ALL A.D.A. & PROWAG CODES ARE MET.
- ANY PAVEMENT CALLED TO BE REPLACE SHALL COMPLY WITH CITY OF WAUKEE STANDARD SPECIFICATIONS.

## UTILITY NOTES:

- QUANTITY CALLOUTS ON PIPE LENGTHS ARE APPROXIMATE AND SHOULD BE USED FOR REFERENCE ONLY.
- THE CONTRACTOR SHALL COORDINATE THE ADJUSTMENT OF ANY AND ALL EXISTING AND PROPOSED UTILITIES TO PROPOSED GRADES. EXISTING UTILITIES SHALL BE RAISED OR LOWERED IN ACCORDANCE WITH THE UTILITY OWNER REQUIREMENTS. ANY NECESSARY ADJUSTMENTS SHALL BE CONSIDERED INCIDENTAL TO CONSTRUCTION.
- ALL EXISTING FIELD TILES ENCOUNTERED DURING CONSTRUCTION SHALL BE REPAIRED, REROUTED, OR CONNECTED TO PUBLIC OR PRIVATE STORM SEWER TO REMAIN IN SERVICE. ANY AND ALL FIELD TILES ENCOUNTERED SHALL BE INCLUDED ON THE AS-BUILT PLANS.
- ALL PROPOSED RCP STORM SEWER PIPE JOINTS SHALL BE FABRIC WRAPPED AND THE LAST 3 PIPE SECTIONS ON THE APRON SHALL BE TIED WITH RF-14 TYPE II CONNECTORS. ALL APRONS SHALL HAVE A STANDARD FOOTING AND TRASH GUARD. ALL APRONS SHALL HAVE A 10-FOOT CLAY WATER STOP.
- MANHOLE SIZE CALLOUTS ARE PROVIDED FOR CONTRACTOR'S CONVENIENCE. THE CONTRACTOR SHALL ULTIMATELY BE RESPONSIBLE FOR PROPER SIZING OF MANHOLES.
- LOTS 3, 4, AND 5 WILL NOT BE PROVIDED WITH STORM SEWER SERVICES. HOME BUILDER(S) OF LOT(S) SHALL DESIGN AND SURFACE DRAIN ANY SUMP INCLUDING EROSION CONTROL MEASURES AT THE SUMP OUTLET.
- ALL RIP RAP CALLED OUT ON PLANS SHALL BE UNDERLAIN WITH ENGINEERING FABRIC.
- SANITARY SEWER SERVICE CONNECTIONS SHALL BE PLACED AT A SLOPE OF NO LESS THAN 2%. SERVICES SHALL MAINTAIN 18" OF VERTICAL SEPARATION FROM THE WATERMAIN WITH 18" OF COMPACTED LOW PERMEABILITY SOIL BETWEEN THE UTILITIES WITHIN 10' OF THE CROSSING.
- MANDREL AND PRESSURE TESTS SHALL BE REQUIRED FOR ALL PROPOSED SANITARY LINES AND MANHOLES SHALL BE VACUUM TESTED.
- THE CONTRACTOR IS RESPONSIBLE FOR CLEANING AND TELEVISIONING ALL STORM AND SANITARY SEWER. THE CITY OF WAUKEE ENGINEERING DEPARTMENT SHALL WITNESS AND APPROVE ALL CLEANING AND TELEVISIONING PRIOR TO PAVING. A COPY OF THE VIDEOS AND A HARD COPY OF THE INSPECTION REPORT SHALL BE PROVIDED TO THE CITY OF WAUKEE ENGINEERING DEPARTMENT. ALL SANITARY SEWER MANHOLES ARE TO BE VACUUM TESTED.
- WATERMANS SHALL BE C-900. SIZE OF WATERMAIN AS SHOWN ON PLANS.
- THRUST BLOCKS SHALL BE INSTALLED AS REQUIRED AND SHALL BE CONSIDERED INCIDENTAL TO WATERMAIN CONSTRUCTION.
- PROPOSED WATERMAIN SHALL BE PRESSURE TESTED, BACTERIA TESTED AND CHLORINATED. THE FILLING OF THE WATER MAIN SHALL BE DONE BY THE CITY OF WAUKEE. ANY DISCHARGE FROM THE WATERMAIN SHALL BE DECHLORINATED.
- TRACER WIRE SHALL BE ADDED TO ALL WATER MAIN, AND BROUGHT TO THE SURFACE AT EVERY HYDRANT.
- ALL HYDRANTS WILL IMMEDIATELY BE COVERED WITH A BLACK PLASTIC BAG (OR EQUIVALENT) ONCE THE HYDRANT IS INSTALLED. THE CITY OF WAUKEE WILL NOTIFY THE CONTRACTOR WHEN THE BAGS CAN BE REMOVED.
- THE MINIMUM HYDRANT LEAD SHALL BE 3.5 FEET.
- FIRE HYDRANT ASSEMBLY SHALL INCLUDE THE TEE, BRANCH, VALVE, HYDRANT, A STORZ FITTING, AND A LOCATOR BOX INCLUDING ANY RELOCATED HYDRANTS. ANY HYDRANT AND VALVE BOX EXTENSIONS DUE TO EXTRA DEPTH SHALL BE CONSIDERED INCIDENTAL.

## SHEET INDEX:

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| C2.1      | GRADING PLAN           |
| C3.1-C3.9 | SANITARY AND WATERMAIN |
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## PROPERTY DESCRIPTION:

(WARRANTY DEED BOOK 2015, PAGE 16065)

BEGINNING AT A POINT BEING 454.7 FEET N 0° 00' OF THE SOUTHEAST CORNER OF SECTION 33, THENCE S 89° 59' W 968.2 FEET, THENCE N 0° 06' E 318.0 FEET, THENCE N 65° 16' E 363.6 FEET, THENCE N 0° 06' E 400 FEET, THENCE N 89° 59' E 636.7 FEET, THENCE S 0° 00' ALONG THE EAST LINE OF THE SE 1/4 OF SECTION 33 AND ALONG THE CENTERLINE OF EAST ROAD 870.0 FEET TO THE POINT OF BEGINNING, ALL OF SAID PARCEL BEING IN THE SE 1/4 OF SECTION 33, TOWNSHIP 79 NORTH, RANGE 26 WEST OF THE 5TH P.M., DALLAS COUNTY, IOWA AND BEING IN AND FORMING A PART OF THE TOWN OF WAUKEE, DALLAS COUNTY, IOWA. SUBJECT TO AN EASEMENT FOR PUBLIC HIGHWAY ON THE EAST 33.0 FEET THEREOF, AND EXCEPT THE FOLLOWING DESCRIBED REAL ESTATE: BEGINNING AT A POINT 454.7 FEET NORTH 0° 00' AND 627.2 FEET SOUTH 89° 59' WEST OF THE SOUTHEAST CORNER OF SECTION 33, TOWNSHIP 79 NORTH, RANGE 26 WEST OF THE 5TH P.M., CITY OF WAUKEE, DALLAS COUNTY, IOWA, THENCE SOUTH 89° 59' WEST 341.0 FEET; THENCE NORTH 0° 06' EAST 318.0 FEET; THENCE NORTH 65° 16' EAST 96.4'; THENCE SOUTH 42° 55' EAST 322.52 FEET; THENCE SOUTH 15° 15' EAST 126.49 FEET TO THE POINT OF BEGINNING, ALL OF SAID DESCRIBED PARCEL BEING IN THE SOUTHEAST QUARTER OF THE SOUTHEAST QUARTER (SE 1/4 SE 1/4) OF SECTION 33, TOWNSHIP 79 NORTH, RANGE 26 WEST OF THE 5TH P.M., IN THE CITY OF WAUKEE, DALLAS COUNTY, IOWA, AND SAID PARCEL CONTAINS APPROXIMATELY 1.94 ACRES.

ADDRESS:  
1010 WARRIOR LANE  
WAUKEE, IOWA 50263-9501

OWNER:  
M & R HOLDINGS  
15602 WILDEN DRIVE  
URBANDALE, IOWA 50323  
PH: (515) 306-8090

DEVELOPER:  
M & R HOLDINGS  
15602 WILDEN DRIVE  
URBANDALE, IOWA 50323  
PH: (515) 306-8090

ENGINEER / PROJECT MANAGER:  
BISHOP ENGINEERING  
ATTN: DAVID BENTZ  
3501 104TH STREET  
URBANDALE, IA 50322  
PH: (515) 276-0467

PROPERTY AREA:  
13.78 ACRES MORE OR LESS

ZONING:  
R-1 SINGLE FAMILY RESIDENTIAL DISTRICT  
MINIMUM LOT SIZE: 10,000SF  
MINIMUM LOT WIDTH: 80FT  
FRONT YARD SETBACK: 30FT  
REAR YARD SETBACK: 30FT  
TOTAL SIDE YARD: 15FT COMBINED (FTF MINIMUM ONE SIDE)

DISTURBED AREA:  
TOTAL DISTURBED AREA= 10.2 ACRES MORE OR LESS

## BENCHMARK:

BM #1:  
HYDRANT 90 FEET NORTHEAST OF SITE ON  
EAST SIDE OF WARRIOR LANE  
ELEVATION = 1027.86 (NAVD 88 DATUM)

## UTILITY MAPS PROVIDED BY:

- CITY OF WAUKEE GIS DEPARTMENT



UTILITY NOTE:  
THE LOCATION OF THE UTILITIES INDICATED ON THE PLANS HAVING BEEN TAKEN FROM THE FIELD SURVEY, EXISTING PUBLIC RECORDS, AND PLANS PROVIDED BY OTHERS. SURFACE UTILITY LOCATIONS HAVE BEEN FIELD LOCATED BY BISHOP ENGINEERING. UNLESS OTHERWISE NOTED, ALL UNDERGROUND UTILITY LOCATIONS ARE APPROXIMATE LOCATIONS ONLY. BISHOP ENGINEERING DOES NOT GUARANTEE THE UNDERGROUND LOCATION OF ANY UTILITIES SHOWN. IT SHALL BE THE DUTY OF THE CONTRACTOR TO DETERMINE THE LOCATION AND DEPTH OF ANY UNDERGROUND UTILITIES SHOWN AND IF ANY ADDITIONAL UTILITIES, OTHER THAN THOSE SHOWN ON THE PLANS, MAY BE PRESENT, A REQUEST WAS MADE TO IOWA ONE CALL FOR UTILITY PROVIDERS TO VERIFY, LOCATE, AND MARK THEIR UTILITIES IN THE FIELD.

## UTILITY NOTES (CONTINUED):

- ANY VALVE BOX EXTENSIONS DUE TO EXTRA DEPTH SHALL BE CONSIDERED INCIDENTAL.
- ANY AND ALL BENDS SHALL BE CONSIDERED INCIDENTAL.
- ALL UTILITIES SHALL BE TESTED TO ANY AND ALL CITY STANDARDS. FURTHERMORE THE CITY OF WAUKEE SHALL WITNESS ALL TESTING.
- CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE TIE-IN OF ALL EXISTING UTILITIES WITH THE CITY OF WAUKEE ENGINEERING DEPARTMENT.
- ALL STRUCTURES CALLED OUT AS "MODIFIED" SHALL BE ENGINEERED BY PRECASTER TO ENSURE STRUCTURAL STABILITY. MODIFICATIONS TO STANDARD STRUCTURES SHALL BE CONSIDERED INCIDENTAL.
- ALL STRUCTURES SIZES CALLED OUT ON PLANS ARE INSIDE WALL DIMENSIONS.
- SANITARY CONNECTIONS TO EXISTING SANITARY SEWER MANHOLE SHALL BE CORE DRILLED AND USE A LINK SEAL.

## SOILS REPORT NOTES:

- REFERENCE SOILS REPORT AND ALL ADDENDUMS PREPARED BY CONSTRUCTION MATERIALS TESTING FOR ADDITIONAL SOILS INFORMATION INCLUDING, BUT NOT LIMITED TO, SUBGRADE INFORMATION, PAVEMENT THICKNESS RECOMMENDATIONS, TESTING REQUIREMENTS, AND ANY POSSIBLE OVER EXCAVATION DUE TO POOR SOILS.

## UTILITY CONFLICT NOTES:

- UTILITY CONFLICTS MAY EXIST ACROSS THE SITE WITH NEW UTILITIES, GRADING, PAVING ETC. MOST UTILITY CONFLICTS HAVE BEEN CALLED OUT FOR CONTRACTOR CONVENIENCE.
- CONTRACTOR IS RESPONSIBLE FOR ALL UTILITY CONFLICTS THAT ARE EITHER CALLED OUT ON THE PLANS OR THAT CAN BE SEEN ON THE PLANS BETWEEN AND EXISTING UTILITY AND PROPOSED CONSTRUCTION.
- CONTRACTOR SHALL FOLLOW THE IOWA DNR WATER SUPPLY ENGINEERING SECTION ALTERNATIVE SOLUTIONS TO 567 IAC 43.3(2)(A)(3) REQUIREMENTS FOR SEWER AND WATER MAIN CROSSINGS.

## WETLAND NOTES:

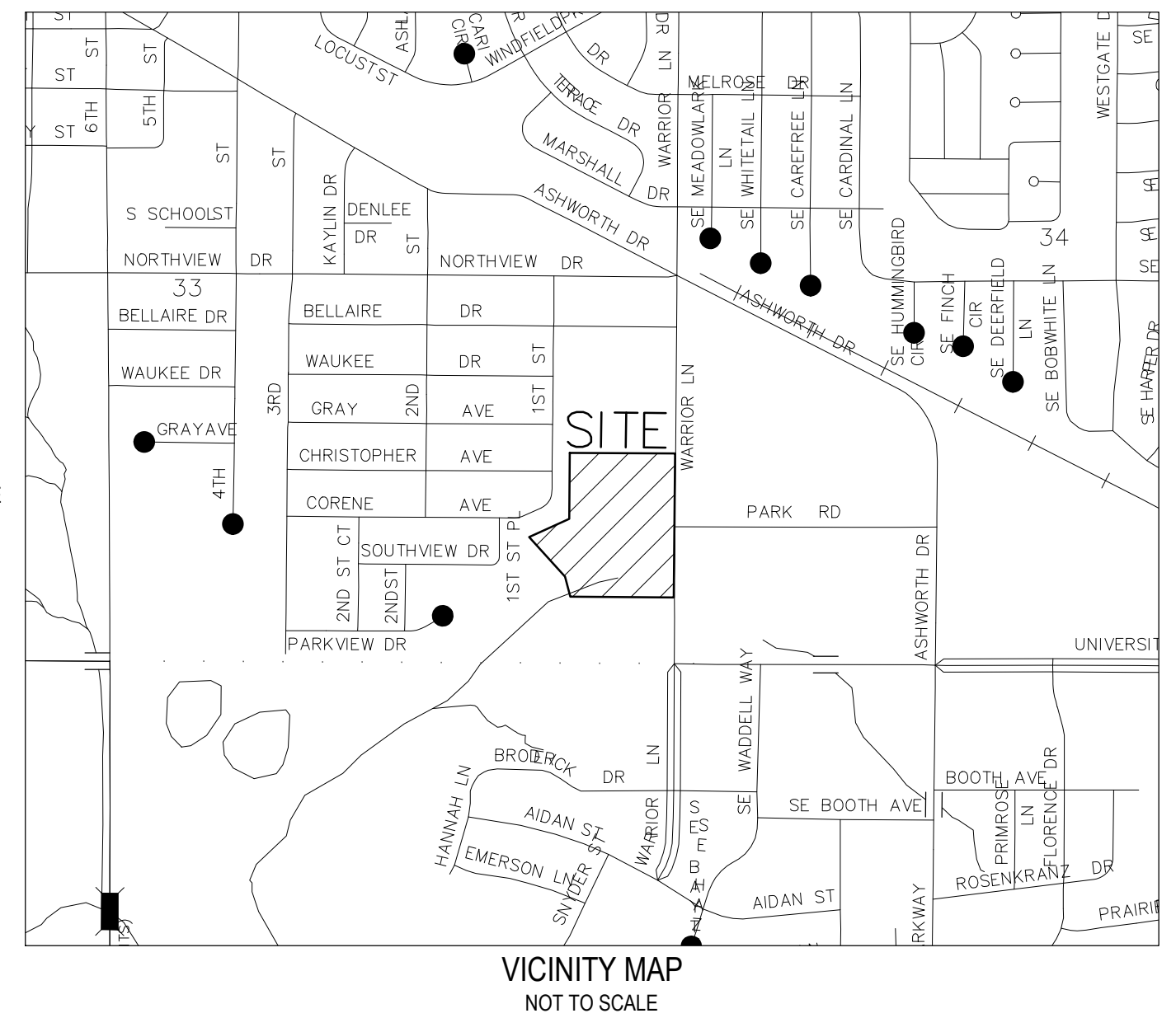
- A WETLAND INVESTIGATION REPORT WAS PREPARED BY GRIGGS ENVIRONMENTAL STRATEGIES, INC. (GES PROJECT #15-640).
- THE WETLAND INVESTIGATION REPORT AND JOINT APPLICATION WAS SUBMITTED TO THE ARMY CORPS OF ENGINEERS ON MARCH 3, 2016. RESPONSE WILL BE PROVIDED ONCE RECEIVED.

## AS-BUILT NOTES:

- CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS INVOLVED WITH AS-BUILTS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING BISHOP ENGINEERING WITH AS-BUILTS OF ALL UTILITIES, INCLUDING THE DEPTH AND LOCATION OF SERVICES.
- CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR PROVIDING BISHOP ENGINEERING WITH A PROFESSIONALLY CERTIFIED AS-BUILT GRADING PLAN UPON COMPLETION OF ALL PROPOSED IMPROVEMENTS, INCLUDING ALL GRADING ACTIVITY.
- BISHOP ENGINEERING SHALL PROVIDE ALL SAID AS-BUILTS TO THE CITY OF WAUKEE ENGINEERING DEPARTMENT, AS PROVIDED BY CONTRACTOR.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR AS-BUILT TOPO OF DETENTION POND & DETENTION POND STORM SEWER. CONTRACTOR SHALL CONTACT BISHOP ENGINEERING (DAVID BENTZ AT 515-276-0467) TO PERFORM SAID AS-BUILT SURVEY. IF DETENTION PONDS HAVE BEEN GRADED INCORRECTLY, CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SUBSEQUENT AS-BUILT TOPO SURVEYS UNTIL ISSUES HAVE BEEN RECTIFIED. CONTRACTOR SHALL HAVE ANY AND ALL DETENTION PONDS SURVEYED PRIOR TO SEEDING.

## QUANTITY ESTIMATE:

<b>SANITARY SEWER:</b>	10 EA	<b>STORM SEWER (CONTINUED):</b>	4 EA
SANITARY MANHOLE	1LS	SW-505	2 EA
ADJUST MANHOLE TO GRADE	1259 LF	SW-506	1 EA
8" SANITARY SEWER (PVC)	37 LF	72" X 72" SW-513 MODIFIED (INCLD WEIR WALL)	1 EA
8" SANITARY SEWER ENCASED	70 LF	24" NYLOPLAST BASIN	1 EA
8" SANITARY SEWER (DUCTILE IRON)	23 EA	CLEAN OUT	1 EA
4" SANITARY SEWER SERVICE STUB		8" A2000	164 LF
		8" PERFORATED A2000	608 LF
		6" SUBDRAIN	471 LF
<b>WATER MAIN:</b>	1,943 LF	15" RCP	29 LF
8" WATER MAIN	7 EA	18" RCP	756 LF
8" VALVE	1 EA	18" CMP	85 LF
12" VALVE	2 EA	24" CMP	146 LF
12" X 8" TEE	2 EA	30" RCP	311 LF
8" X 8" TEE	6 EA	48" RCP	143 LF
6" HYDRANT ASSEMBLY	5 EA	18" FES W/TRASH GUARD INCLD.	4 EA
45" BEND	4 EA	30" FES W/TRASH GUARD INCLD.	1 EA
22.5" BEND	3 EA	48" FES W/TRASH GUARD INCLD.	1 EA
11.25" BEND	22 EA	24" CMP FES	2 EA
WATER SERVICE, 1" COPPER	1 EA	STORM SEWER SERVICE, 4" PVC	20 EA
WATER SERVICE, 1.5" COPPER		RIP-RAP, CLASS D	800 TON
<b>WATER MAIN COST SHARE ITEMS</b>	848 LF	<b>PAVING:</b>	6950 SY
12" WATER MAIN	40 LF	SUBGRADE PREPARATION	50 SY
DIRECTION BORE 12" WATER MAIN	1 EA	PAVEMENT, PCC, 7" REINFORCED	5,225 SY
12" X 12" T.S.V.	4 EA	PAVEMENT, PCC, 7"	854 SY
6" HYDRANT ASSEMBLY	1 EA	TRAIL OR WALK, PCC, 5"	1LS
12" X 8" TEE	2 EA	DETECTABLE WARNING PANELS	1LS
12" VALVE	1 EA	<b>MISCELLANEOUS ITEMS:</b>	
BLOW OFF ASSEMBLY	1 EA	MOBILIZATION	1LS
		CLEARING & GRUBBING	1LS
		GRADING / EXCAVATION	1LS
		STRIP & STOCKPILE TOPSOIL	1LS
		RE-SFREAD TOPSOIL (8" DEPTH)	1LS
		EROSION CONTROL	1LS
		SEEDING	1LS
		LANDSCAPING	1LS
		LIGHT POLES	1LS



## ABBREVIATIONS:

AC ACRES  
ASPH ASPHALT  
BK BOOK  
CONC CONCRETE  
D DEEDED DISTANCE  
EX EXISTING  
ENCL ENCLOSURE  
FF FINISHED FLOOR  
FL FLOW LINE  
FRAC FRACTIONAL  
M MEASURED DISTANCE  
MH MANHOLE  
OPC ORANGE PLASTIC CAP  
P PLATTED DISTANCE  
PG PAGE  
POB POINT OF BEGINNING  
POC POINT OF COMMENCEMENT  
PRA PREVIOUSLY RECORDED AS  
PUE PUBLIC UTILITY EASEMENT  
ROW RIGHT OF WAY  
RPC RED PLASTIC CAP  
SF SQUARE FEET  
SAN SANITARY  
TYP TYPICAL  
YPC YELLOW PLASTIC CAP  
N NORTH  
S SOUTH  
E EAST  
W WEST

## LEGEND:

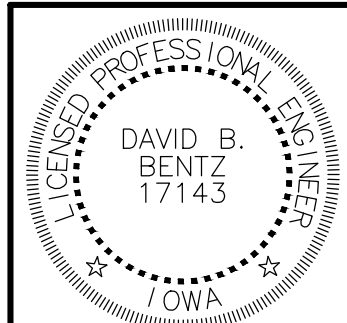
— SAN — SANITARY SEWER  
— ST — STORM SEWER  
— W — WATER LINE  
— G — GAS LINE  
— U/E — UNDERGROUND ELECTRIC  
— O/E — OVERHEAD ELECTRIC  
— TELE — TELEPHONE LINE  
— F/O — FIBER OPTIC  
— CATV — CABLE TV

⊕ STORM MANHOLE  
⊕ CURB INTAKE  
⊕ SURFACE INTAKE  
⊕ FLARED END SECTION  
⊕ SANITARY MANHOLE  
⊕ CLEANOUT  
⊕ FIRE HYDRANT  
⊕ SPRINKLER  
⊕ IRRIGATION CONTROL VALVE  
⊕ WATER MANHOLE  
⊕ WELL  
⊕ WATER VALVE  
⊕ WATER SHUT OFF  
⊕ YARD HYDRANT  
⊕ ELECTRIC MANHOLE  
⊕ ELECTRIC METER  
⊕ ELECTRIC RISER  
⊕ ELECTRIC VAULT  
⊕ POWER POLE  
⊕ TRANSFORMER POLE  
⊕ LIGHT POLE  
⊕ ELECTRIC JUNCTION BOX  
⊕ ELECTRIC PANEL  
⊕ TRANSFORMER  
⊕ GROUND LIGHT  
⊕ GUY WIRE  
⊕ ELECTRIC HANDHOLE  
⊕ GAS METER  
⊕ GAS VALVE  
⊕ AIR CONDITIONING UNIT  
⊕ TELEPHONE RISER  
⊕ TELEPHONE VAULT  
⊕ TELEPHONE MANHOLE  
⊕ TRAFFIC SIGNAL MANHOLE  
⊕ FIBER OPTIC RISER  
⊕ FIBER OPTIC FAULT  
⊕ CABLE TV RISER  
⊕ SIGN  
⊕ DENOTES NUMBER OF PARKING STALLS  
⊕ PROPERTY CORNER - FOUND AS NOTED  
⊕ PROPERTY CORNER- PLACED 3/4" IRON PIPE WITH YELLOW PLASTIC CAP ID#14775  
⊕ SECTION CORNER - FOUND AS NOTED

**Bishop Engineering**  
"Planning Your Successful Development"  
3501 104th Street  
Des Moines, Iowa 50322-3825  
Phone: (515) 276-0467 Fax: (515) 276-0217  
Established 1959  
Civil Engineering & Land Surveying

**BRANDON'S RESERVE AS BUILT**  
**1010 WARRIOR LANE, WAUKEE IA**  
**COVER SHEET AS BUILT**

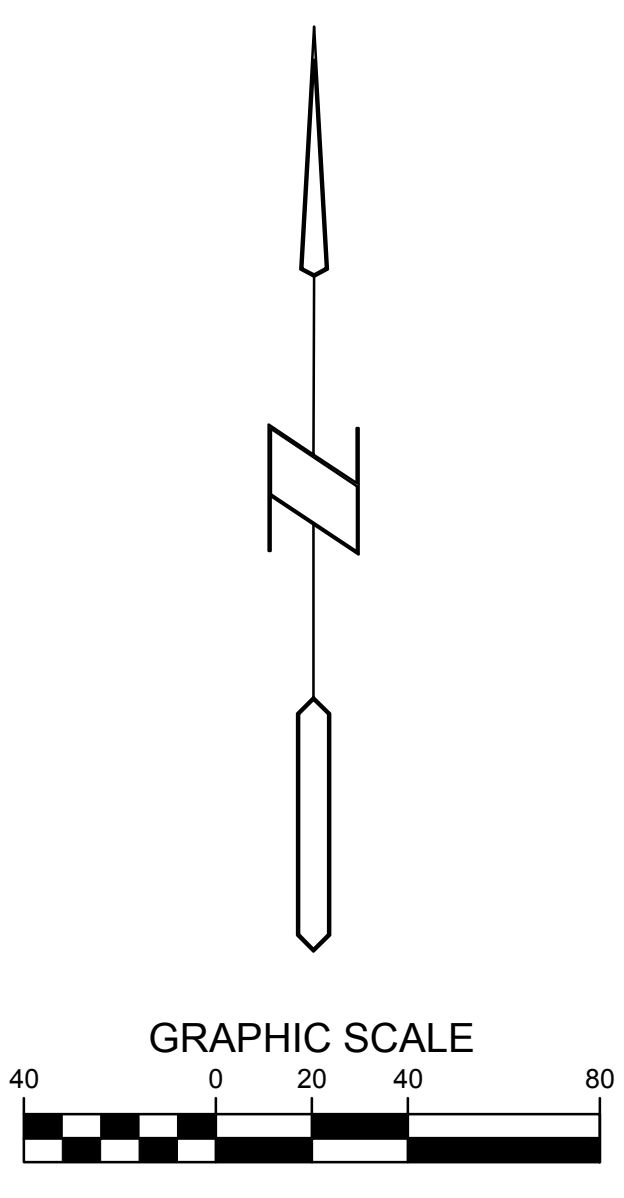
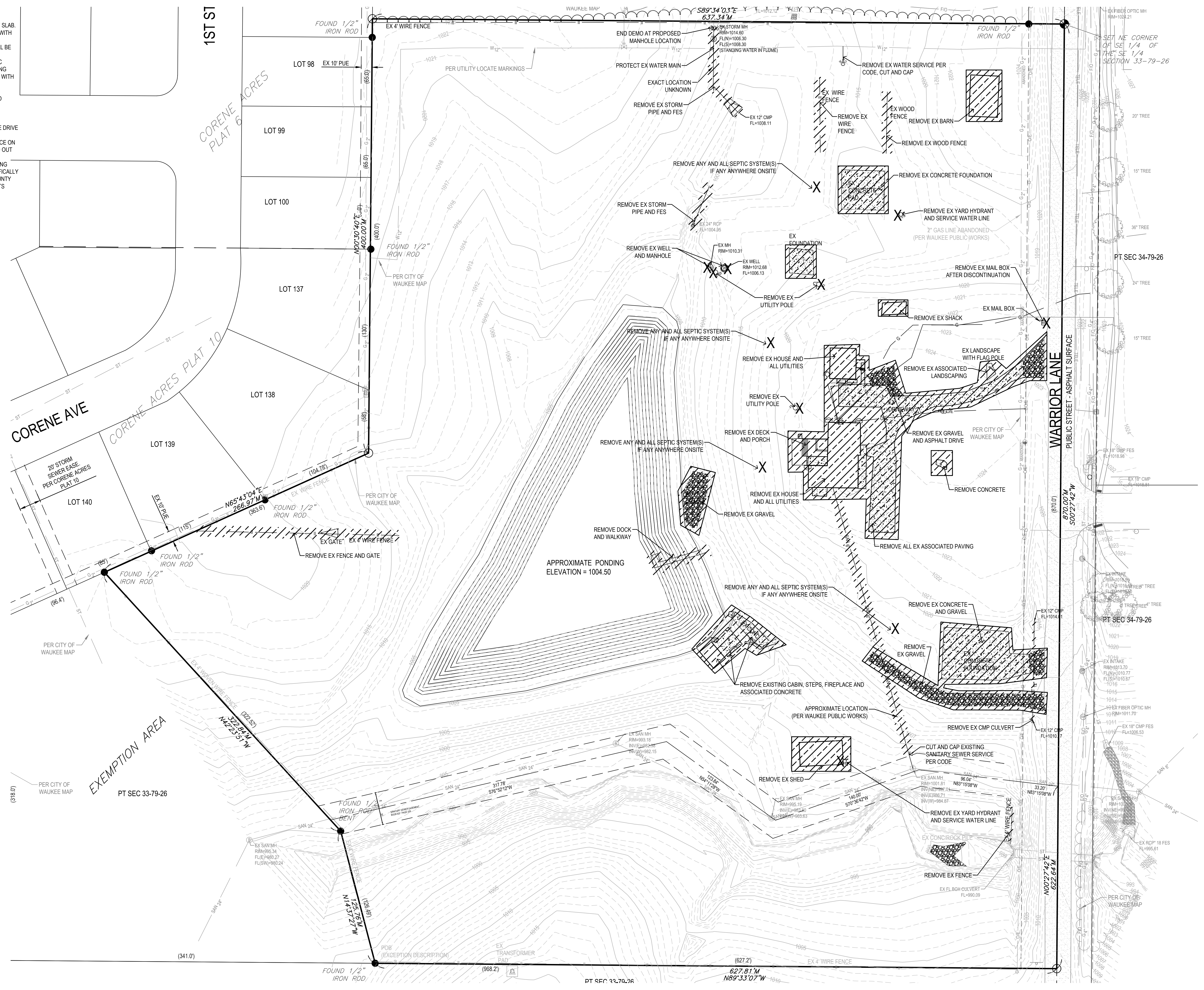
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DRAWN BY:  
EAV  
CHECKED BY:  
DDB  
REVISION DATE:  
2-19-16 1st SUBMITTAL  
3-14-16 2ND SUBMITTAL  
3-30-16 3rd SUBMITTAL  
4-11-16  
6-30-16 C3.6 WATER REV  
7-07-16 C4.3 MAILPAD REV  
7-20-16 MULTIPLE REV.  
12-7-16 AS BUILT  
PROJECT NUMBER:  
**150351**  
SHEET NUMBER:  
**C0.1**



I HEREBY CERTIFY THAT THIS ENGINEERING DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF IOWA.  
SIGNED: DAVID B. BENTZ, PE. 17143 DATE: 12-07-2016  
LICENSE RENEWAL DATE: DEC. 31, 2017 PAGES OR SHEETS COVERED BY THIS SEAL: C0.1-C7.1

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- DEMO NOTES:**
1. SAWCUT & REMOVE ALL PAVEMENT TO FULL DEPTH OF SLAB.
  2. PROTECT ALL TREES NOT CALLED OUT FOR REMOVAL WITH ORANGE CONSTRUCTION FENCE AT THE DRIP LINE.
  3. PAVEMENT STRIPING CALLED OUT FOR REMOVAL SHALL BE SANDBLASTED. NO GRINDING WILL BE ALLOWED.
  4. CONTRACTOR SHALL REMOVE AND DISPOSE OF SEPTIC SYSTEM AND ANY UTILITY SERVICES FROM ANY EXISTING HOUSE. SAID CONTRACTOR SHALL ALSO COORDINATE WITH UTILITY COMPANIES ON REMOVAL OF UTILITY LINES. COORDINATION FOR REMOVAL OF SEPTIC SYSTEM IS THROUGH DALLAS COUNTY. BACKFILLING OF REMOVED FOUNDATIONS, UTILITIES, ETC. SHALL ADHERE TO THE RECOMMENDATIONS IN THE GEOTECHNICAL REPORT.
  5. CONTRACTOR MAY REUSE GRAVEL ON SITE FOR SITE ENTRANCE DRIVE IF GRAVEL MEETS SWPPP ENTRANCE DRIVE GRAVEL REQUIREMENTS.
  6. CONTRACTOR SHALL REMOVE ANY AND ALL FARM FENCE ON PROPERTY INCLUDING ANY NOT SPECIFICALLY CALLED OUT OR INDICATED ON PLAN.
  7. CONTRACTOR SHALL ABANDONED ANY AND ALL EXISTING WELLS ON THE PROPERTY INCLUDING ANY NOT SPECIFICALLY CALLED OUT OR INDICATED ON PLAN PER DALLAS COUNTY ENVIRONMENTAL HEALTH DEPARTMENT REQUIREMENTS



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**BRANDON'S RESERVE AS BUILT**  
**1010 WARRIOR LANE, WAUKEE IA**  
**DEMO PLAN**

REFERENCE NUMBER:	
DRAWN BY:	EAV
CHECKED BY:	DBB
REVISION DATE:	2-19-16 1ST SUBMITTAL 3-14-16 2ND SUBMITTAL 3-30-16 3rd SUBMITTAL 4-11-16 6-30-16 C3.6 WATER REV 7-07-16 C4.3 MAILPAD REV 7-20-16 MULTIPLE REV. 12-7-16 AS BUILT
PROJECT NUMBER:	150351
SHEET NUMBER:	C0.2



- TOPSOIL NOTES:**
1. STRIP AND STOCKPILE TO MEET GENERAL PERMIT #2 REQUIREMENTS.
  2. RESPREAD TOPSOIL TO A MINIMUM DEPTH OF 8" ON ALL GREEN (NON PAVED) AREAS. IMPORT TOPSOIL AS NECESSARY TO ACHIEVE A MINIMUM DEPTH OF 8".
  3. **TOPSOIL SHALL BE FREE OF ALL ROCK AND DEBRIS LARGER THAN 3/4" IN SIZE.**
  4. TOPSOIL IS DEFINED AS: FERTILE, FRIABLE LOAM, CAPABLE OF SUSTAINING VIGOROUS PLANT GROWTH, FROM WELL DRAINED SITE FREE FROM FLOODING, NOT IN FROZEN OR MUDDY CONDITIONS, REASONABLE FREE FROM SUBSOIL, CLAY LUMPS, ROOTS, GRASS, WEEDS, STONES LARGER THAN 3/4 INCH IN DIAMETER, AND FOREIGN MATTER. ACIDITY RANGE (PH) OF 5.5 TO 7.5, CONTAINING MINIMUM 4 PERCENT AND MAXIMUM 20 PERCENT ORGANIC MATTER.
  5. CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING ALL TOPSOIL REQUIREMENTS OF NPDES GENERAL PERMIT NO. 2 ARE MET.

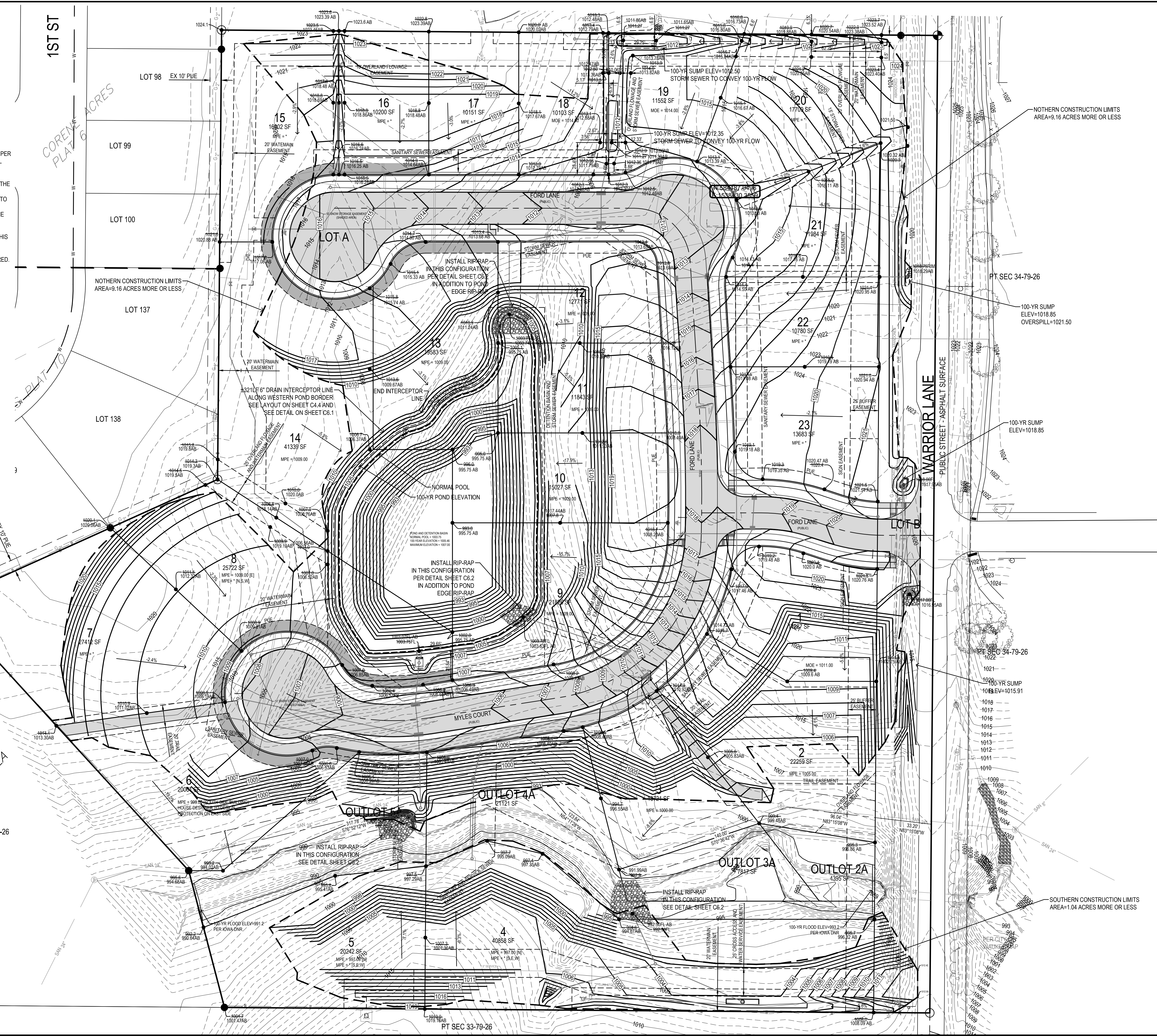
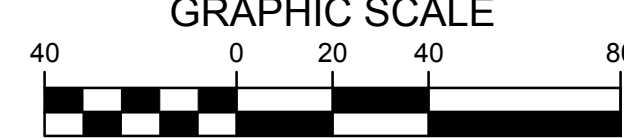
- GRADING NOTES:**
1. CONTRACTOR SHALL CONSTRUCT THE DETENTION POND INCLUDING THE "SHORELINE" PER THE WET DETENTION POND CROSS SECTION DETAIL ON SHEET C6.1. THIS DETAIL SHALL APPLY TO THE FULL PERIMETER OF THE POND.
  2. CONTRACTOR SHALL FOLLOW ALL RECOMMENDATION IN THE GEOTECHNICAL REPORT WHEN PERFORMING ANY AND ALL GRADING WORK. A PDF COPY WILL BE PROVIDED TO THE CONTRACTOR FOR REFERENCE.
  3. APPLICANT SHALL PROVIDE CITY OF WAUKEE WITH A CERTIFIED GRADING PLAN PRIOR TO THE ACCEPTANCE OF THE IMPROVEMENTS.
  4. TWO FOOT OVER EXCAVATION FOR SEDIMENT STORAGE DURING CONSTRUCTION IN THE POND IS NOT SHOWN ON THIS SHEET DUE TO THIS SHEET REFLECTING FINAL GRADES. CONTRACTOR TO OVER EXCAVATE THE POND BY 2 FEET TO ALLOW FOR SEDIMENT STORAGE DURING CONSTRUCTION. CONTRACTOR SHALL CLEAN POND TO GRADE ON THIS SHEET IF THERE IS MORE SEDIMENT IN POND THAN DESIGN AT NO ADDITIONAL COST OWNER PRIOR TO ENDING CONSTRUCTION ACTIVITY.
  5. A CLAY POND LINER IS REQUIRED IN ALL DISTURBED AREA WHERE RETENTION IS DESIRED.

**MINIMUM PROTECTION ELEVATION NOTES:**

1. MINIMUM PROTECTION ELEVATIONS (MPE) ARE FOR REFERENCE ONLY. ALL LOTS, WITH OR WITHOUT MPE'S, SHALL BE REVIEWED FOR CONFORMANCE WITH THE STORMWATER MANAGEMENT PLAN AND GRADING PLAN.
2. THE HOME BUILDER SHALL ENSURE ALL DRAINAGE SWALES ARE MAINTAINED AND/OR PROTECTED AS DESIGNED DURING HOME CONSTRUCTION AS INTENDED IN THE ORIGINAL DESIGN AND APPROVED BY THE CITY.
3. HOME BUILDERS SHALL BE RESPONSIBLE FOR ENSURING POSITIVE DRAINAGE AWAY FROM HOUSE.
4. LOTS WITH MPE'S NOTED WITH AN ASTERISK (\*) DRAIN FROM REAR TO FRONT. HOME BUILDER SHALL BE RESPONSIBLE FOR THE CONVEYANCE OF ALL STORM WATER ACROSS SUBJECT LOT. DRAINAGE SHALL BE CONVEYED AROUND THE SIDES OF THE HOUSE AND TO THE STREET.
5. MPE'S LISTED DO NOT ACCOUNT FOR DRAINAGE THROUGH SIDE YARDS INCLUDING THE OVERTOPPING OF STREET LOW POINTS. THE HOME BUILDER SHALL BE RESPONSIBLE FOR GRADING THE SIDE YARD TO ACCOUNT FOR THE VARYING DEPTH OF FLOW AND ENSURING FLOOD PROTECTION AND POSITIVE DRAINAGE AWAY FROM THE HOUSE.
6. MPE'S PROVIDED ARE BASED ON PROPOSED CONTOURS AND NOT ACTUAL AS-BUILT GRADES. HOME BUILDERS MUST ADJUST MPE'S ACCORDINGLY AND GRADE LOT TO HAVE POSITIVE DRAINAGE TO PROPERTY LINES AND PUBLIC WAYS.
7. LOTS LEFT LOW ON GRADING PLAN ARE INTENDED FOR BASEMENT DIRT TO BE USED AS FILL AROUND HOUSE TO ASSURE POSITIVE DRAINAGE AWAY FROM HOUSE.
8. MPE'S LISTED DO NOT ACCOUNT FOR DEPTH OF SANITARY SERVICE. THE HOME BUILDER SHALL BE RESPONSIBLE FOR VERIFYING THE DEPTH OF THE SERVICES AND SET THE BASEMENT ELEVATION ACCORDINGLY.
9. LOTS WITH MULTIPLE MPE'S ARE NOTED WITH THE DIRECTION THE MPE APPLIES IN BRACKETS. FOR EXAMPLE [N] APPLIES TO THE NORTH SIDE OF THE LOT AND [S] APPLIES TO THE SOUTH SIDE OF THE LOT.

**GRADING LEGEND:**

- EXISTING CONTOUR ——— 150 ———
  - PROPOSED CONTOUR ——— 150 ———
  - FINISHED GROUND ELEVATION ● 150.50
  - FES FLOWLINE ELEVATION ● 150.50FL
  - 150.50G
  - TOP OF WALL ELEVATION ● 150.50TW
  - BOTTOM OF WALL ELEVATION ● 150.50BW
  - EDGE OF WALK ELEVATION ● 150.50EW
  - TOP OF STAIR ELEVATION ● 150.50TS
  - BOTTOM OF STAIR ELEVATION ● 150.50BS
- NOTE: WALL ELEVATIONS SHOWN ON PLAN ARE FINISHED GROUND GRADES AT THE TOP AND BOTTOM OF THE WALL.



1ST ST  
CORELAND ACRES  
PLAY 6

XEMPTION AREA  
PT SEC 33-79-26

NOTHERN CONSTRUCTION LIMITS  
AREA=9.16 ACRES MORE OR LESS

PT SEC 34-79-26

100-YR SUMP  
ELEV=1018.85  
OVERSPILL=1021.50

100-YR SUMP  
ELEV=1018.85

PT SEC 34-79-26

100-YR SUMP  
ELEV=1015.91

SOUTHERN CONSTRUCTION LIMITS  
AREA=1.04 ACRES MORE OR LESS

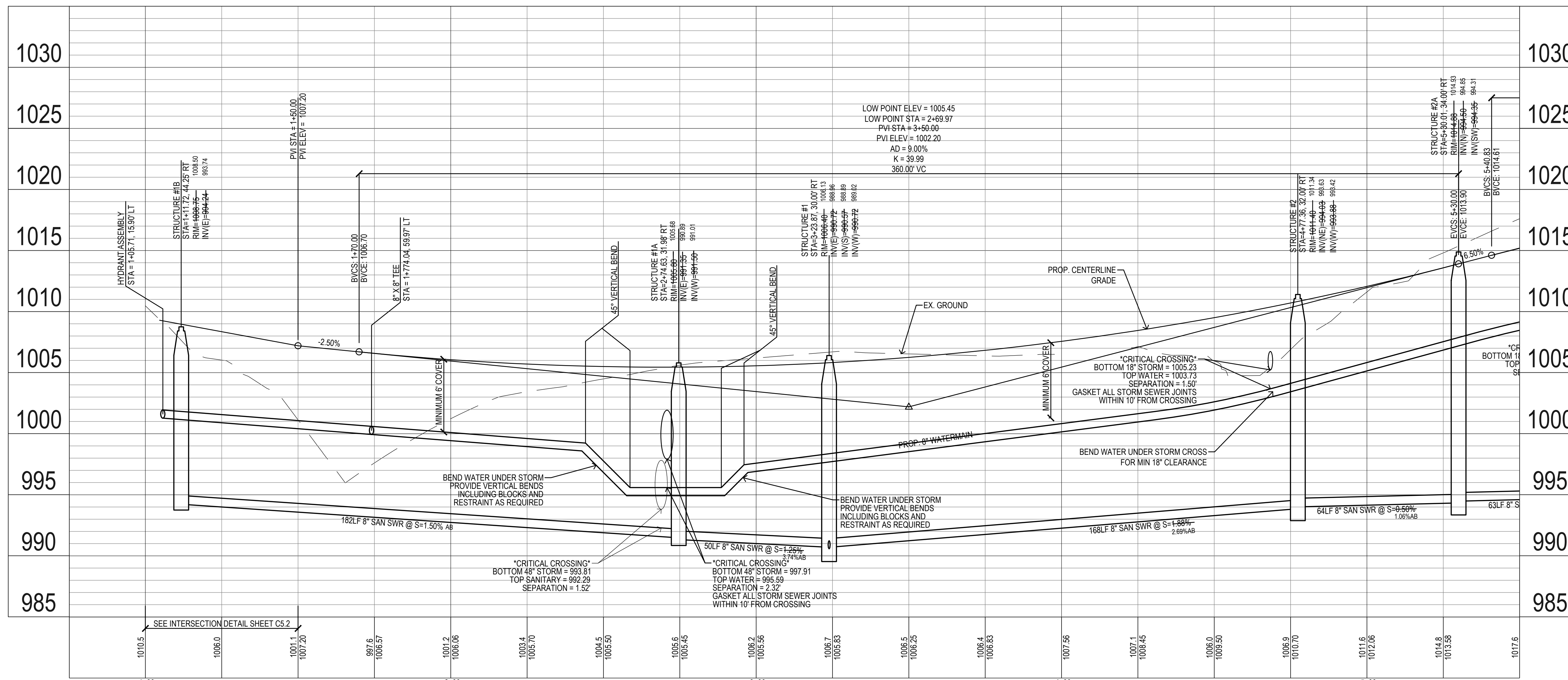
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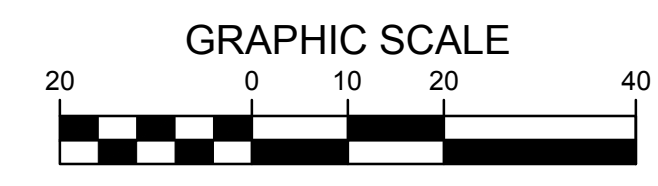
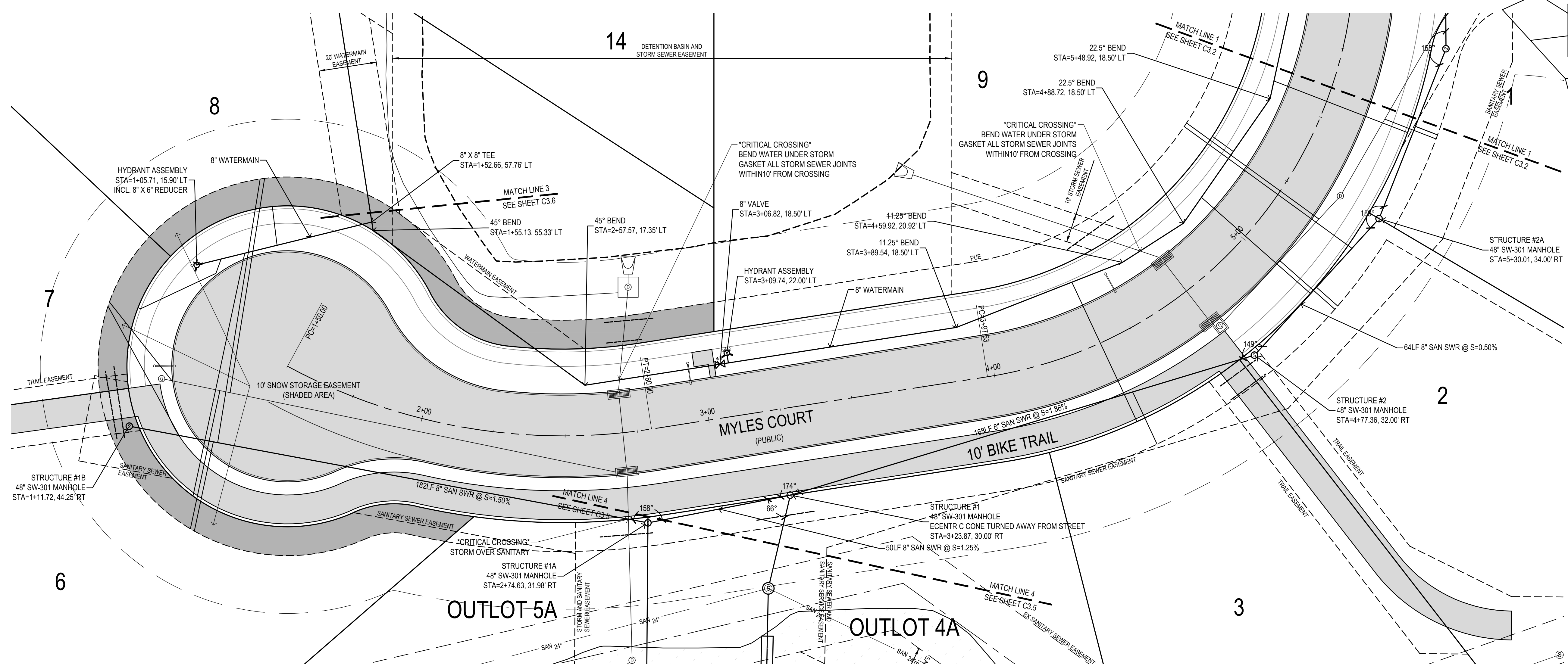
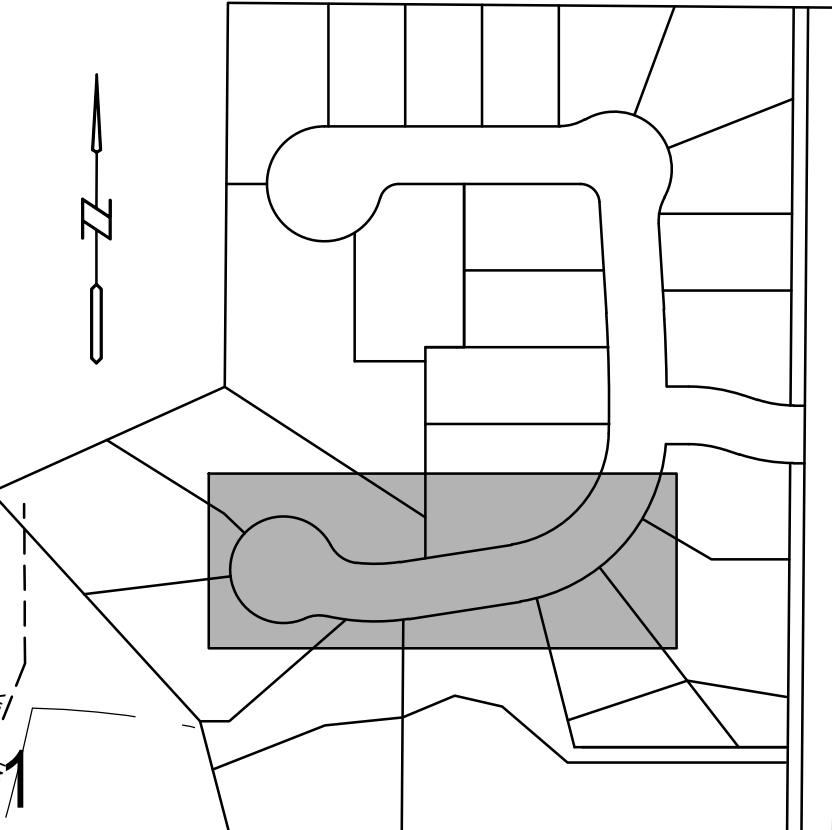
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**1010 WARRIOR LANE, WAUKEE IA**  
**GRADING PLAN**

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PROJECT NUMBER:	150351
SHEET NUMBER:	C2.1

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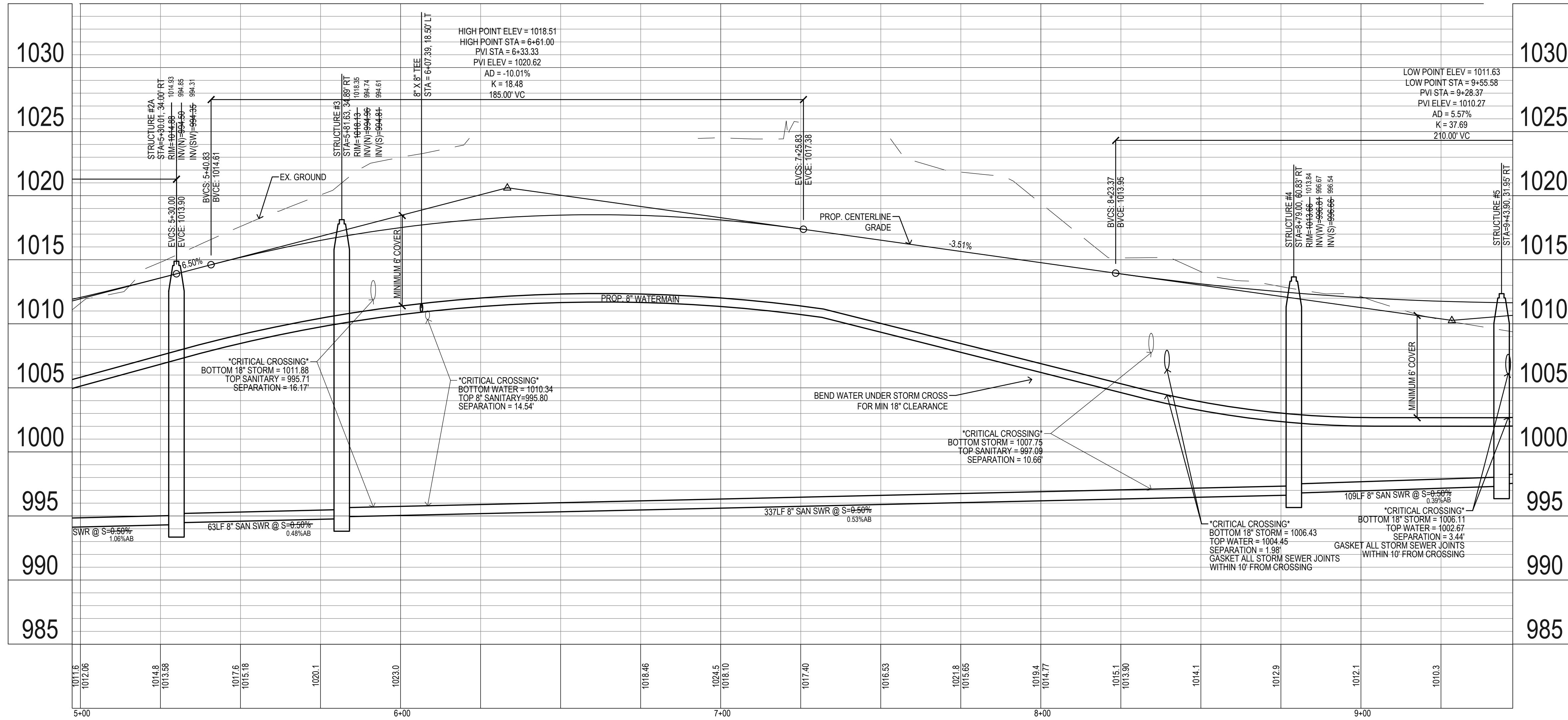
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 1. CONTRACTOR SHALL PROVIDE SANITARY SERVICE RISERS AS NECESSARY ON LOTS. COST SHALL BE INCLUDED IN BASE BID.



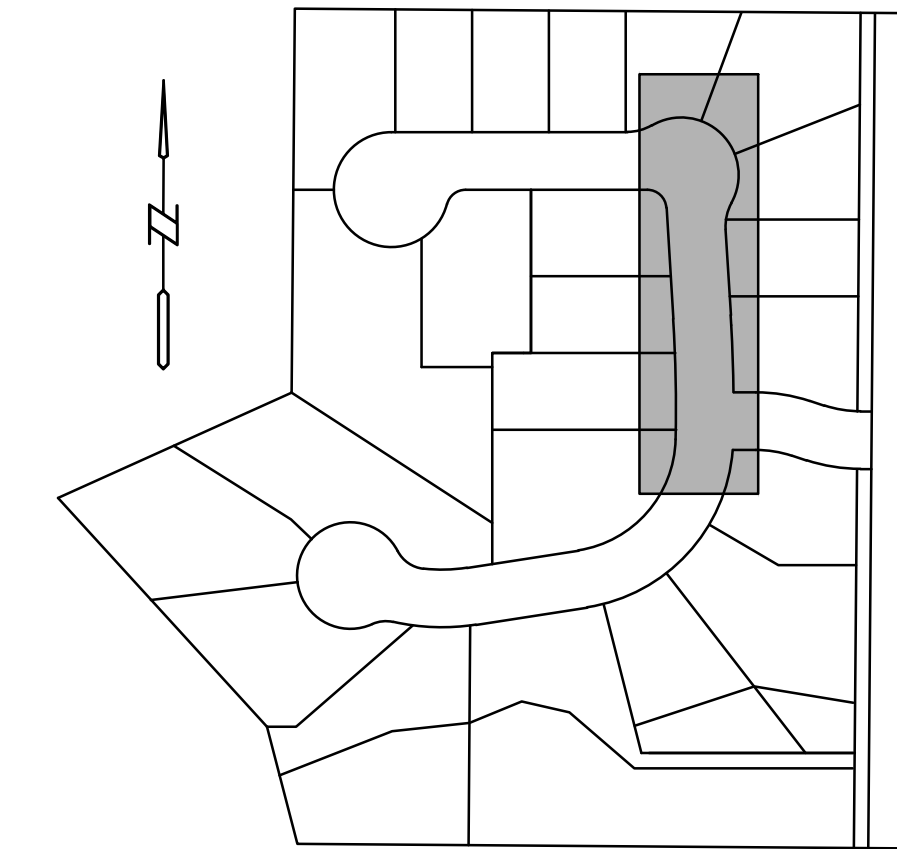
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**WATERMAIN AND SANITARY SEWER**

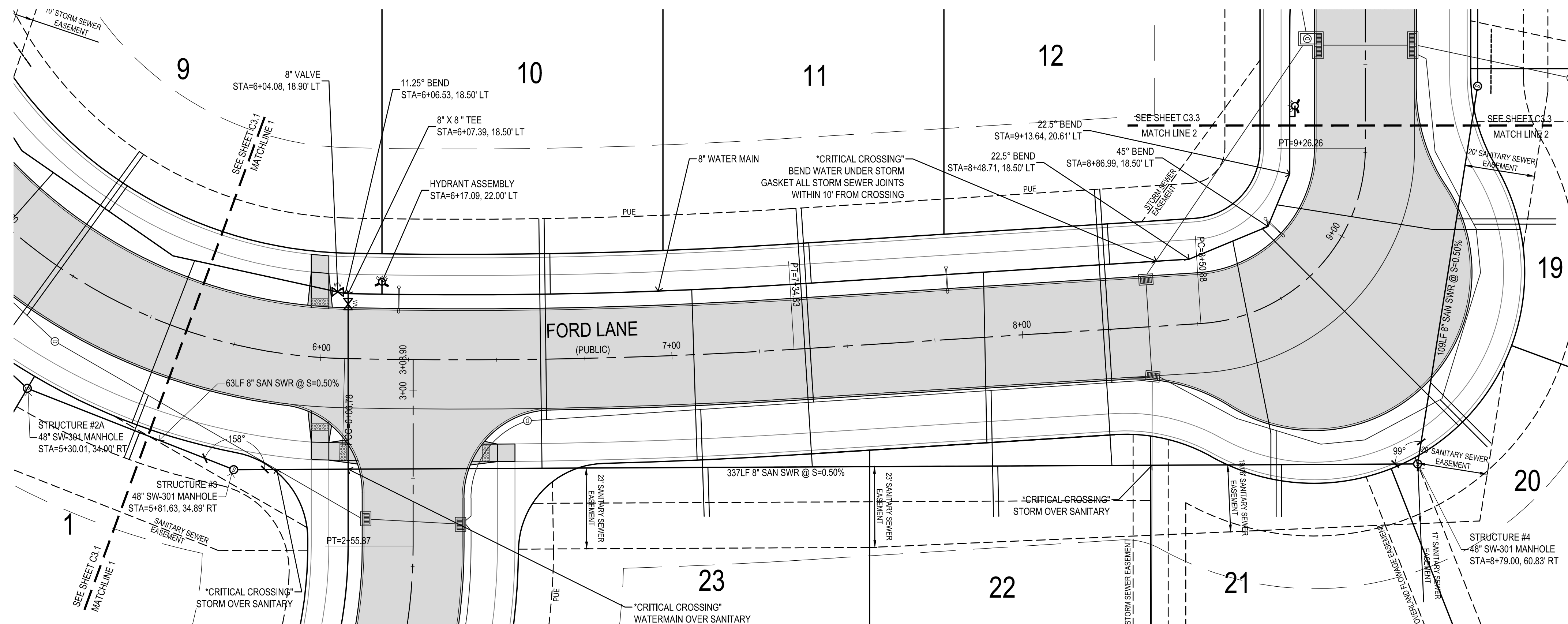
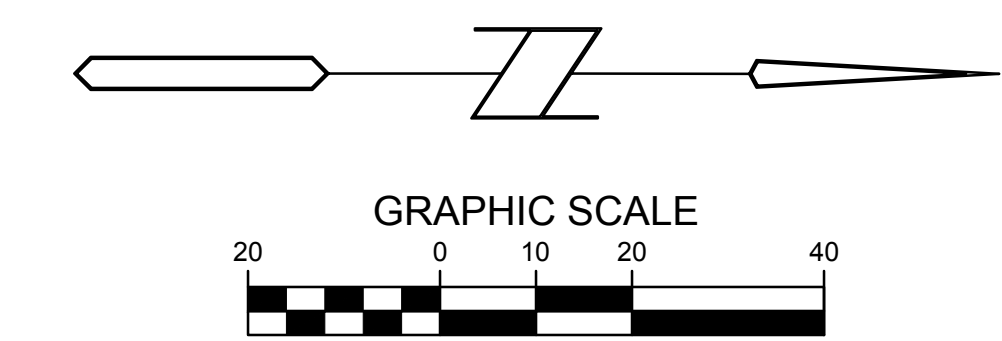
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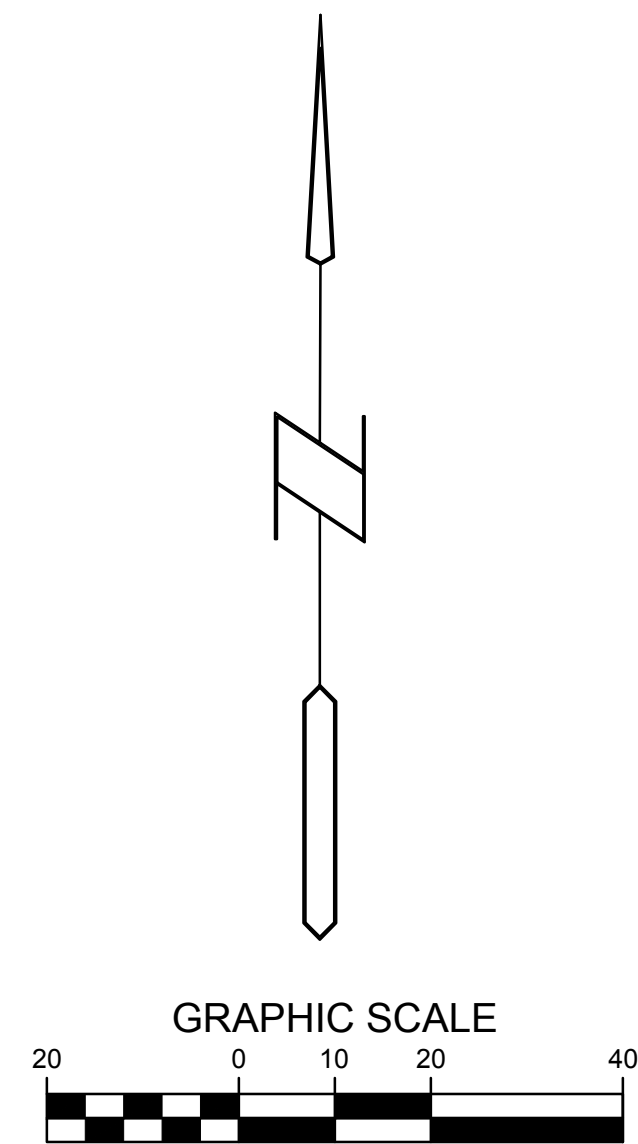
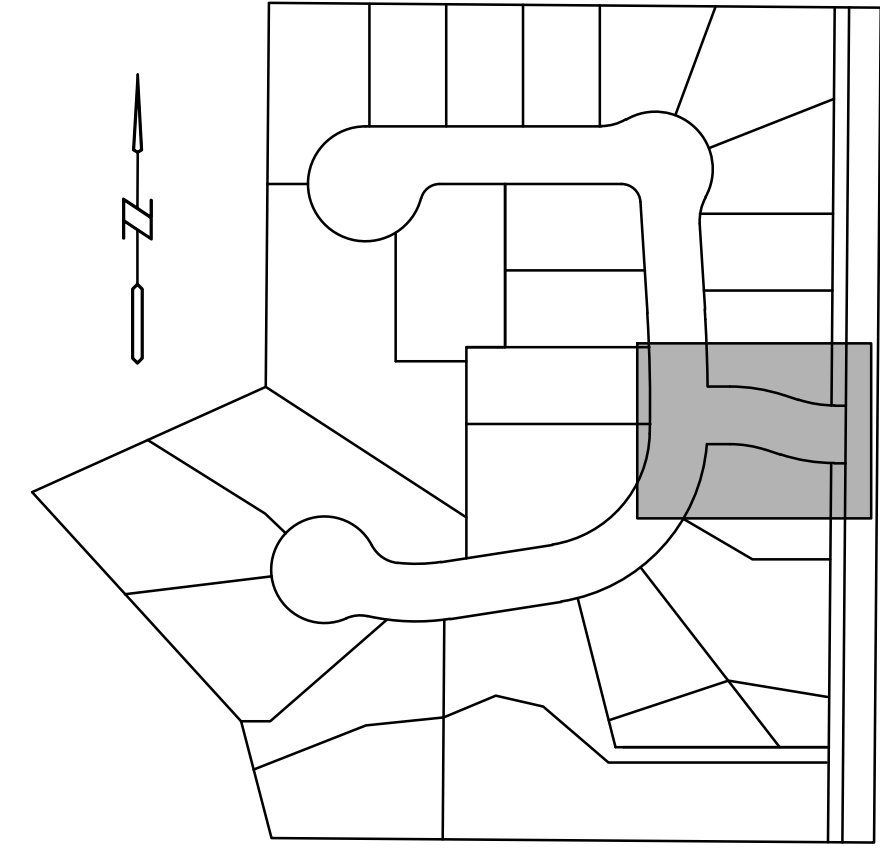
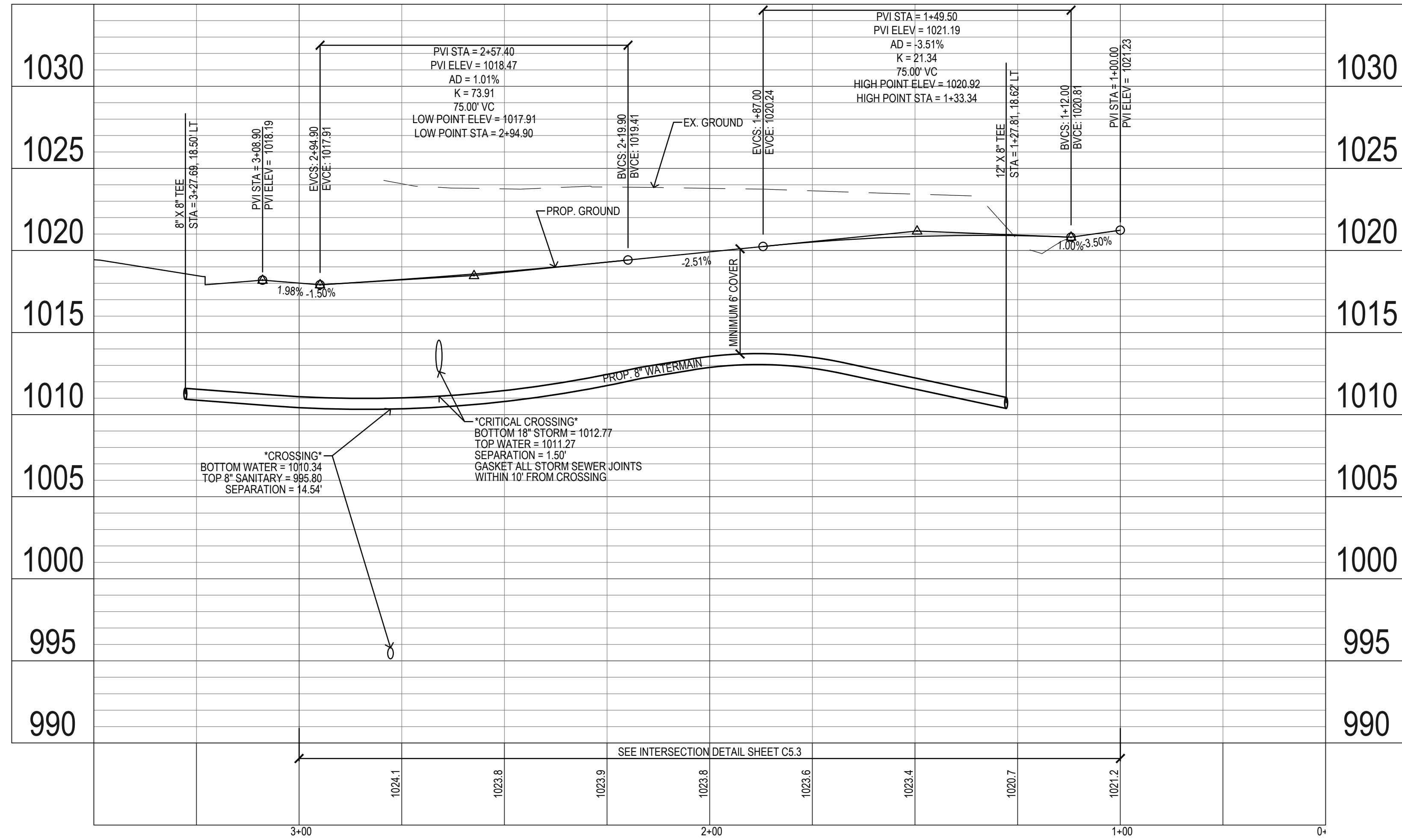
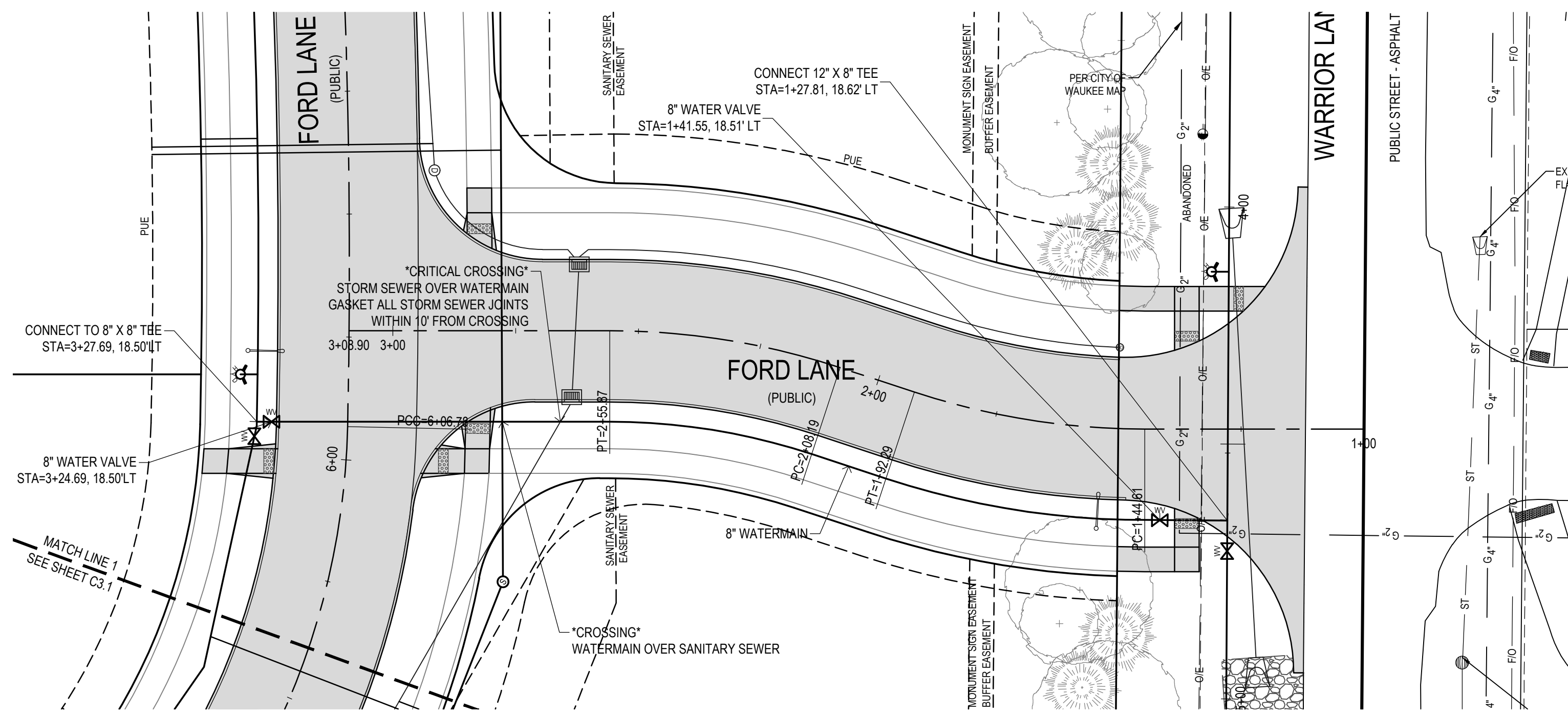
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**WATERMAIN AND SANITARY SEWER**

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REVISION DATE:

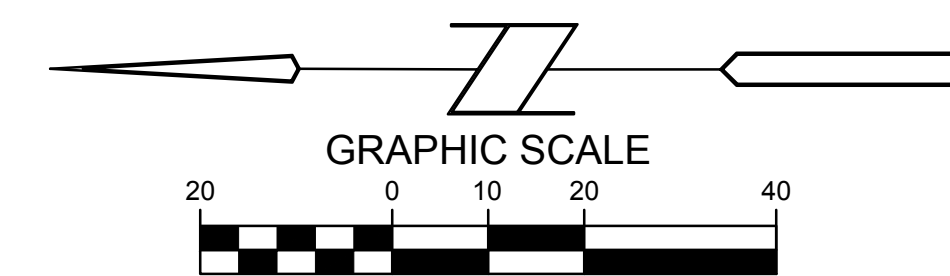
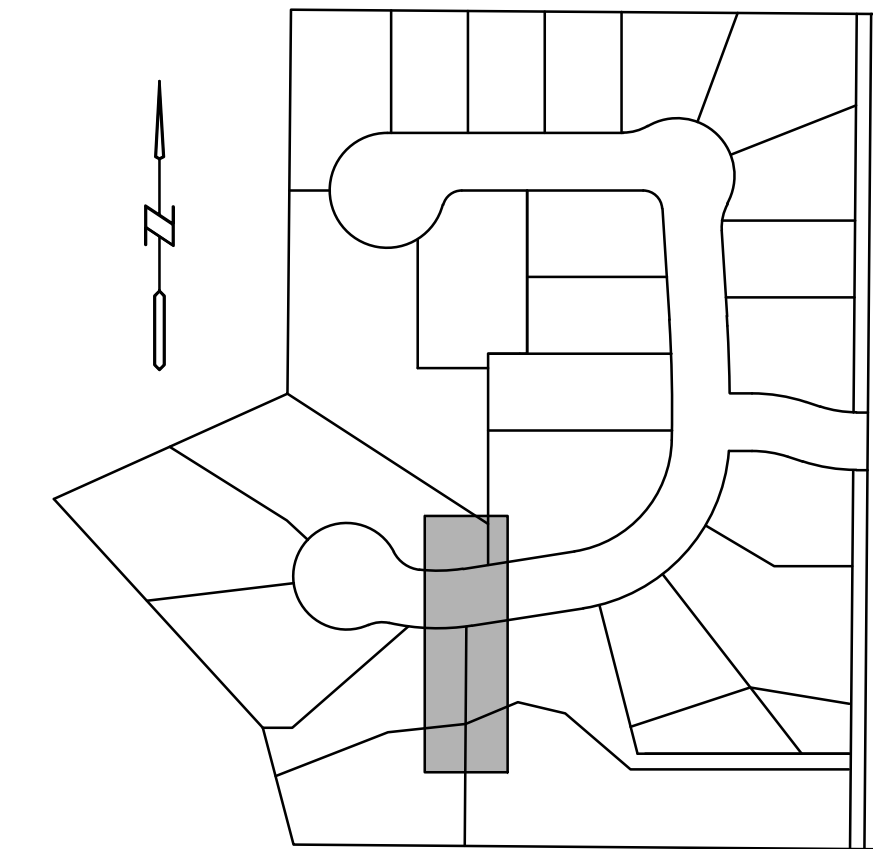
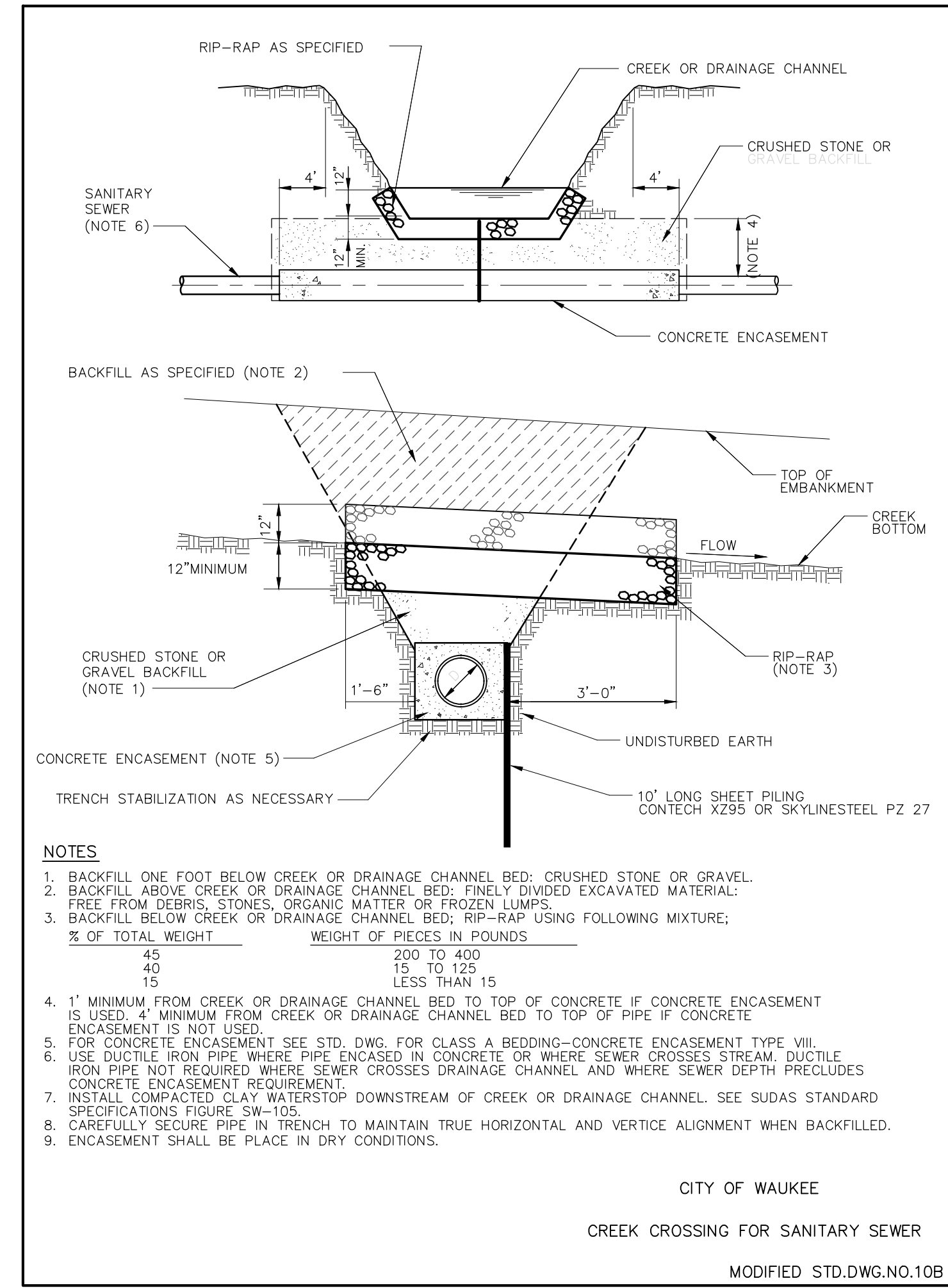
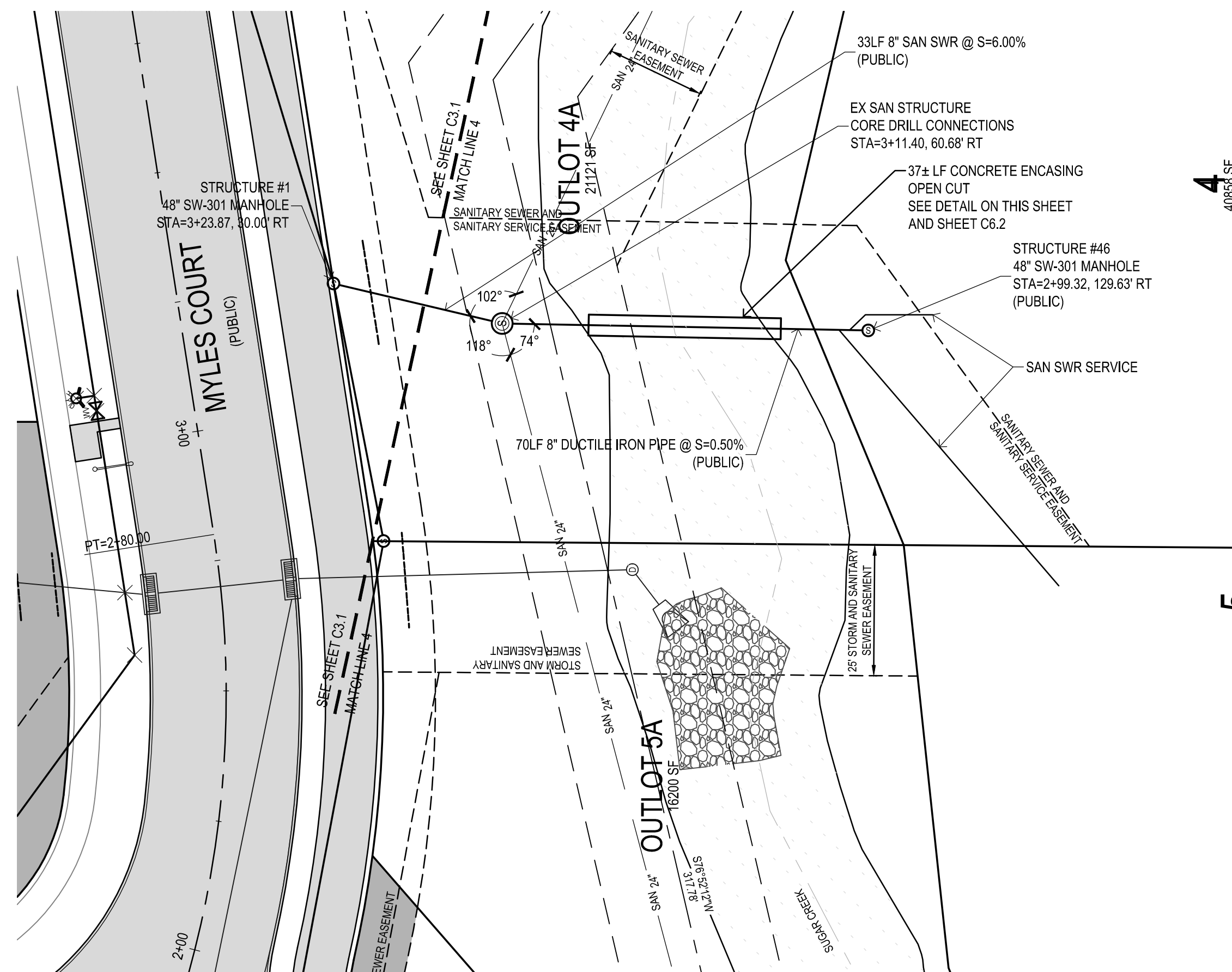
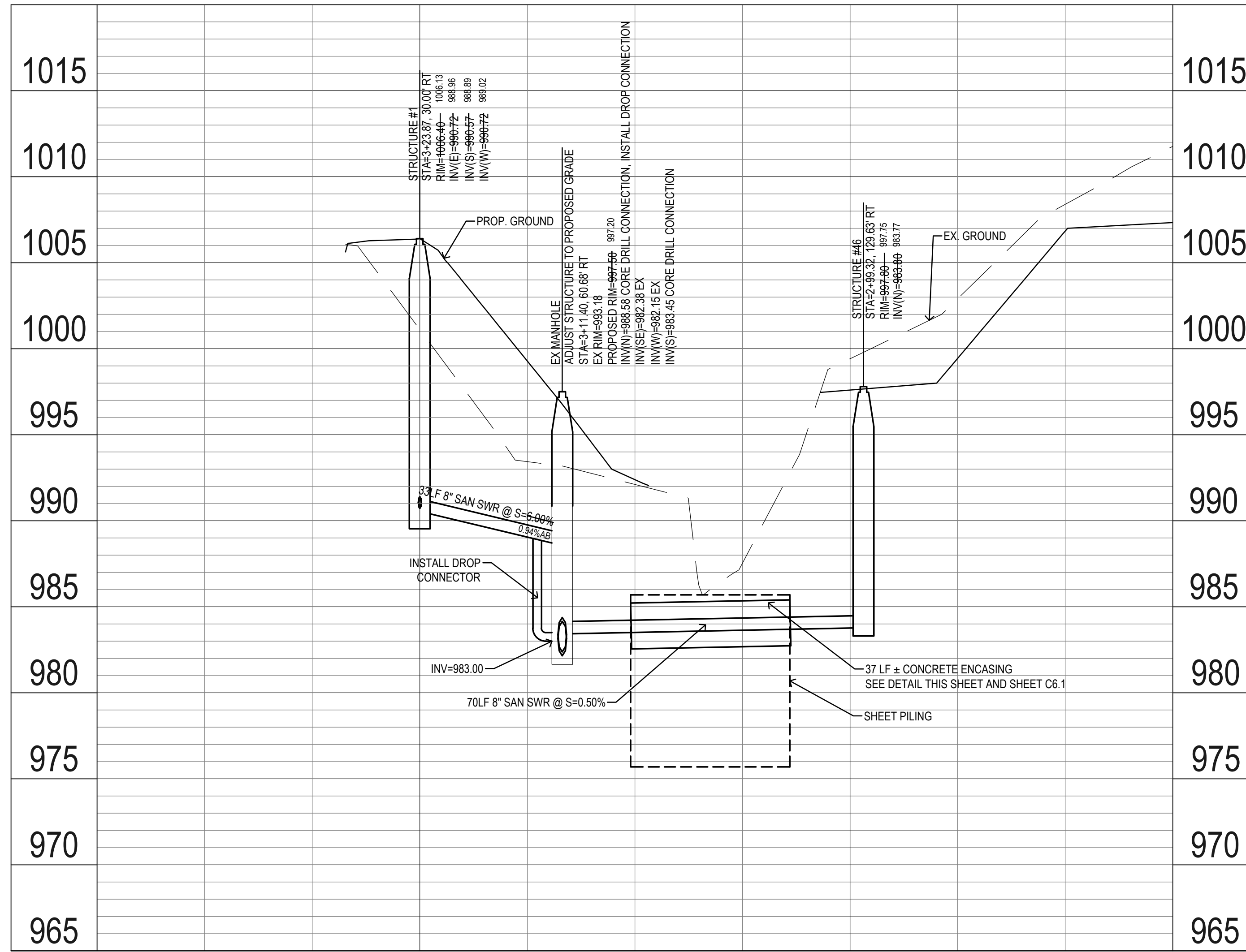
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- 12-7-16 AS BUILT

PROJECT NUMBER:

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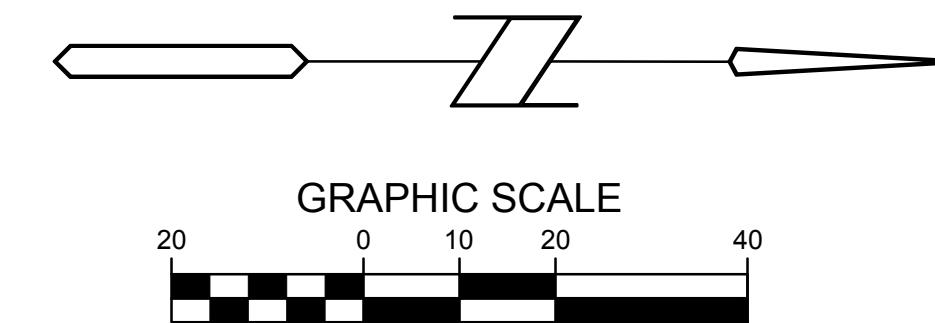
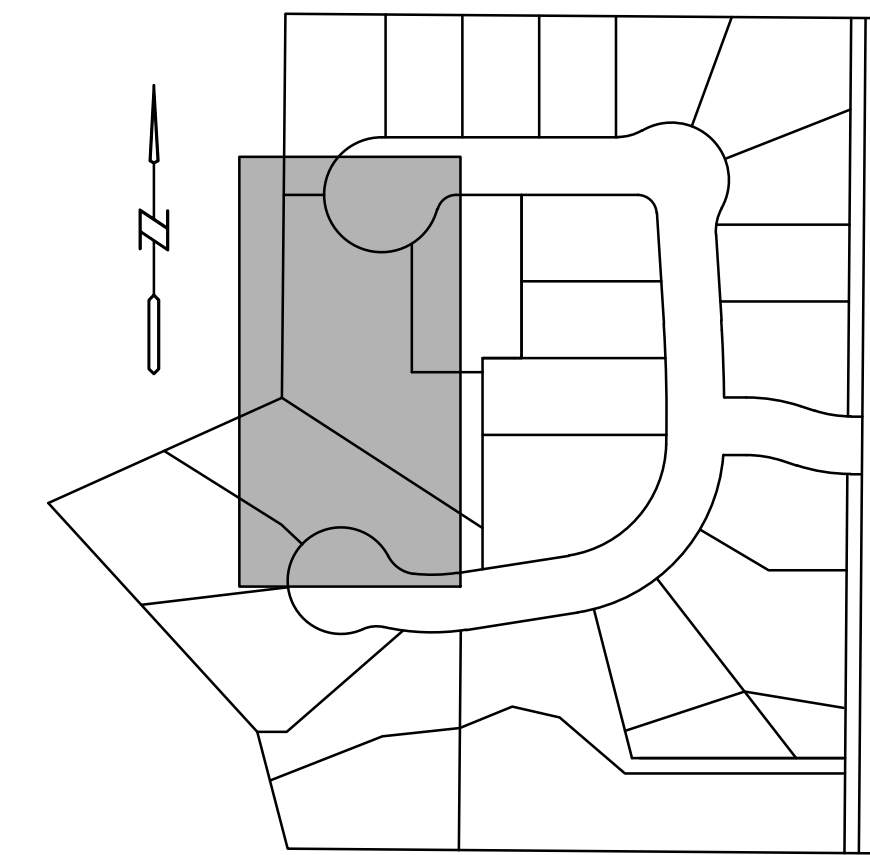
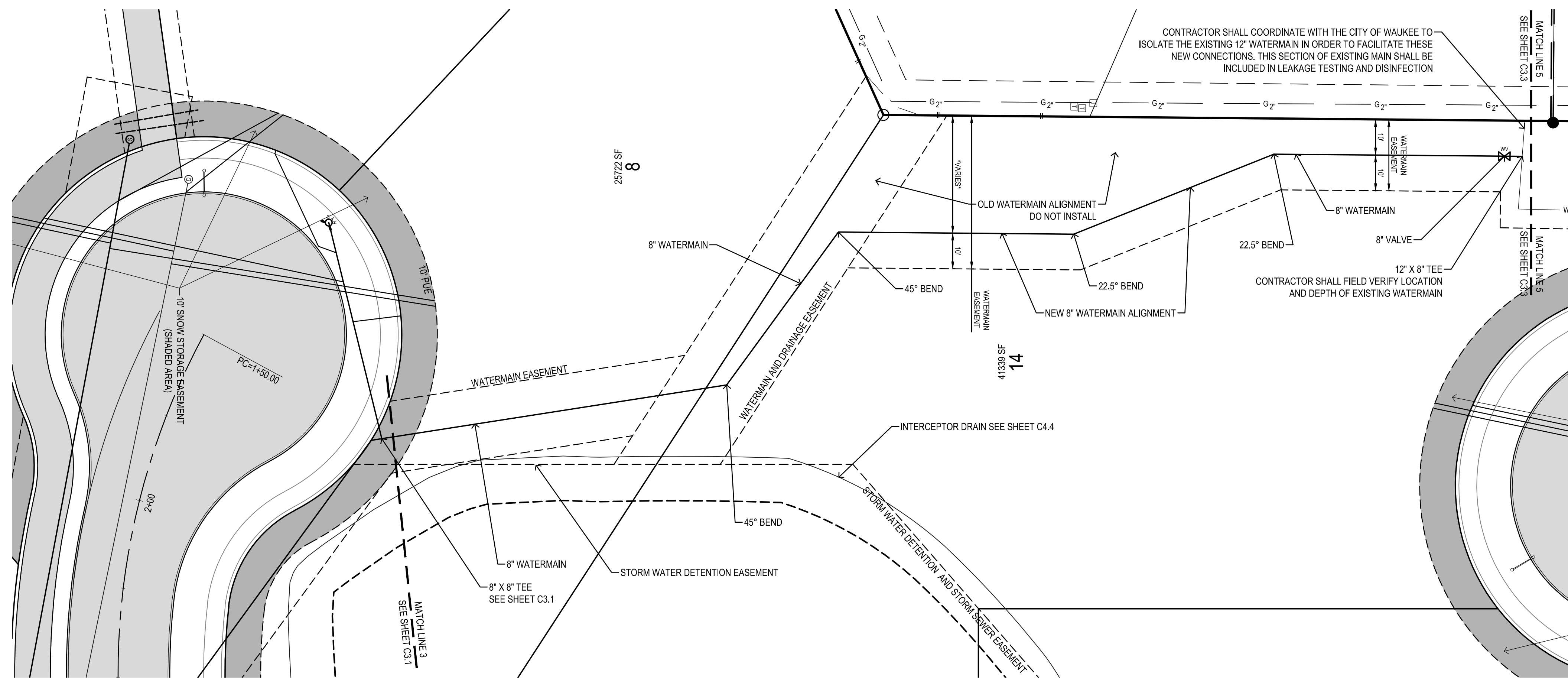
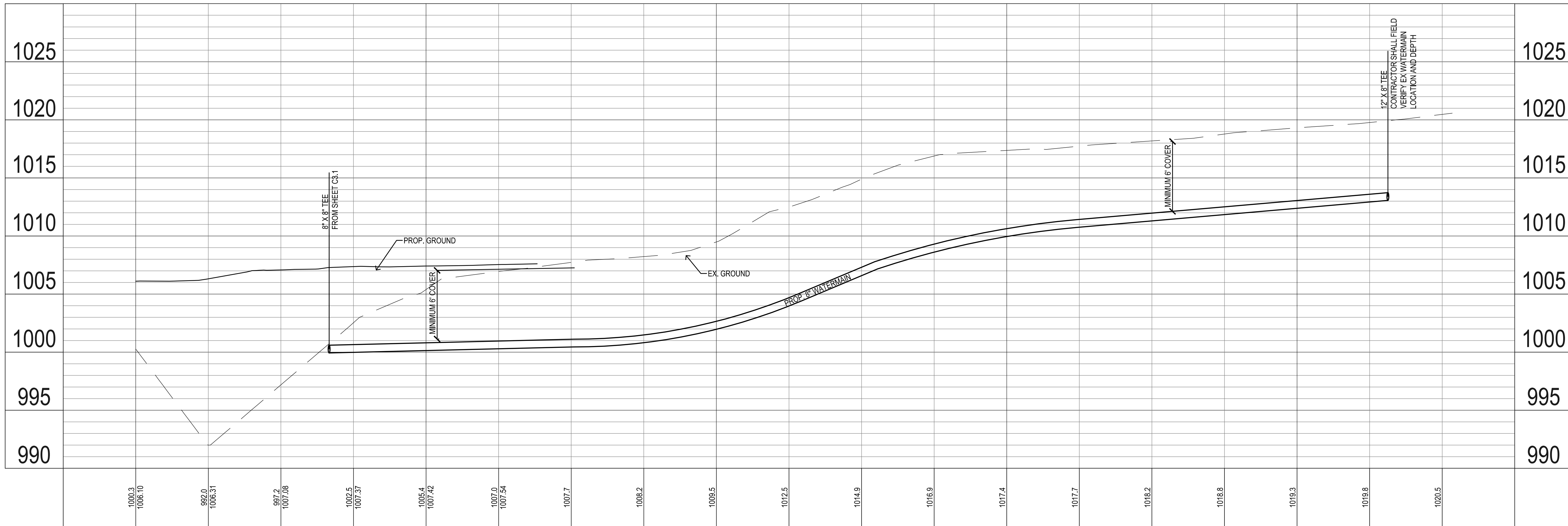
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**WATERMAIN AND SANITARY SEWER**

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PROJECT NUMBER:	150351
SHEET NUMBER:	C3.5

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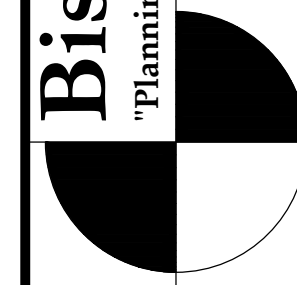
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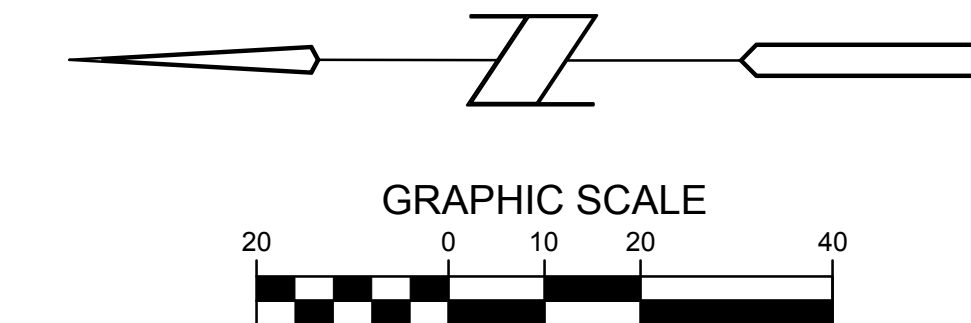
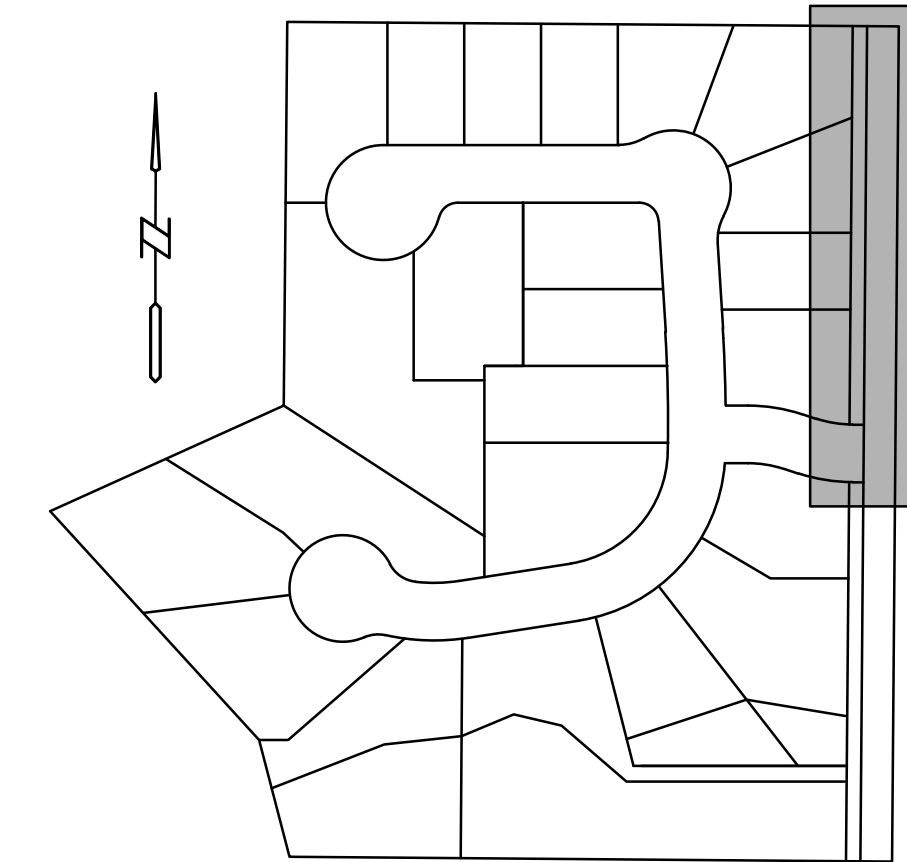
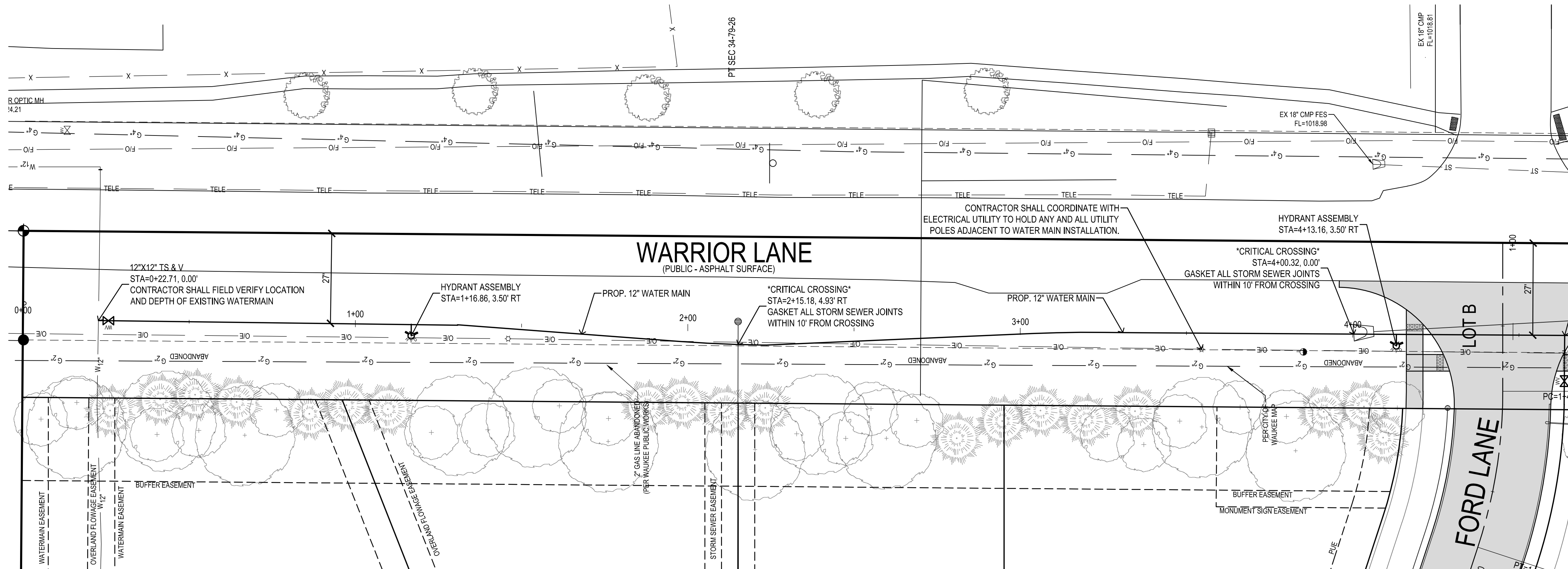
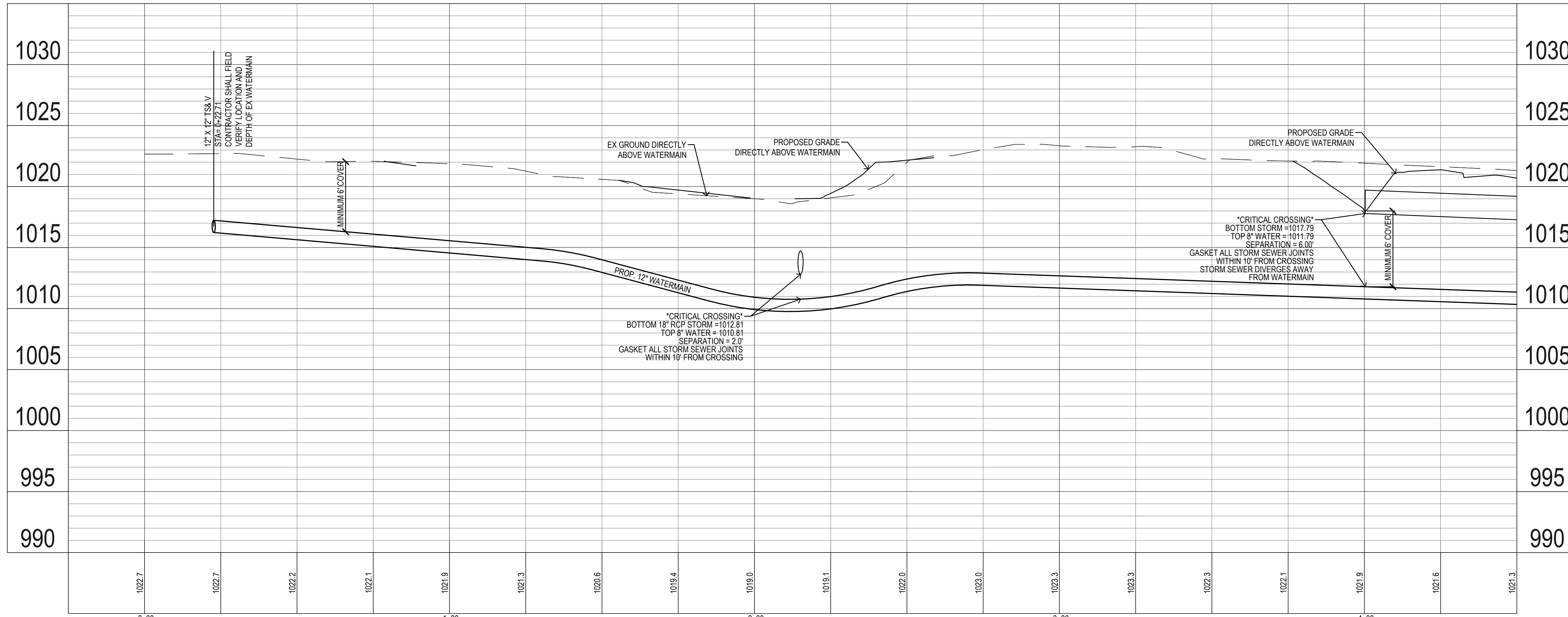
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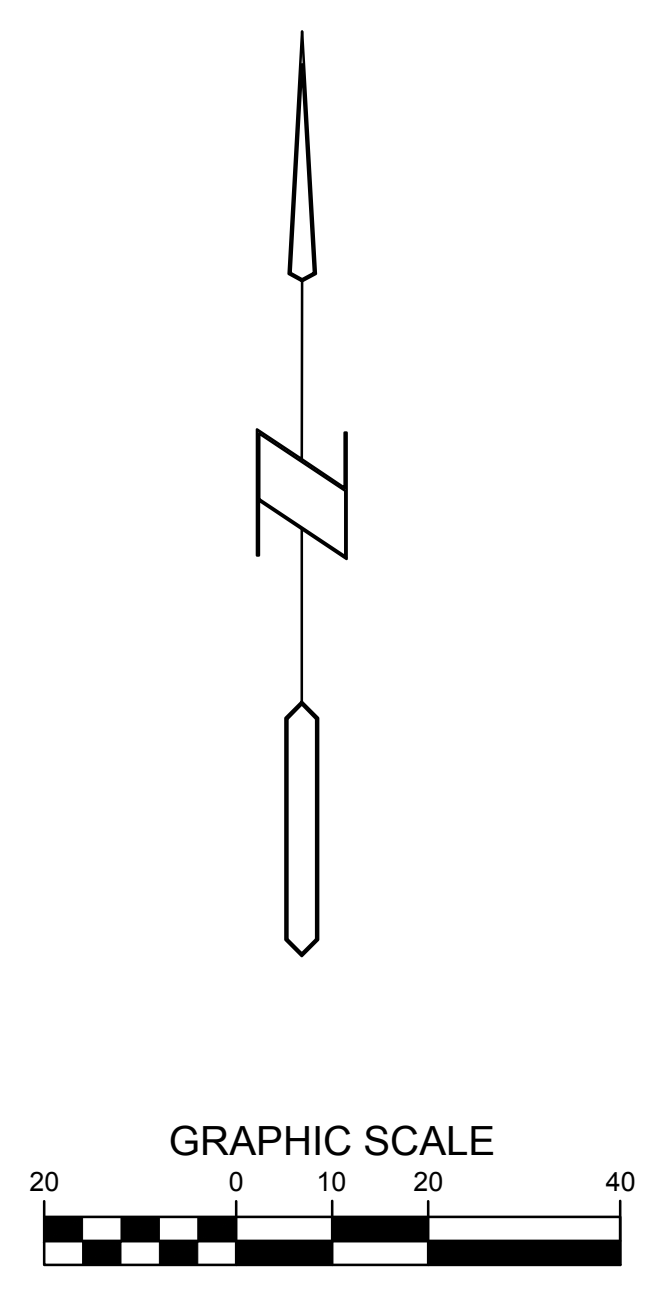
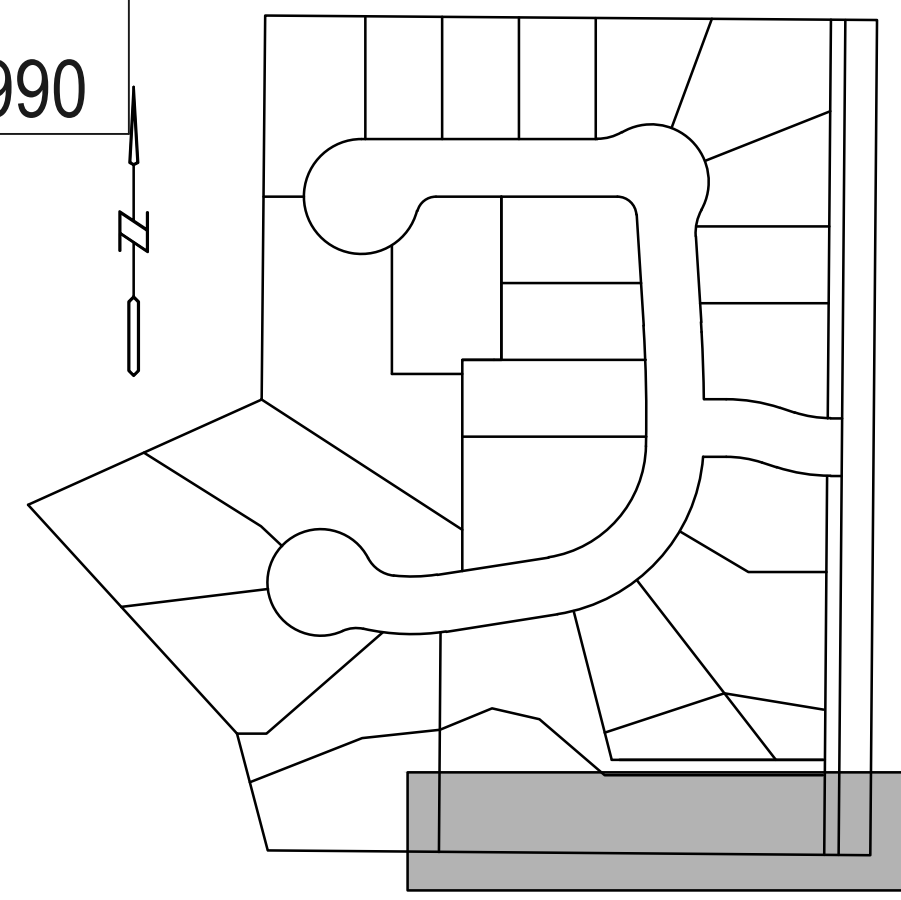
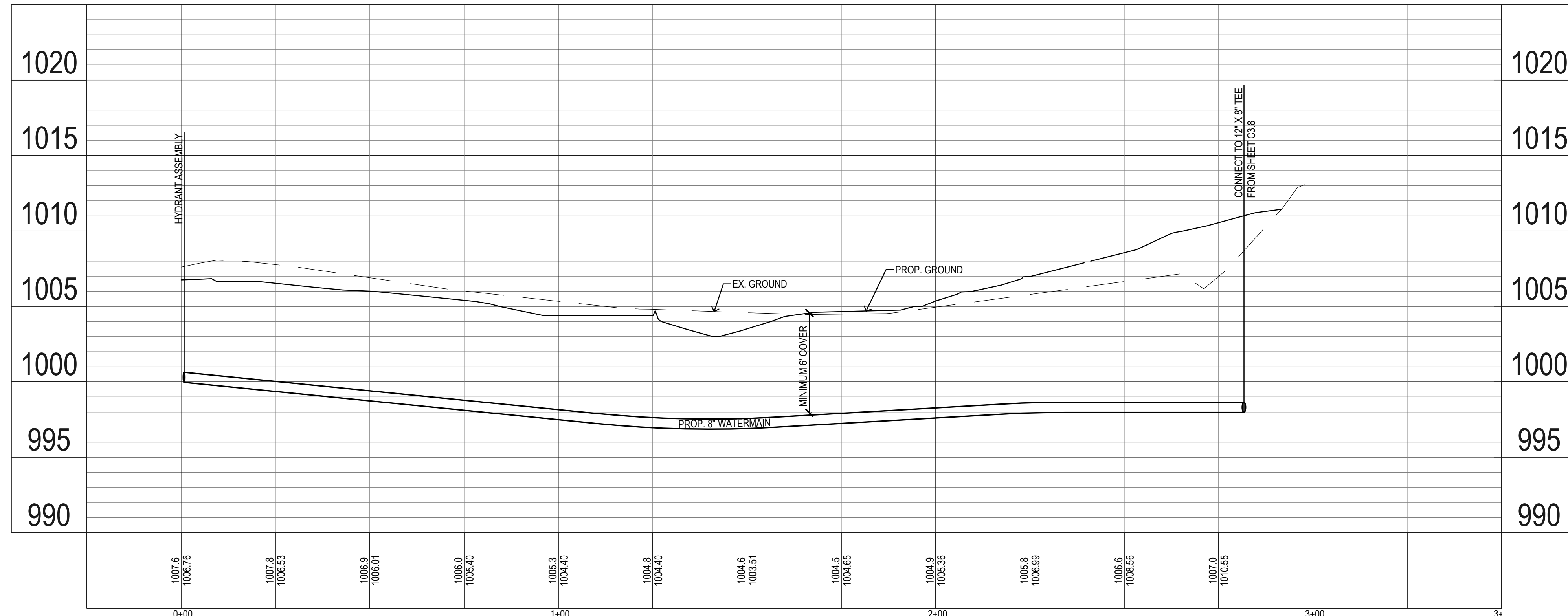
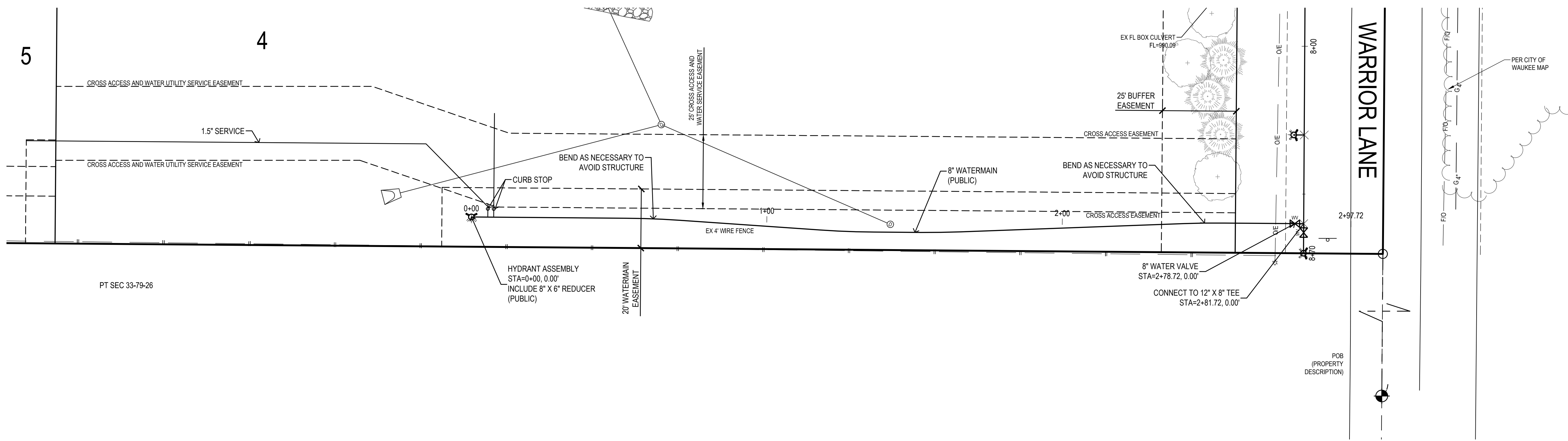
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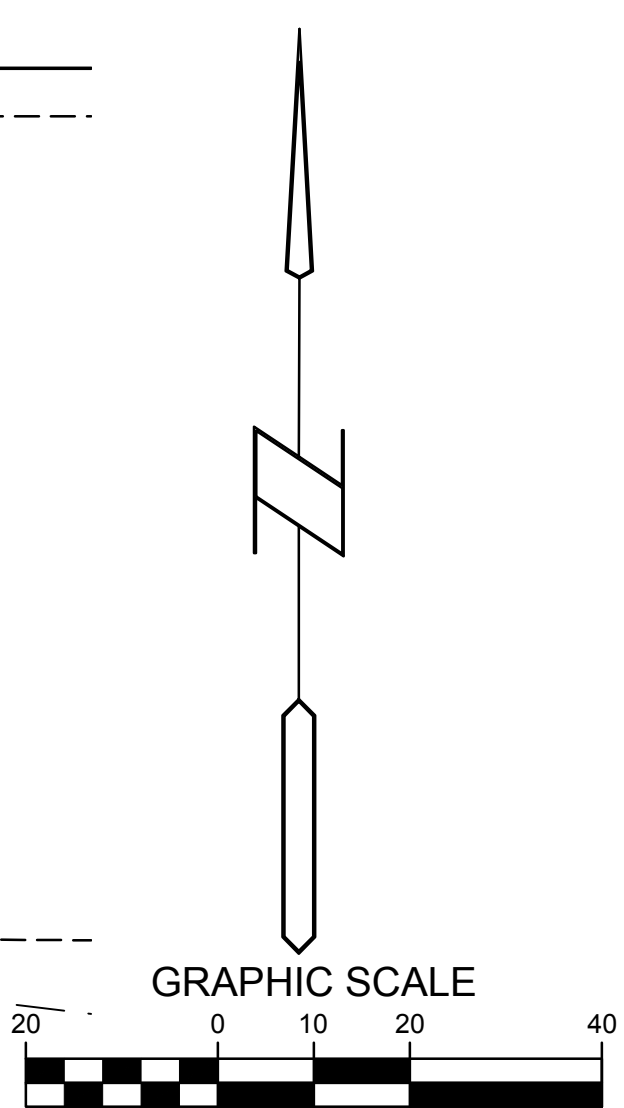
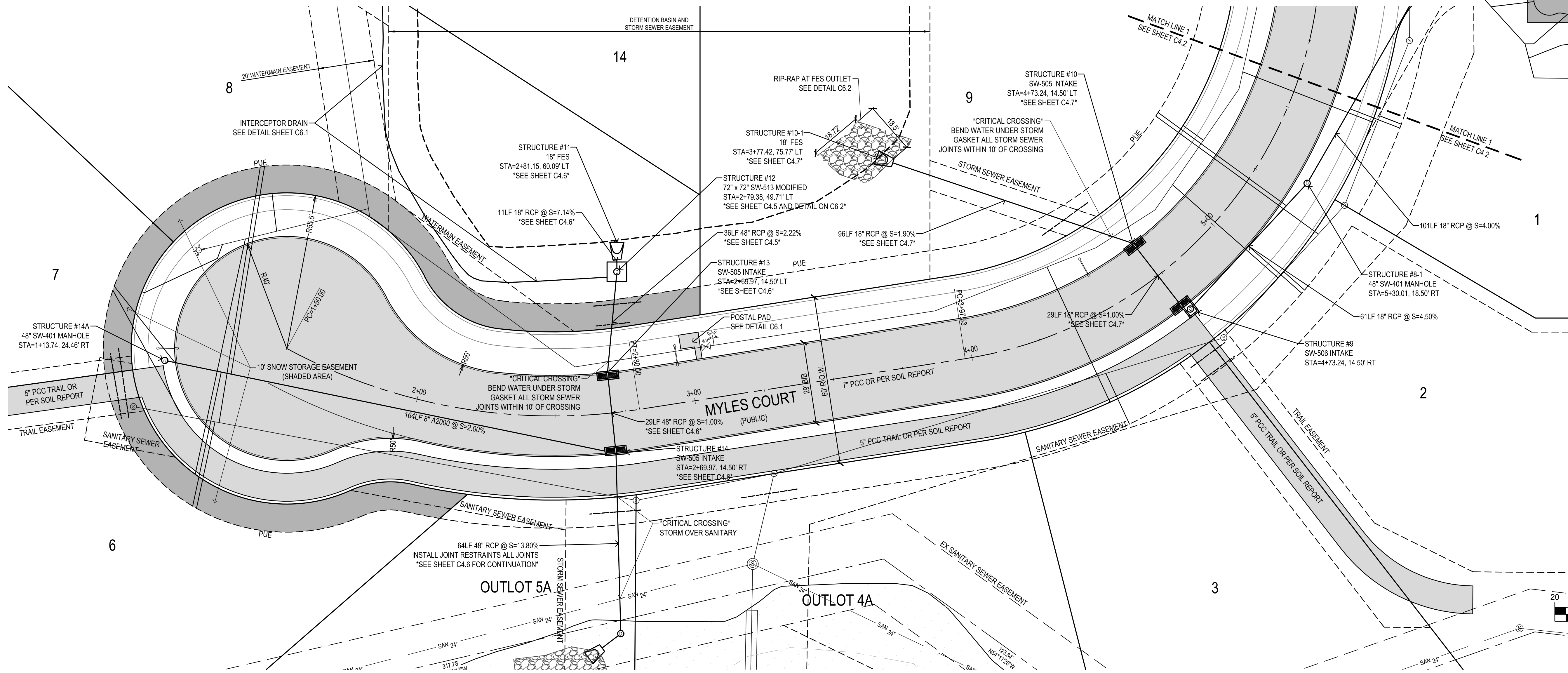
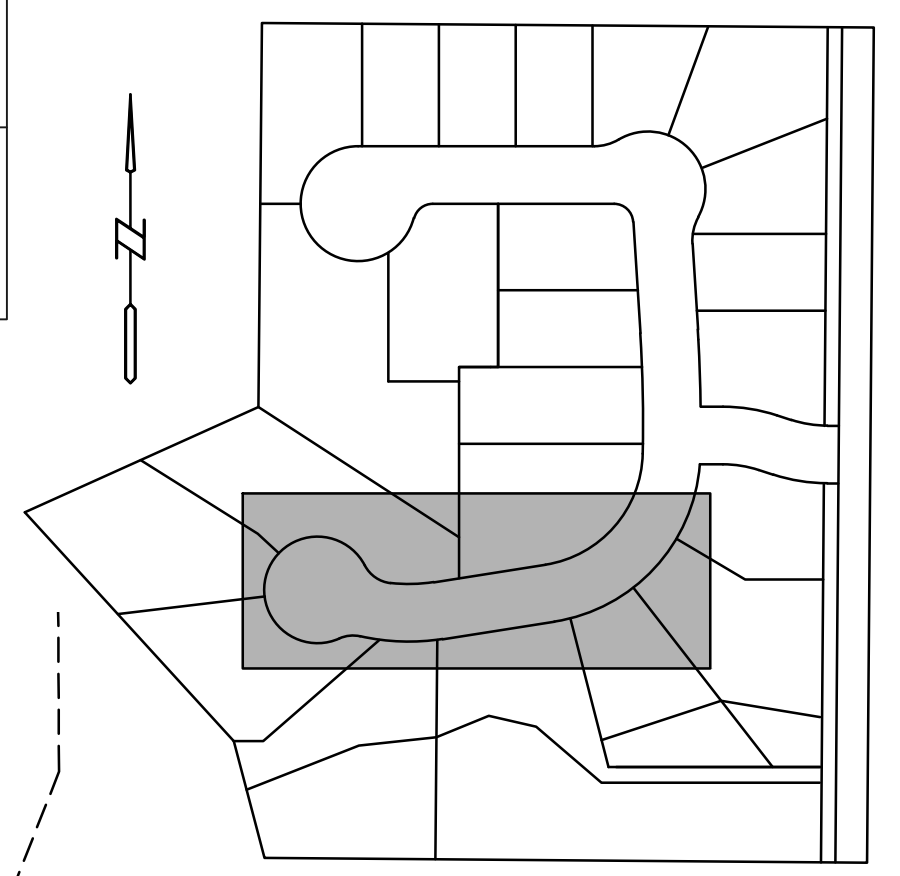
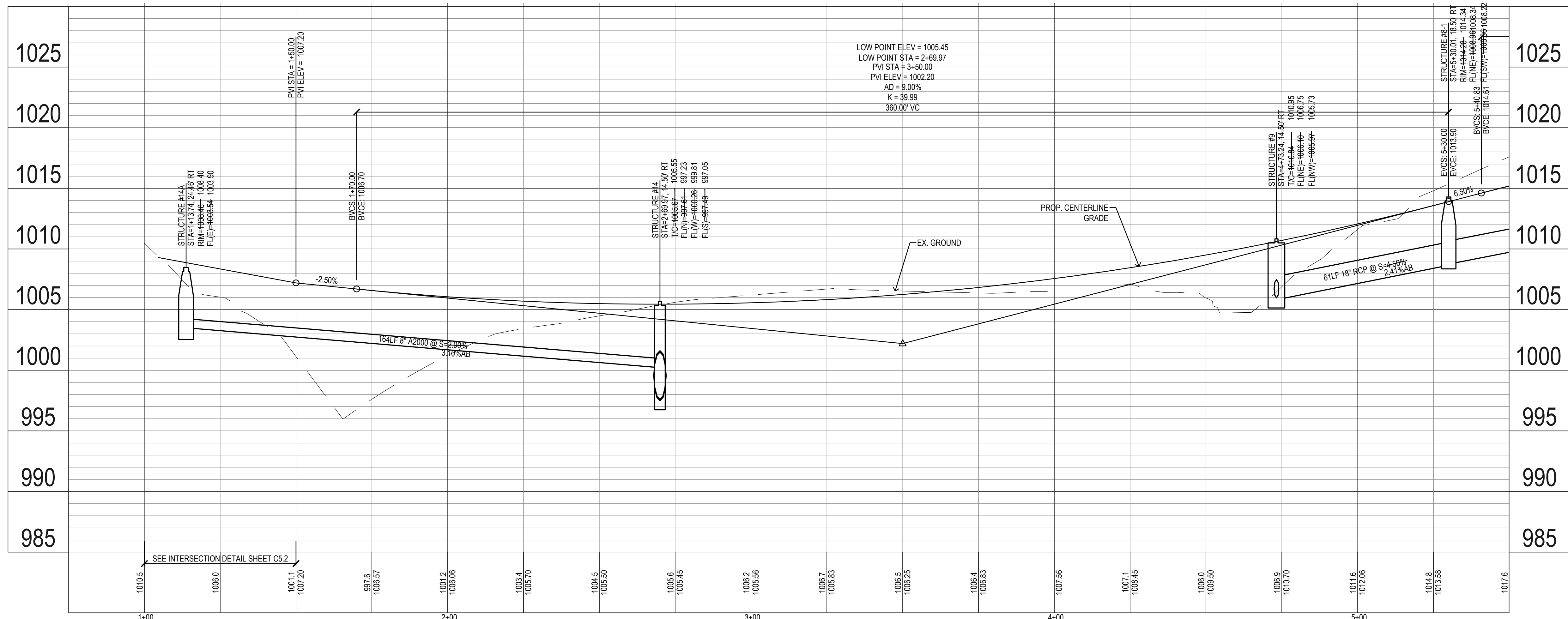
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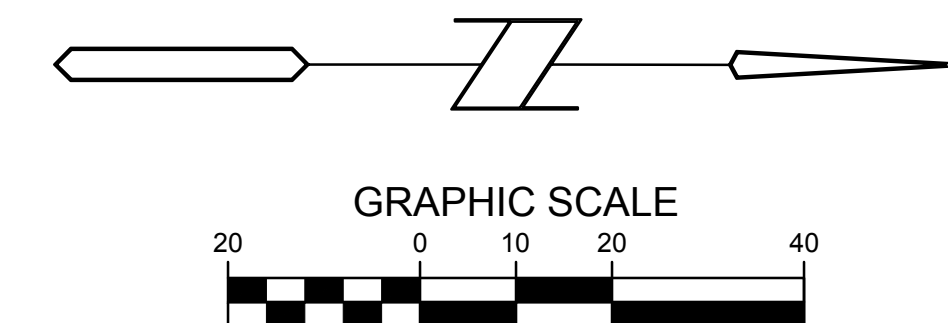
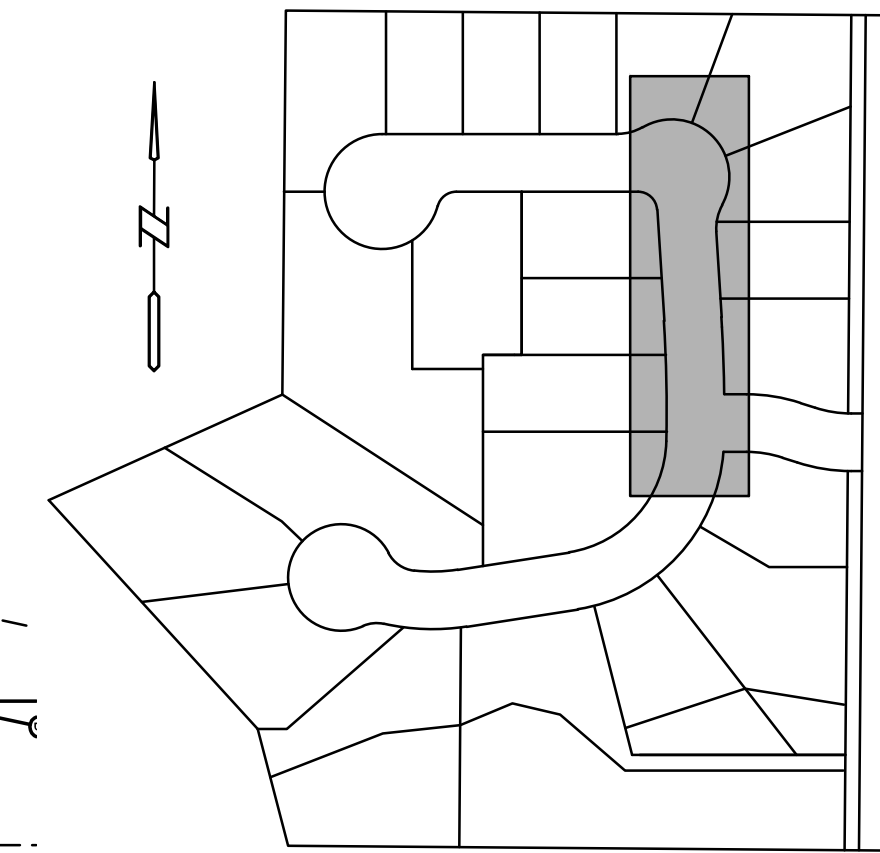
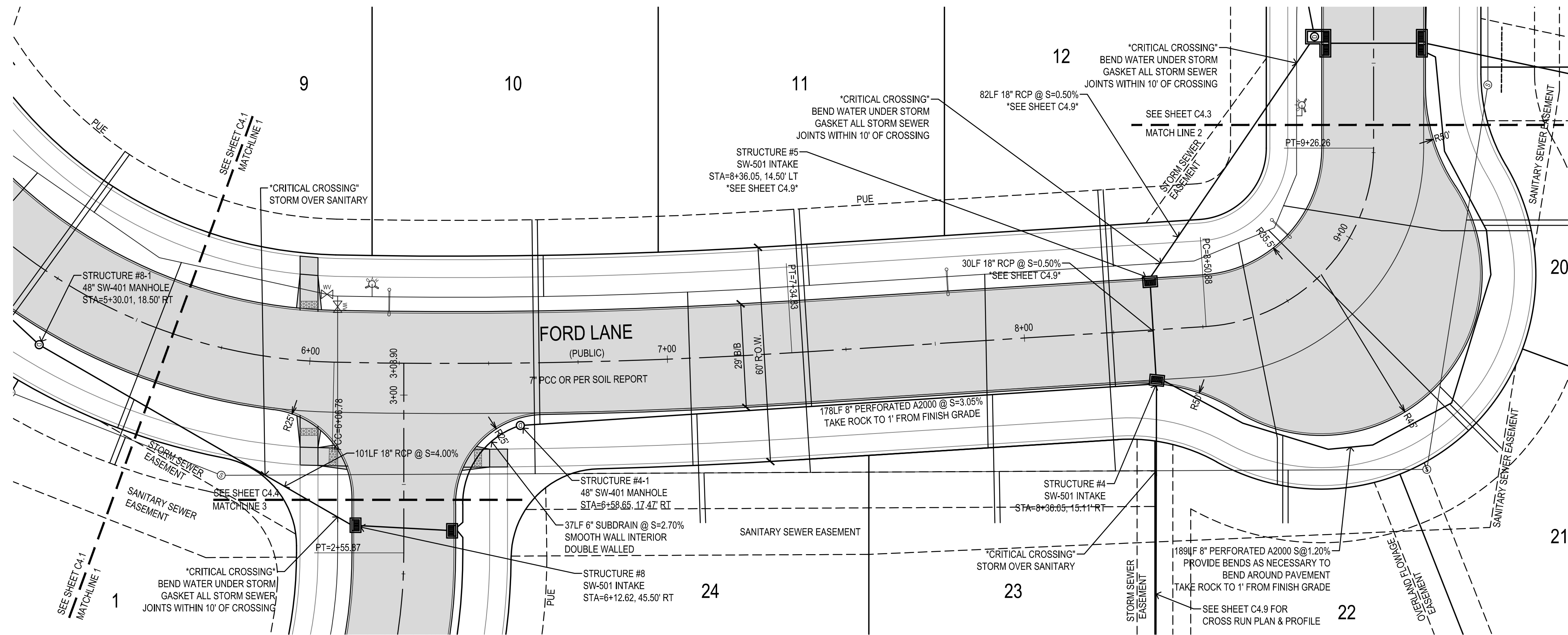
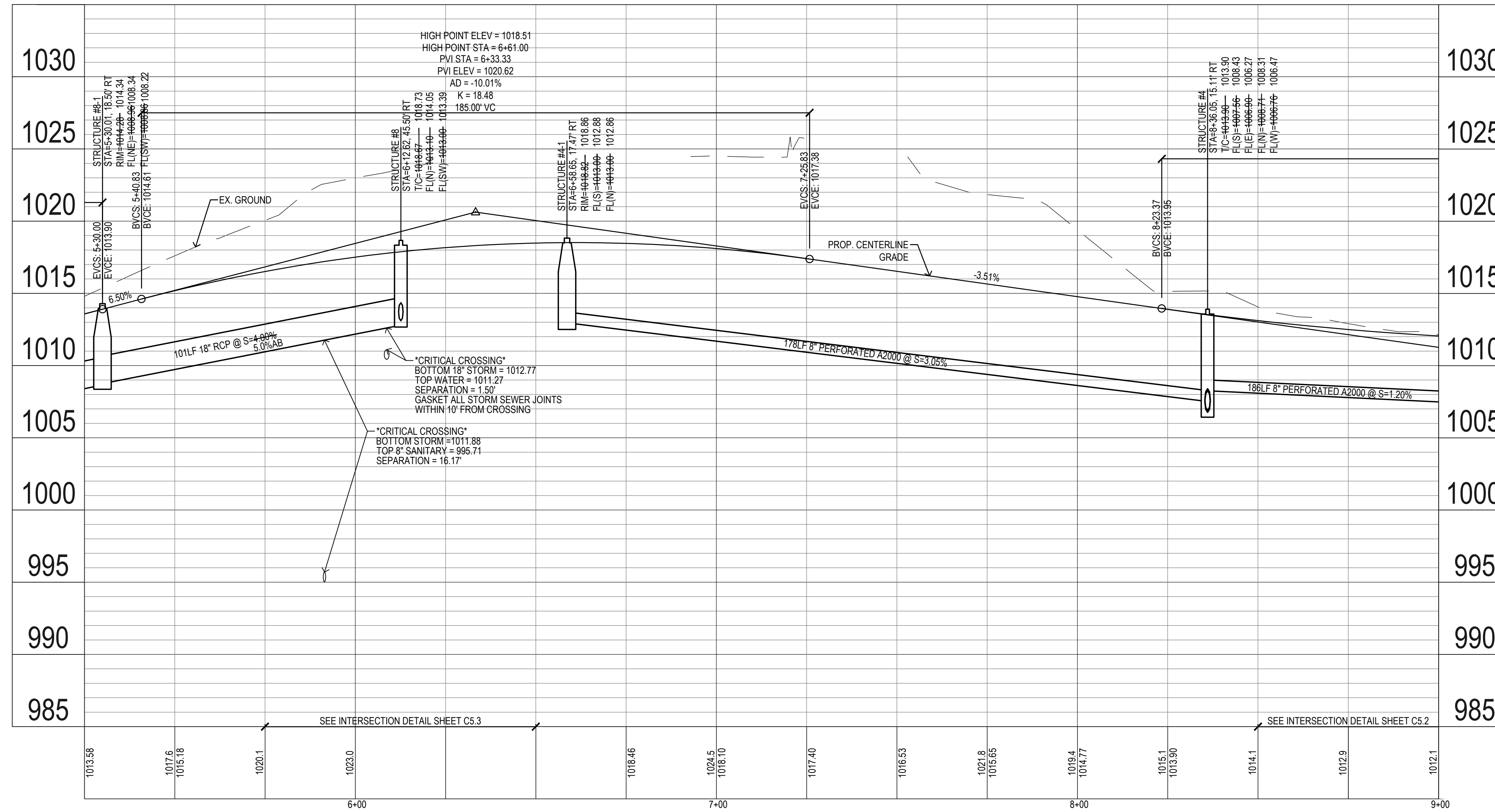
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**BRANDON'S RESERVE AS BUILT**  
**1010 WARRIOR LANE, WAUKEE IA**  
**STORM SEWER AND PAVING AS BUILT**

REFERENCE NUMBER:	
DRAWN BY:	EAV
CHECKED BY:	DBB
REVISION DATE:	2-19-16 1ST SUBMITTAL 3-14-16 2ND SUBMITTAL 3-30-16 3rd SUBMITTAL 4-11-16 6-30-16 C3.6 WATER REV 7-07-16 C4.3 MAILPAD REV 7-20-16 MULTIPLE REV. 12-7-16 AS BUILT
PROJECT NUMBER:	150351
SHEET NUMBER:	C4.1

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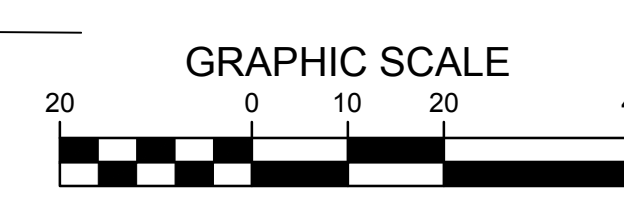
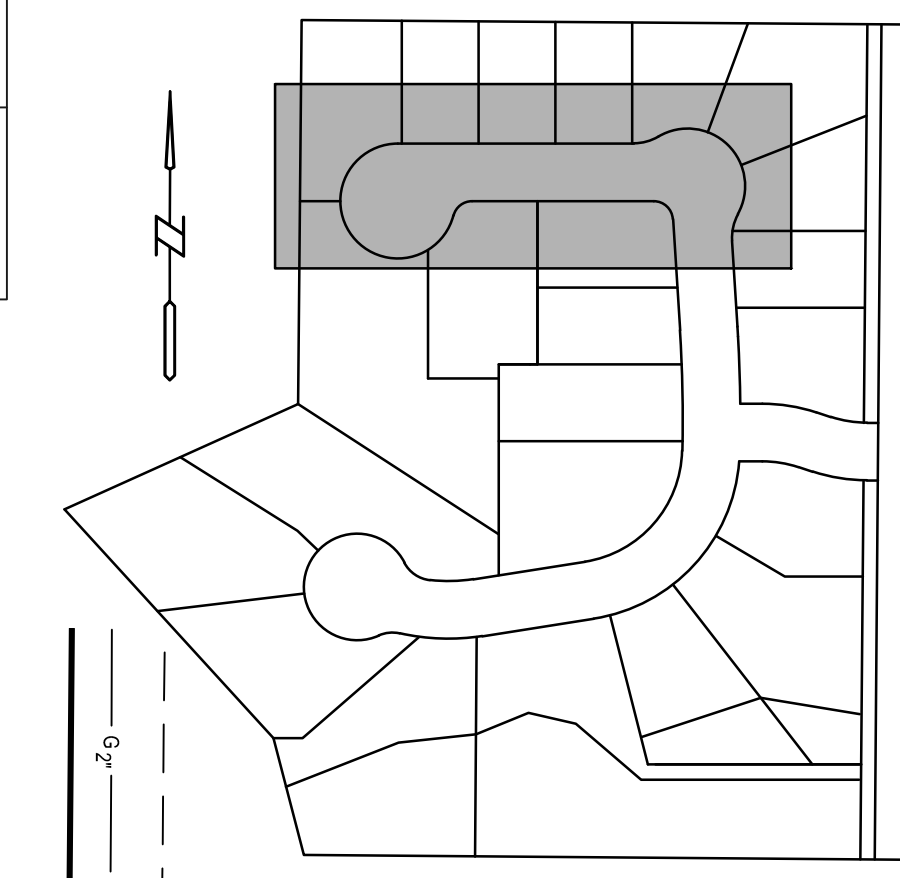
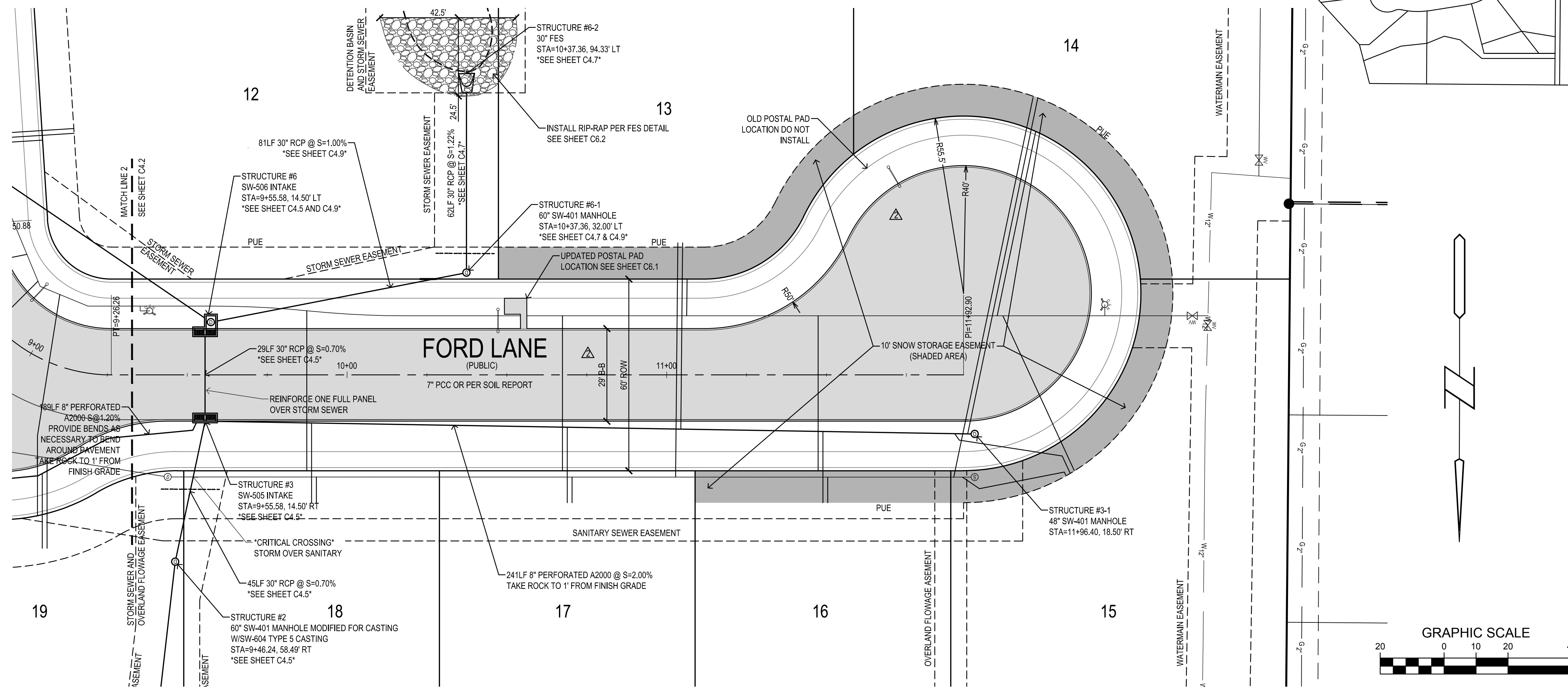
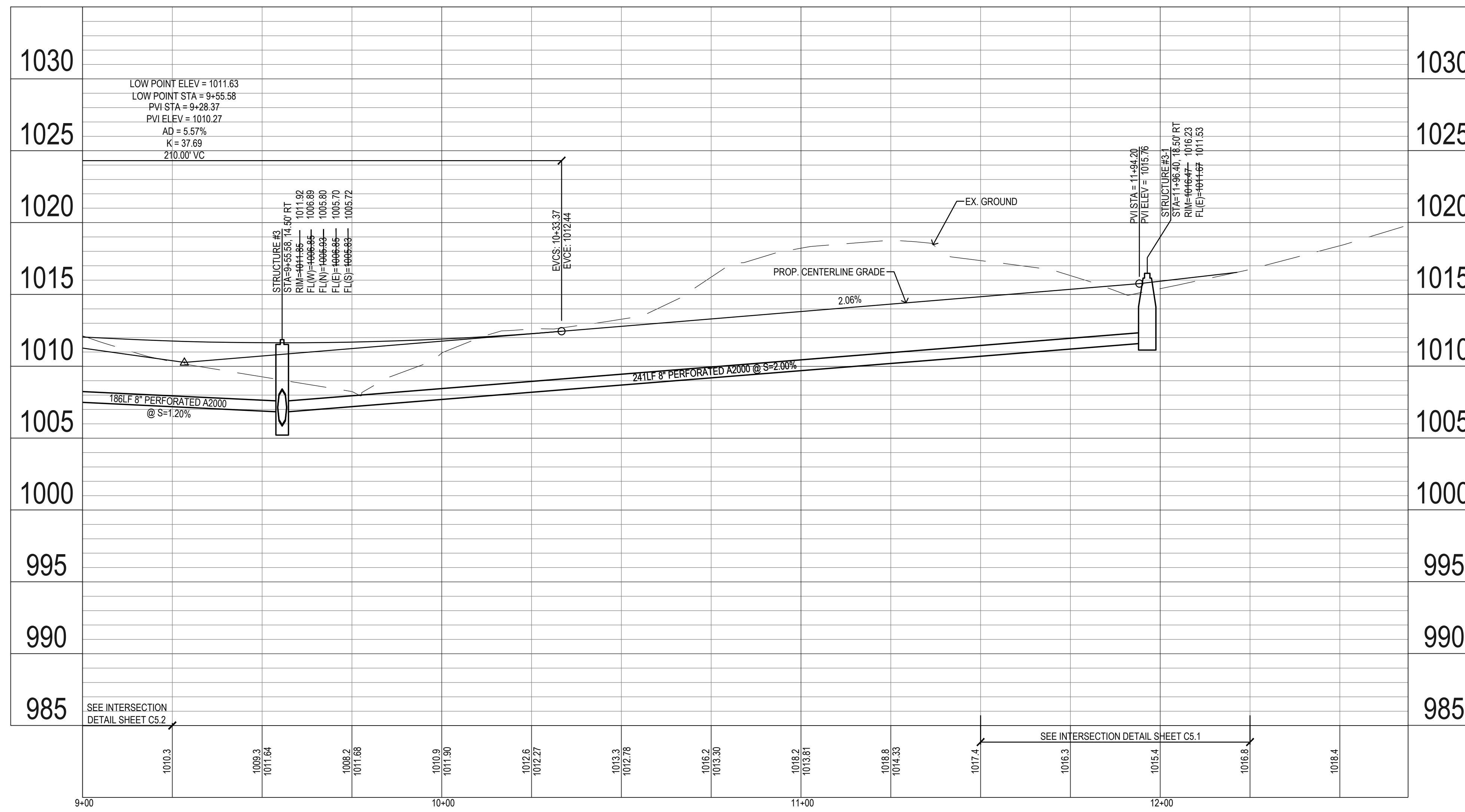


**BRANDON'S RESERVE AS BUILT**  
1010 WARRIOR LANE, WAUKEE IA

**STORM SEWER AND PAVING**

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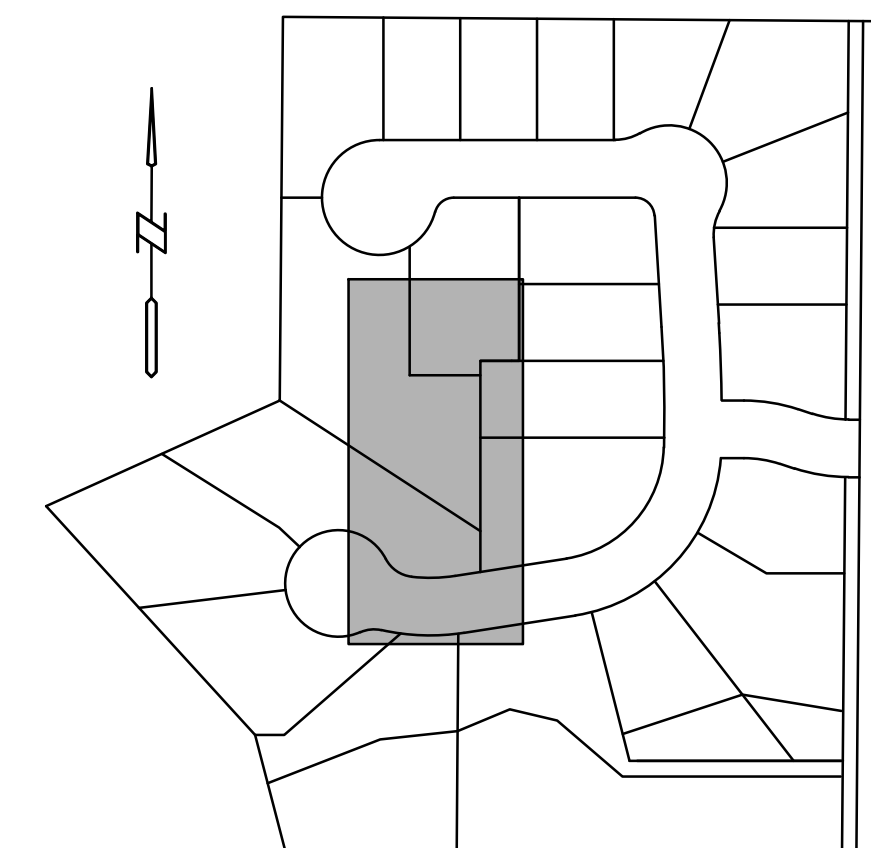
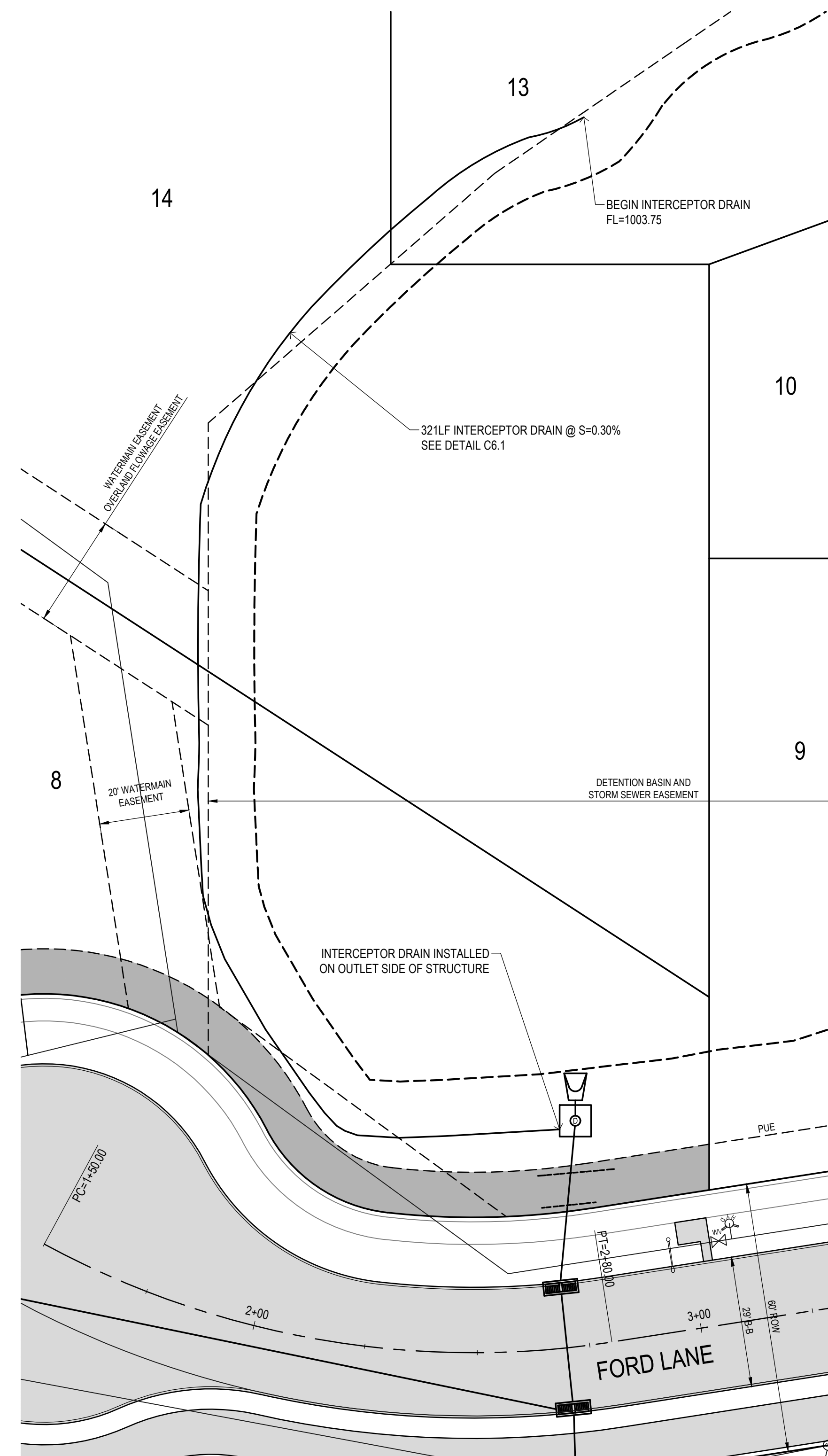
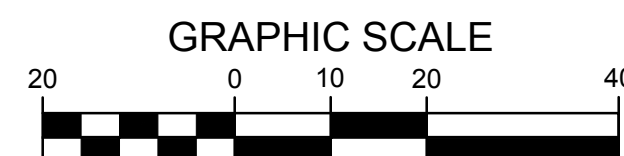
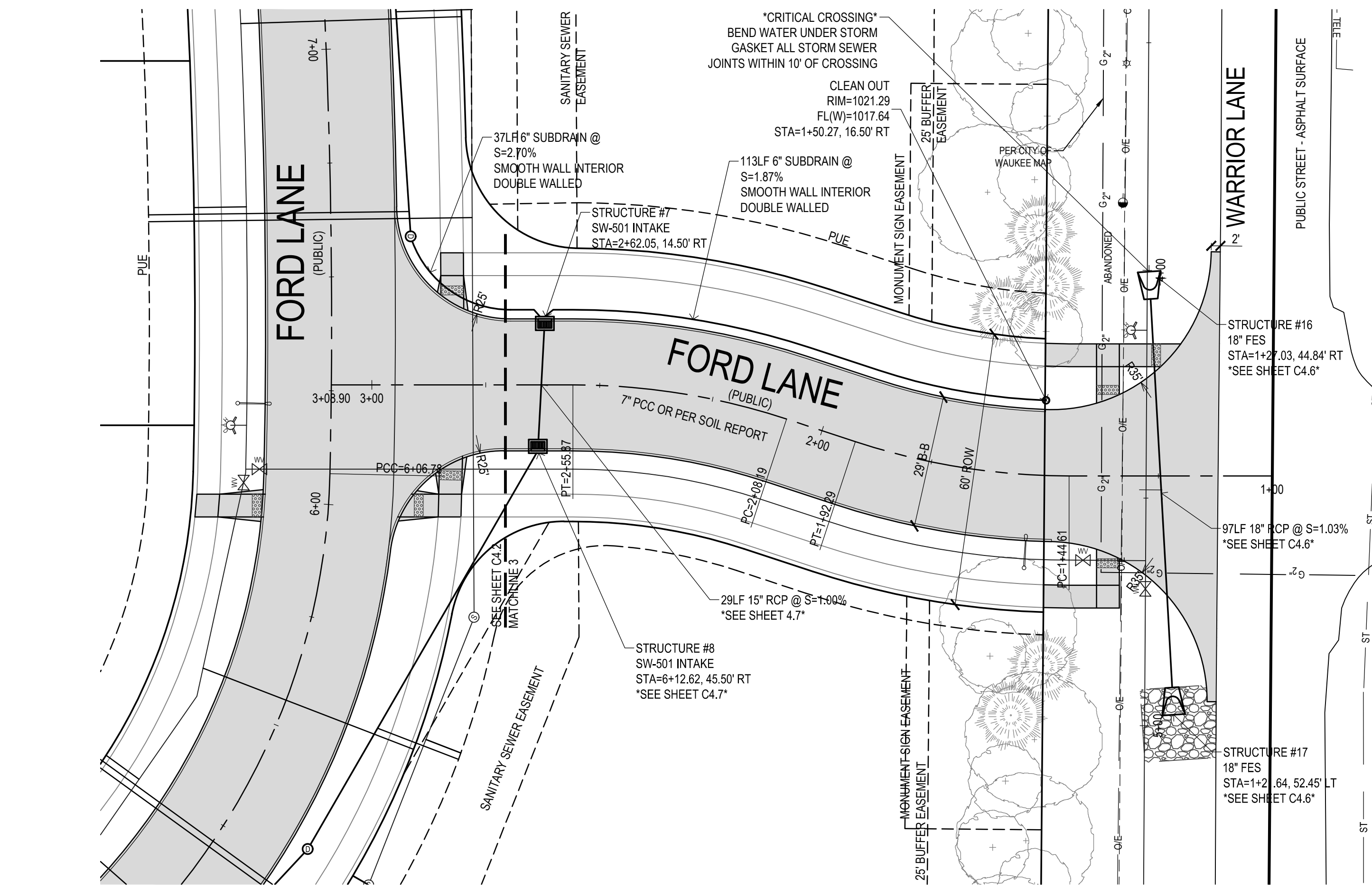
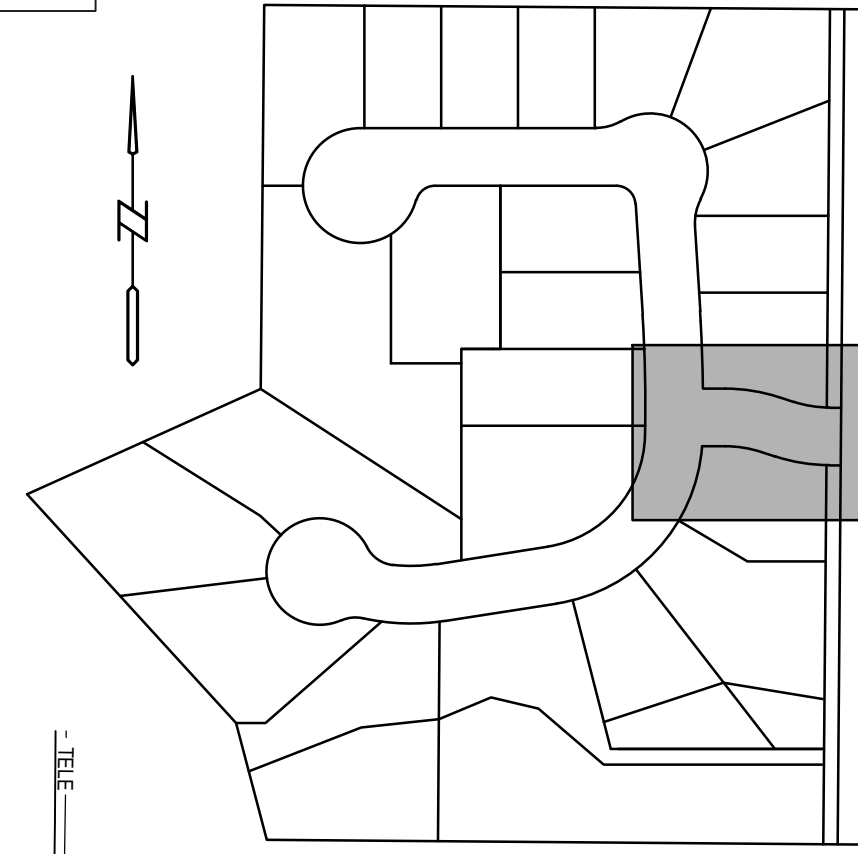
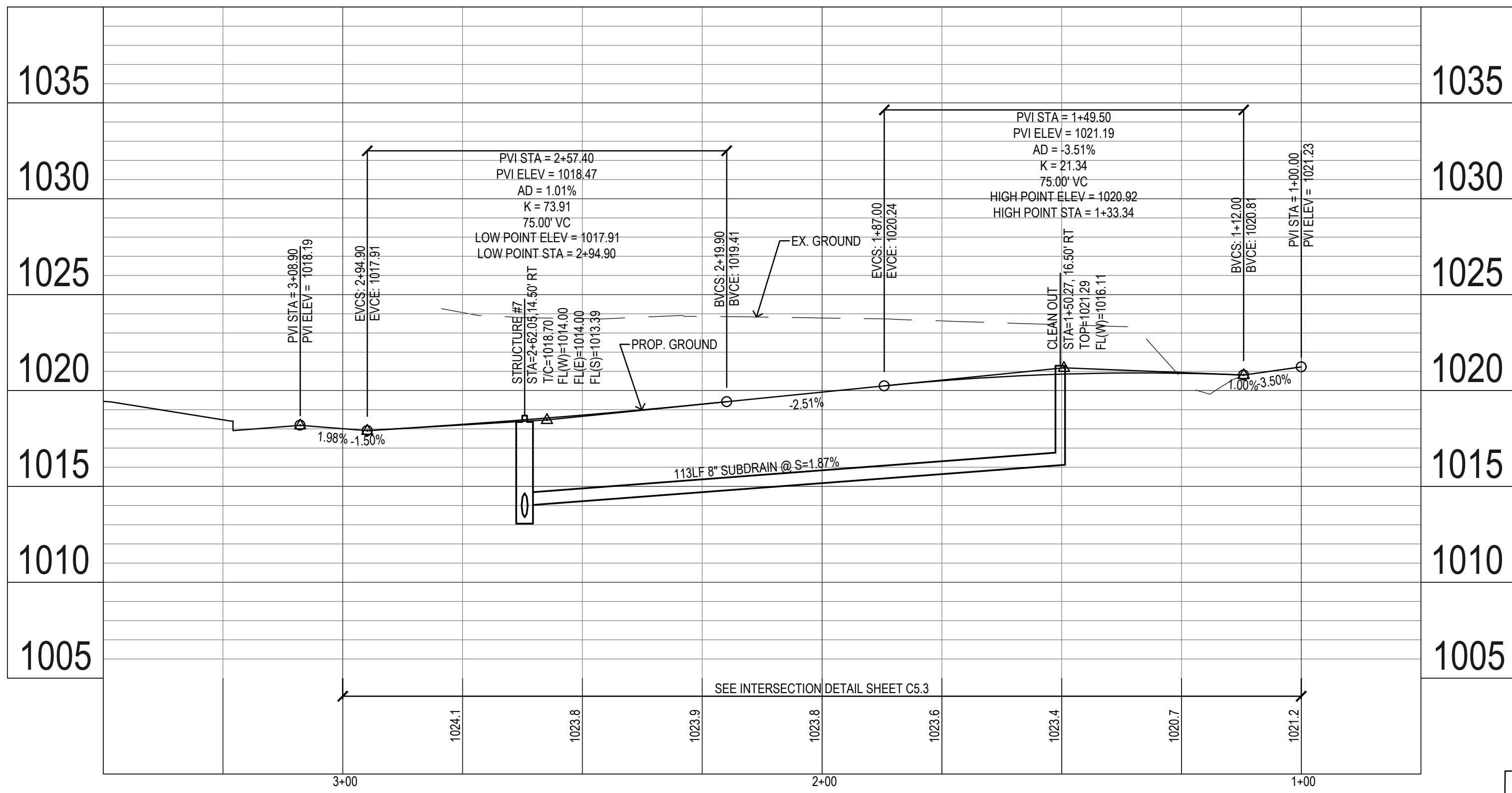
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PROJECT NUMBER:	150351
SHEET NUMBER:	C4.2



**BRANDON'S RESERVE AS BUILT**  
**1010 WARRIOR LANE, WAUKEE IA**  
**STORM SEWER AND PAVING**

REFERENCE NUMBER:	
DRAWN BY:	EAV
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REVISION DATE:	2-19-16 1ST SUBMITTAL 3-14-16 2ND SUBMITTAL 3-30-16 3rd SUBMITTAL 4-11-16 6-30-16 C3.6 WATER REV 7-07-16 C4.3 MAIL PAD REV 7-20-16 MULTIPLE REV. 12-7-16 AS BUILT
PROJECT NUMBER:	150351
SHEET NUMBER:	C4.3

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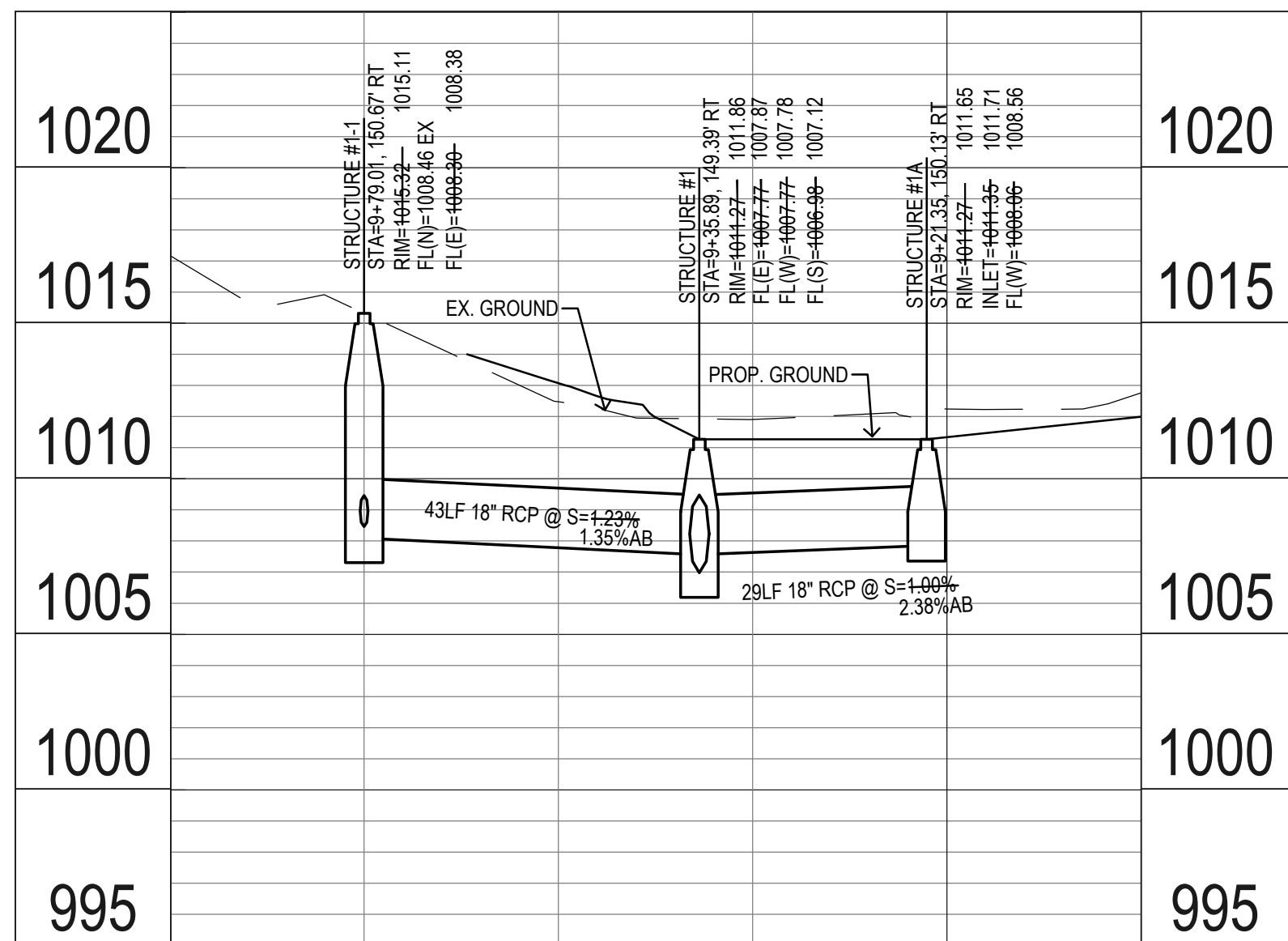
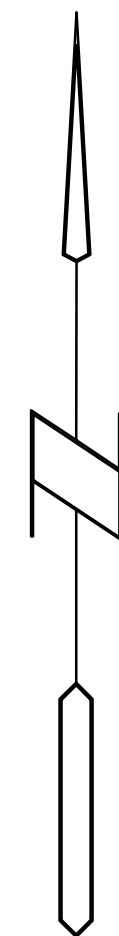
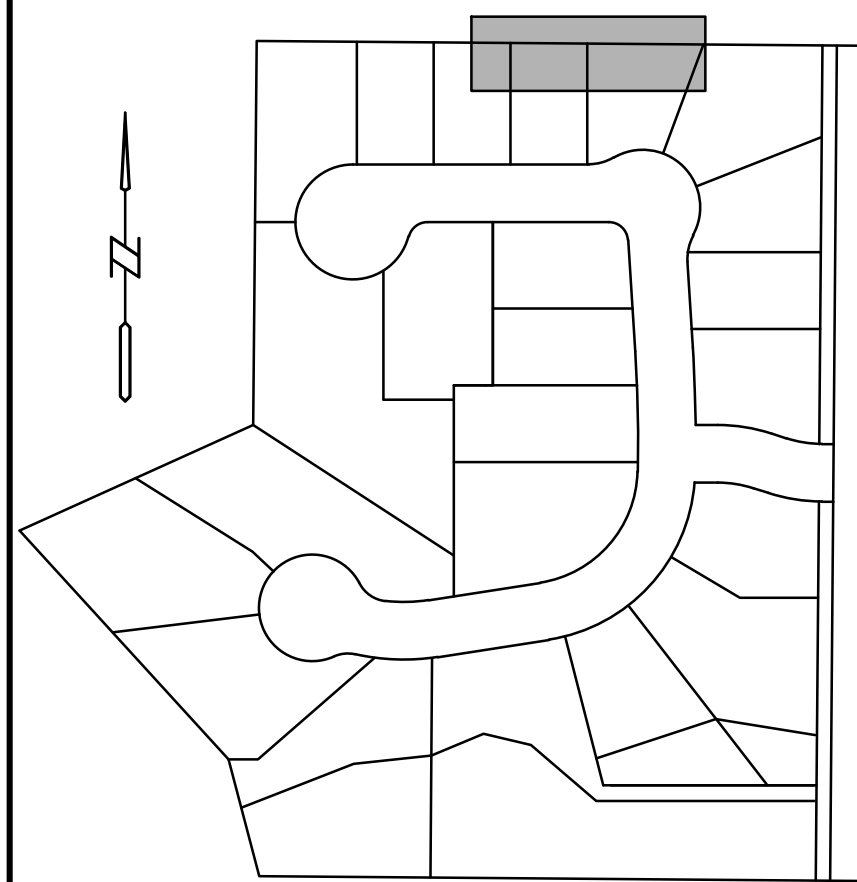
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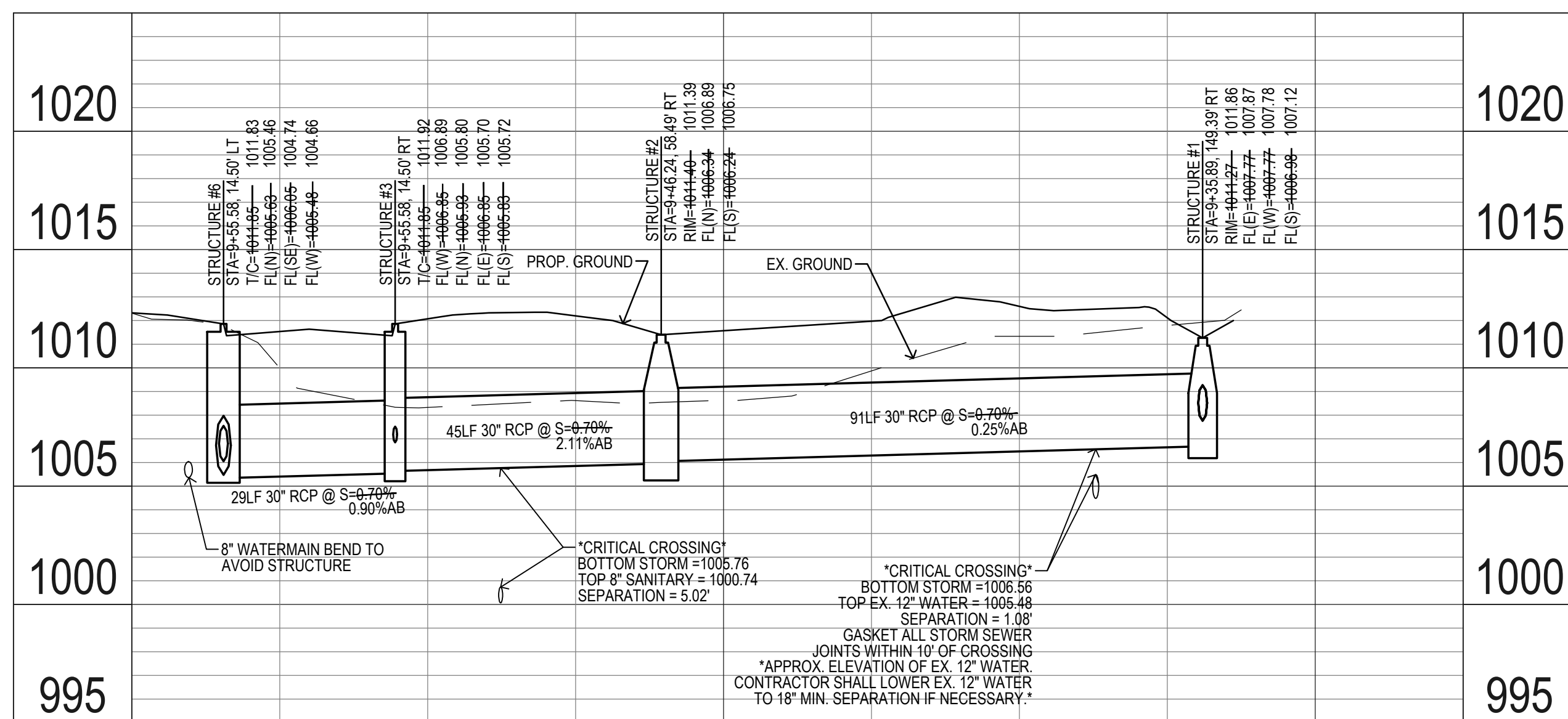
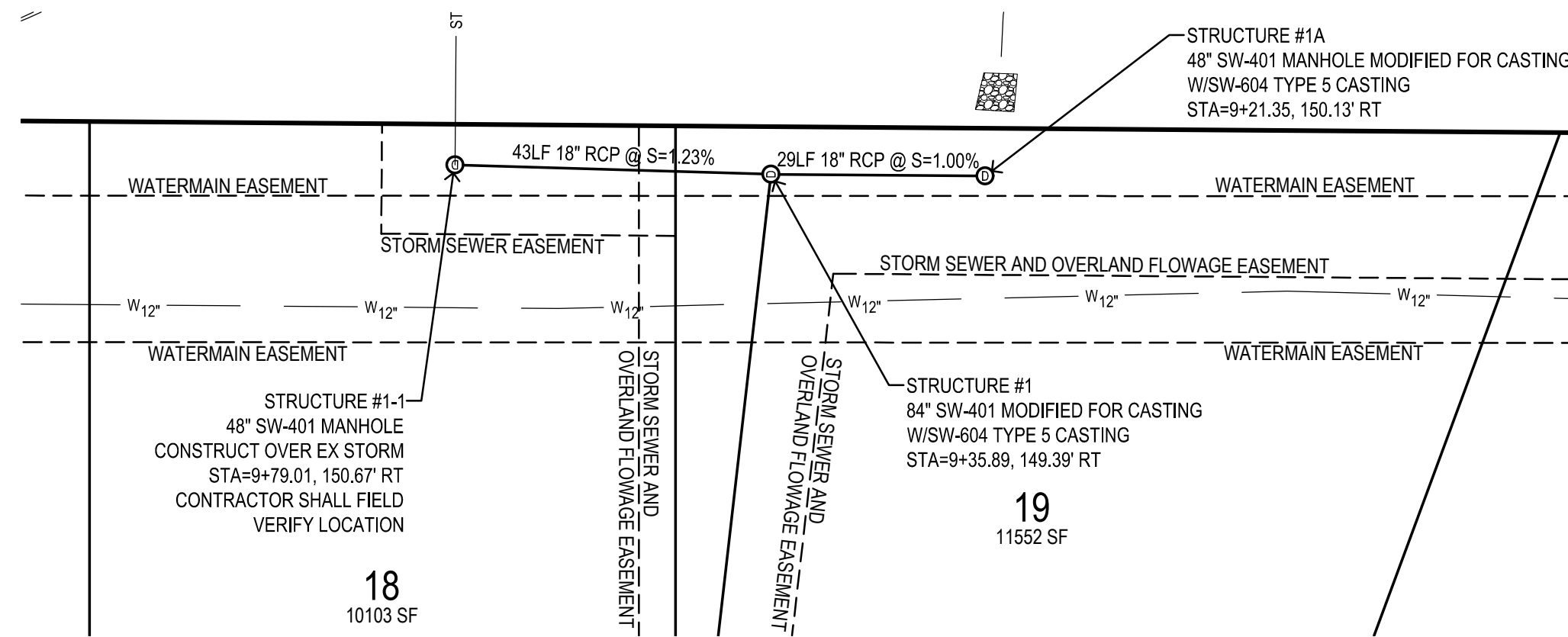
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 3-30-16 3rd SUBMITTAL  
 4-11-16  
 6-30-16 C3.6 WATER REV  
 7-07-16 C4.3 MAILPAD REV  
 7-20-16 MULTIPLE REV.  
 12-7-16 AS BUILT

PROJECT NUMBER:  
 150351

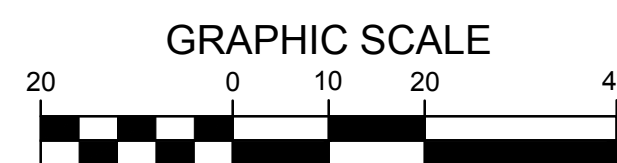
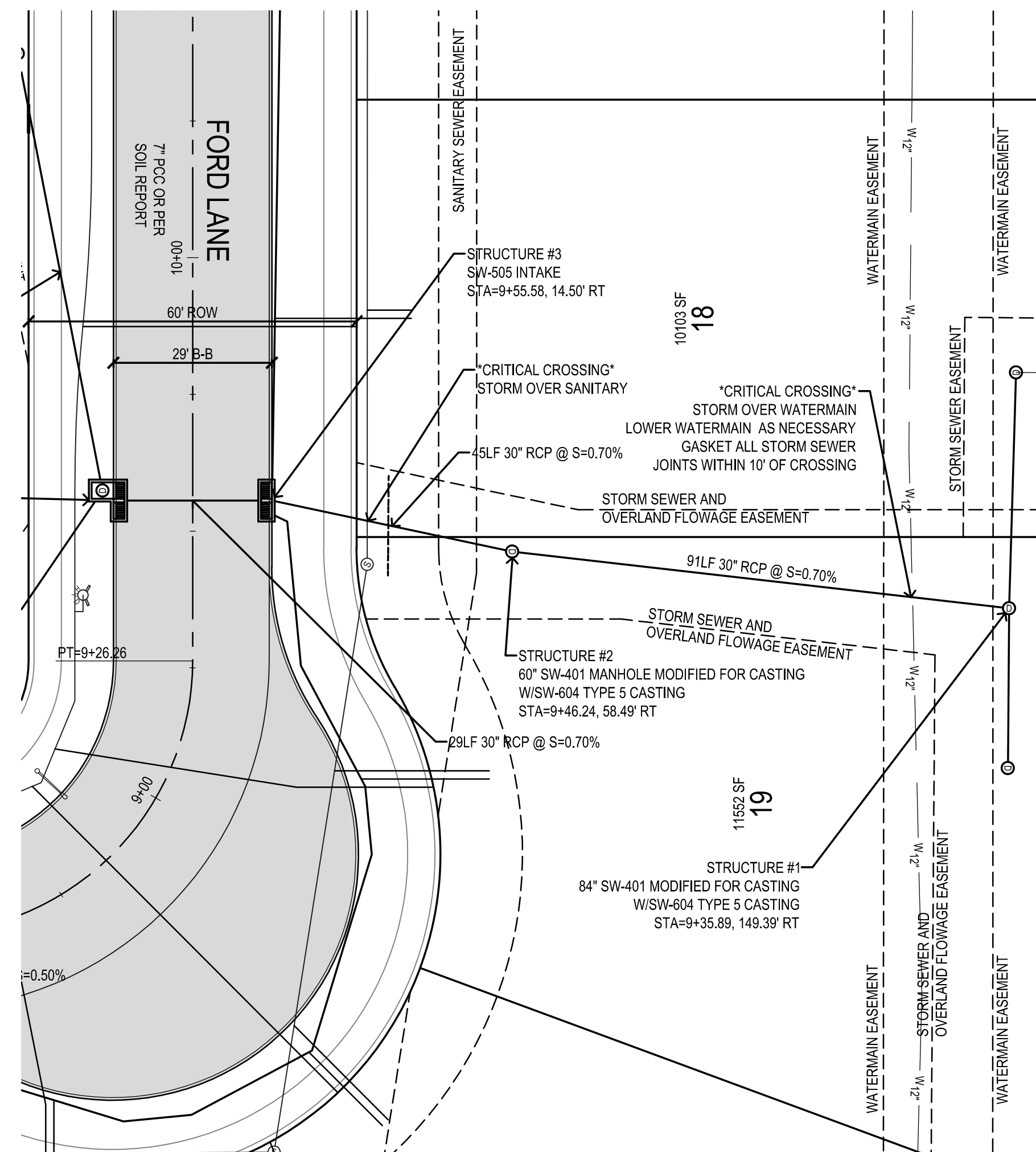
SHEET NUMBER:  
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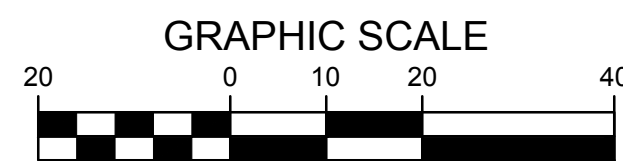
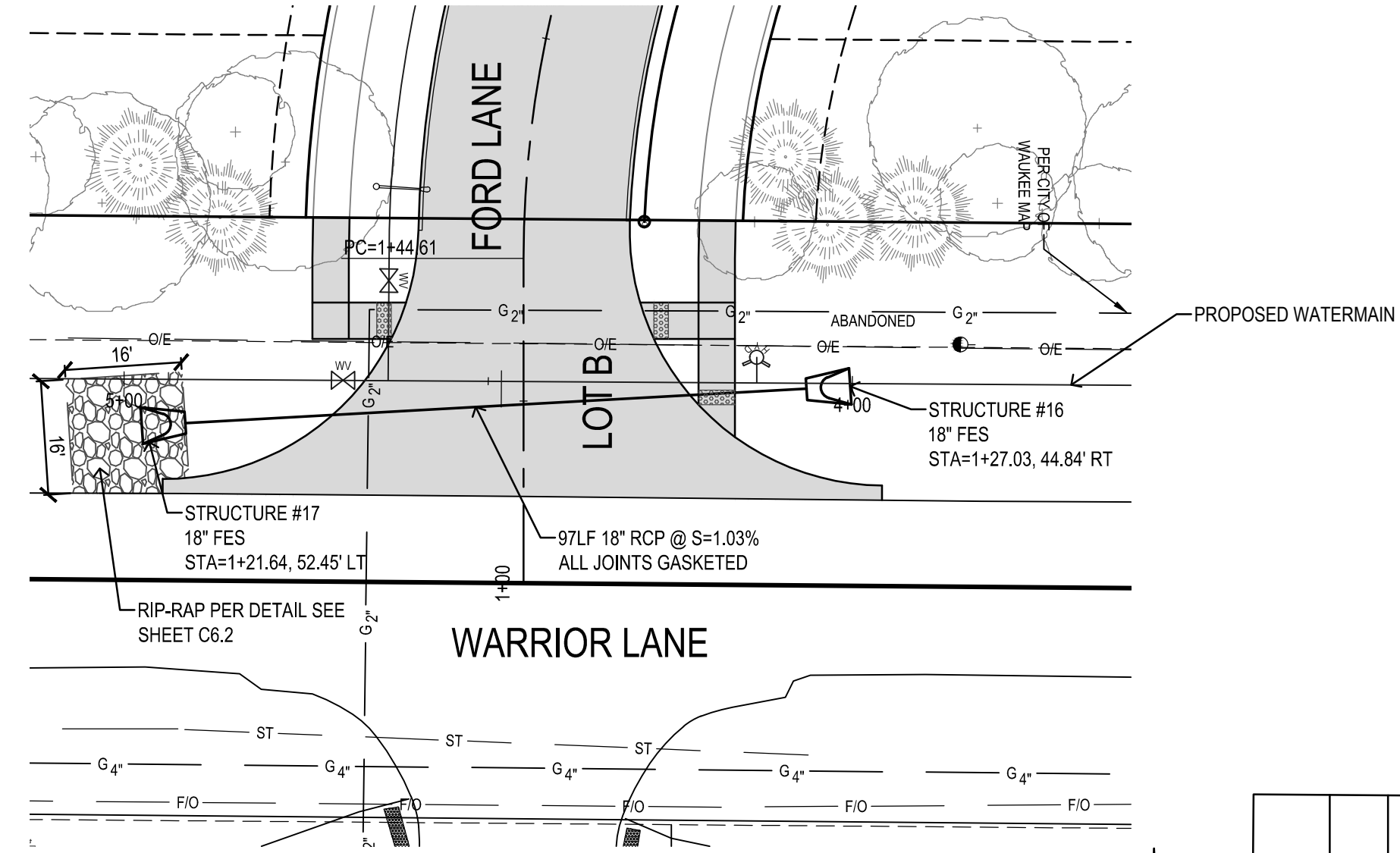
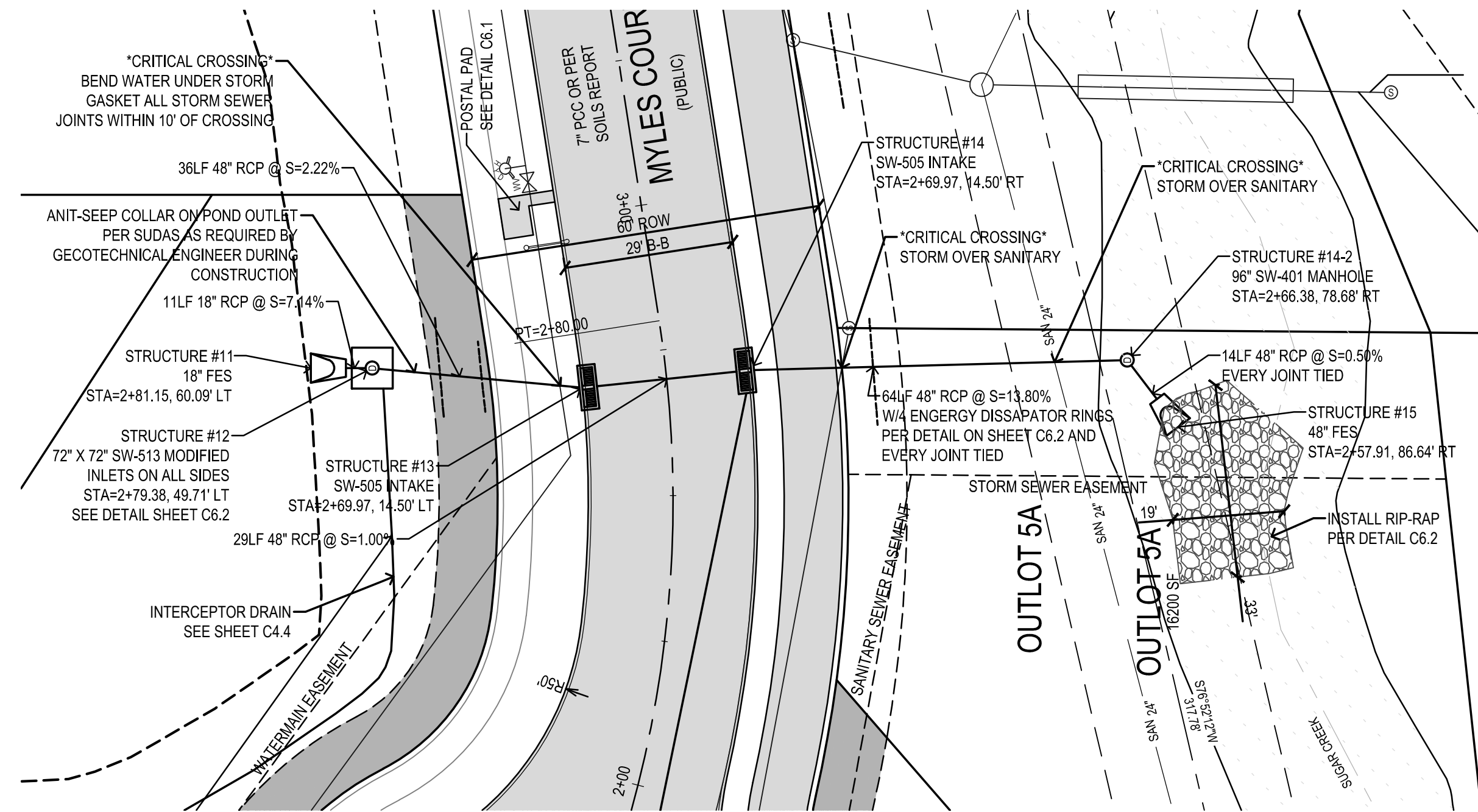
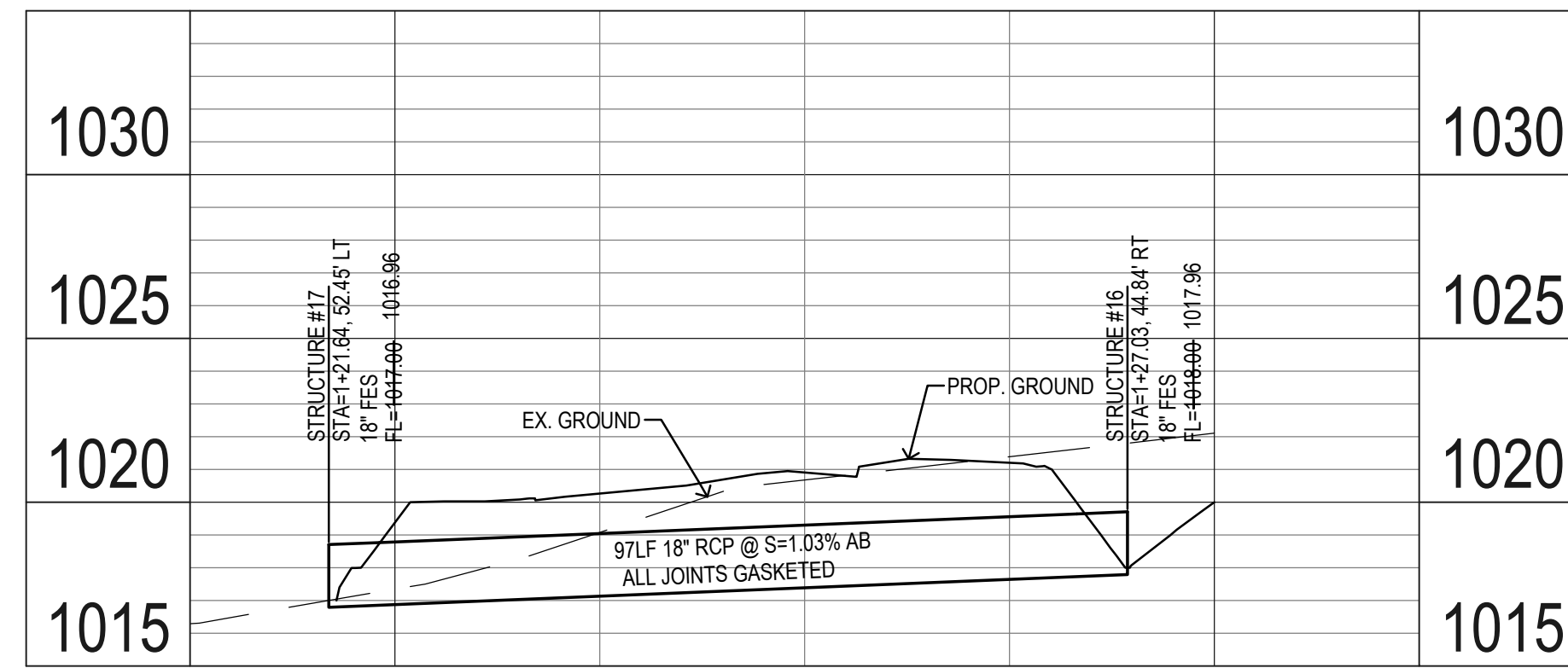
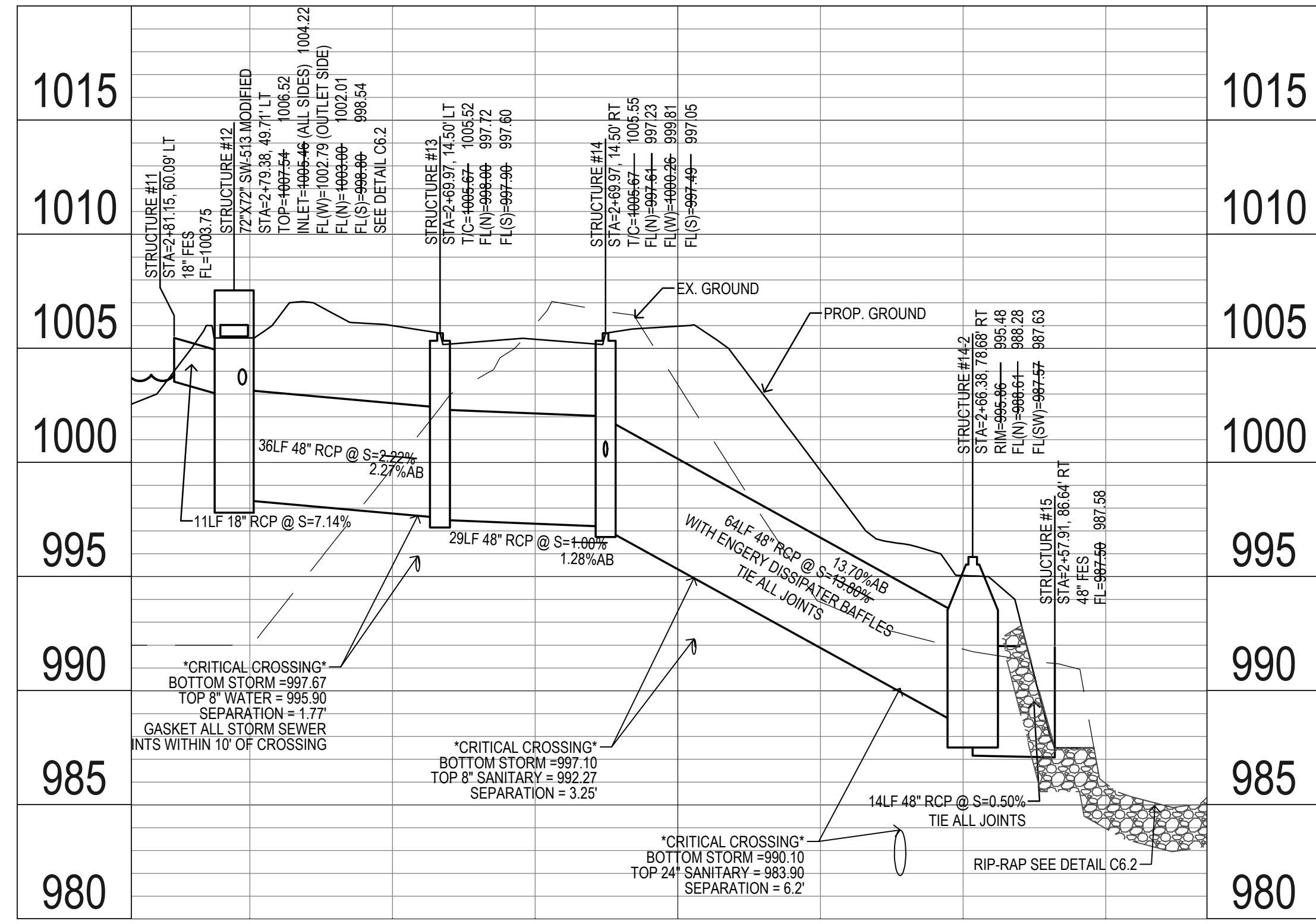
**CROSS RUN #1-1 - #1A**  
 STA 9+35  
 FORD LANE  
 SHEET C4.3



**CROSS RUN #3 - #1**  
 STA 9+45  
 FORD LANE  
 SHEET C4.3



REFERENCE NUMBER:	
DRAWN BY:	EAV
CHECKED BY:	DBB
REVISION DATE:	2-19-16 1st SUBMITTAL 3-14-16 2ND SUBMITTAL 3-30-16 3rd SUBMITTAL 4-11-16 6-30-16 C3.6 WATER REV 7-07-16 C4.3 MAILPAD REV 7-20-16 MULTIPLE REV. 12-7-16 AS BUILT
PROJECT NUMBER:	150351
SHEET NUMBER:	C4.5



**BRANDON'S RESERVE AS BUILT**  
**1010 WARRIOR LANE, WAUKEE IA**

**STORM SEWER AND PAVING**

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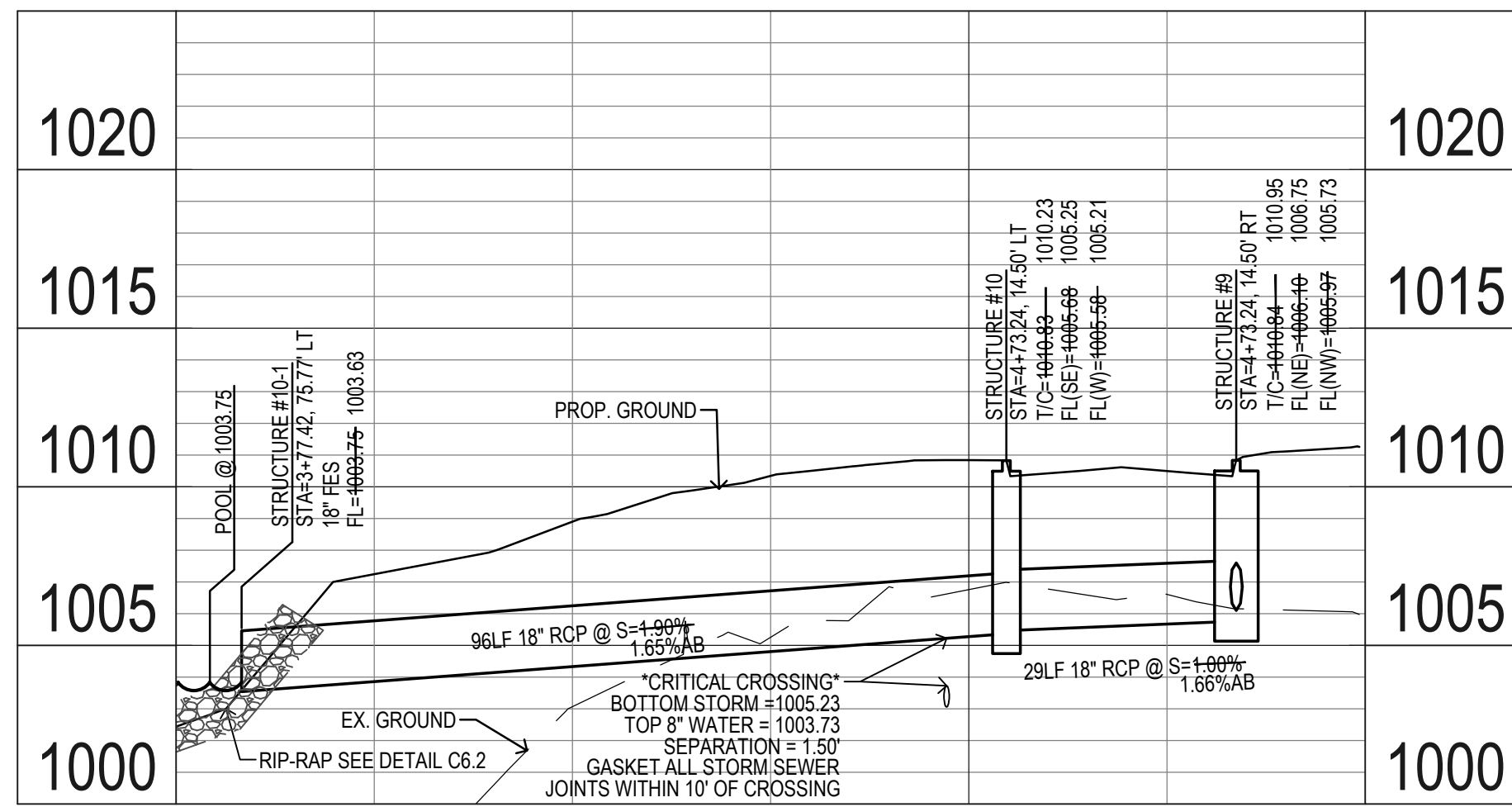
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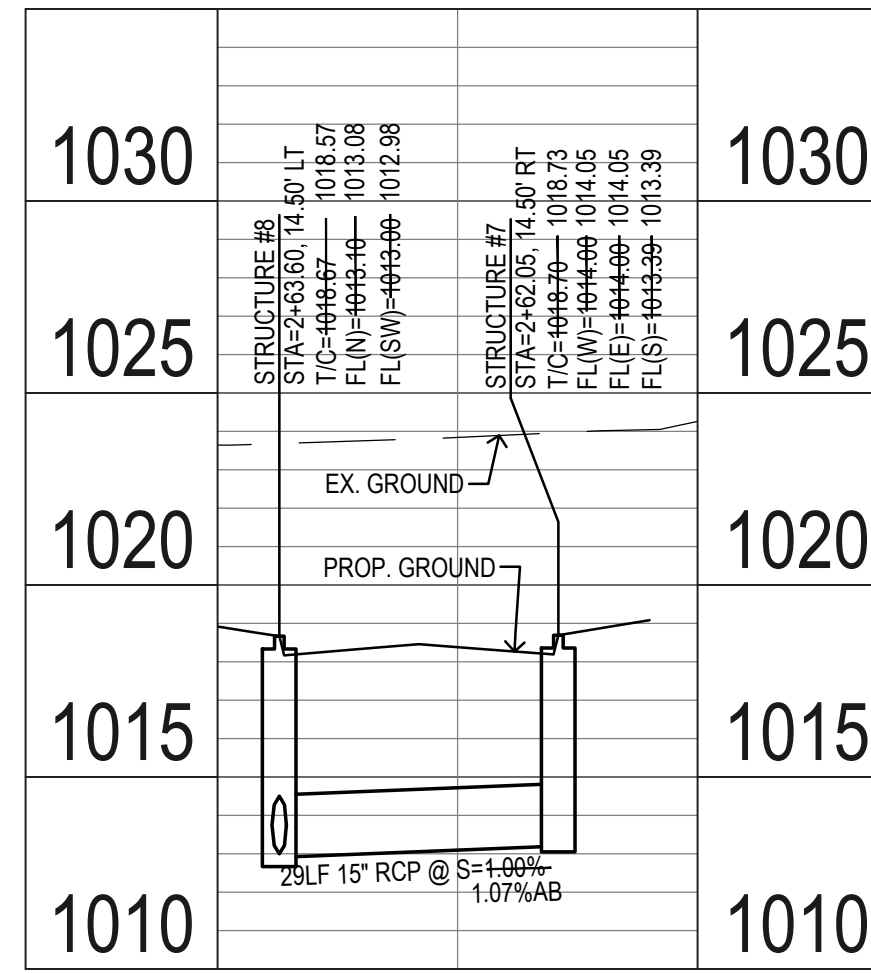
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 6-30-16 C3.6 WATER REV  
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 12-7-16 AS BUILT

PROJECT NUMBER:  
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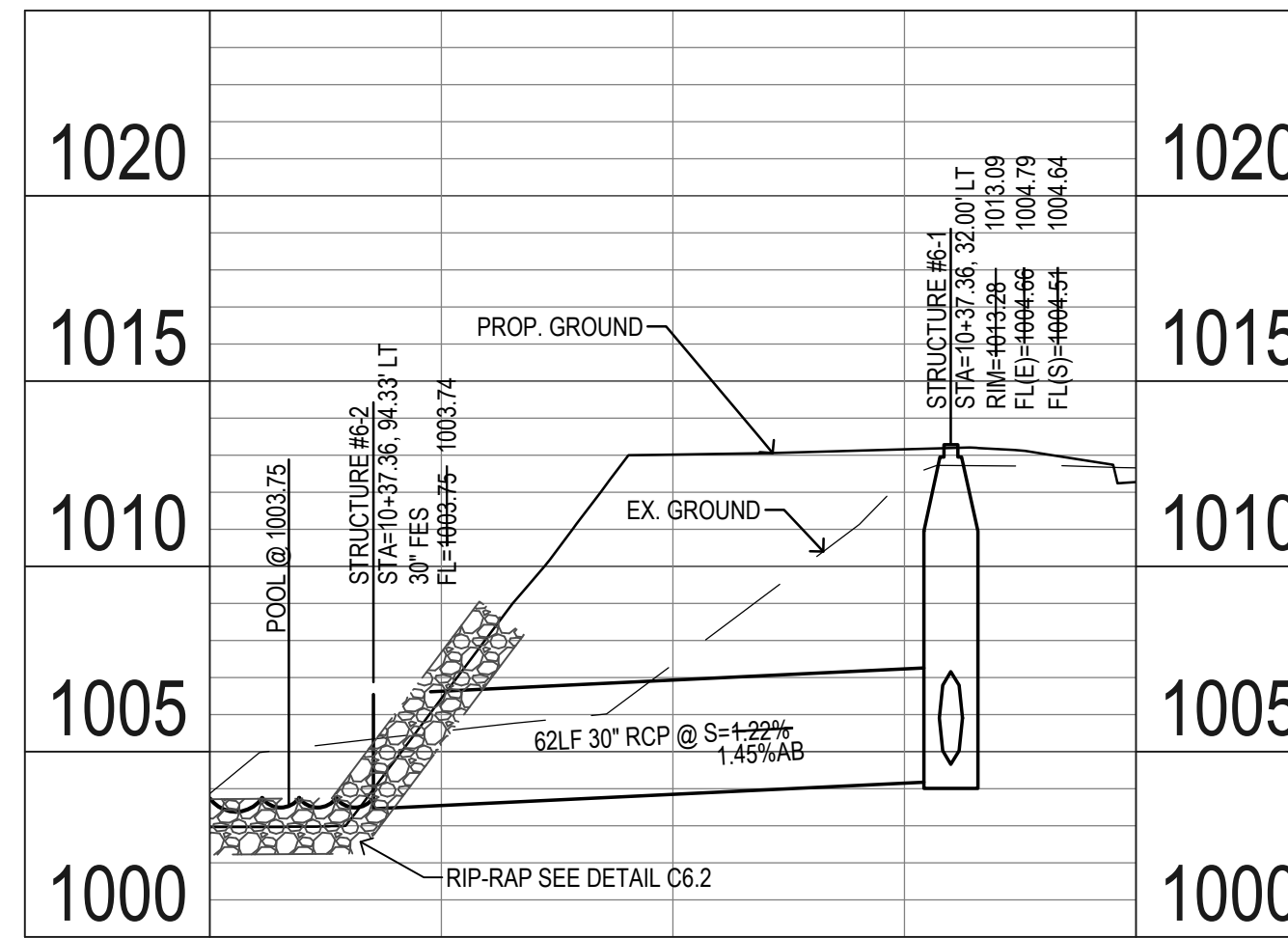
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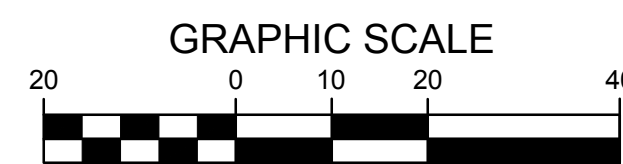
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 STA 4+73.25  
 FORD LANE  
 SHEET C4.1



CROSS RUN #7 - #8  
 STA 2+62.83  
 FORD LANE  
 SHEET C4.2 & C4.4



CROSS RUN #6-1 - #6-2  
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 FORD LANE  
 SHEET C4.3



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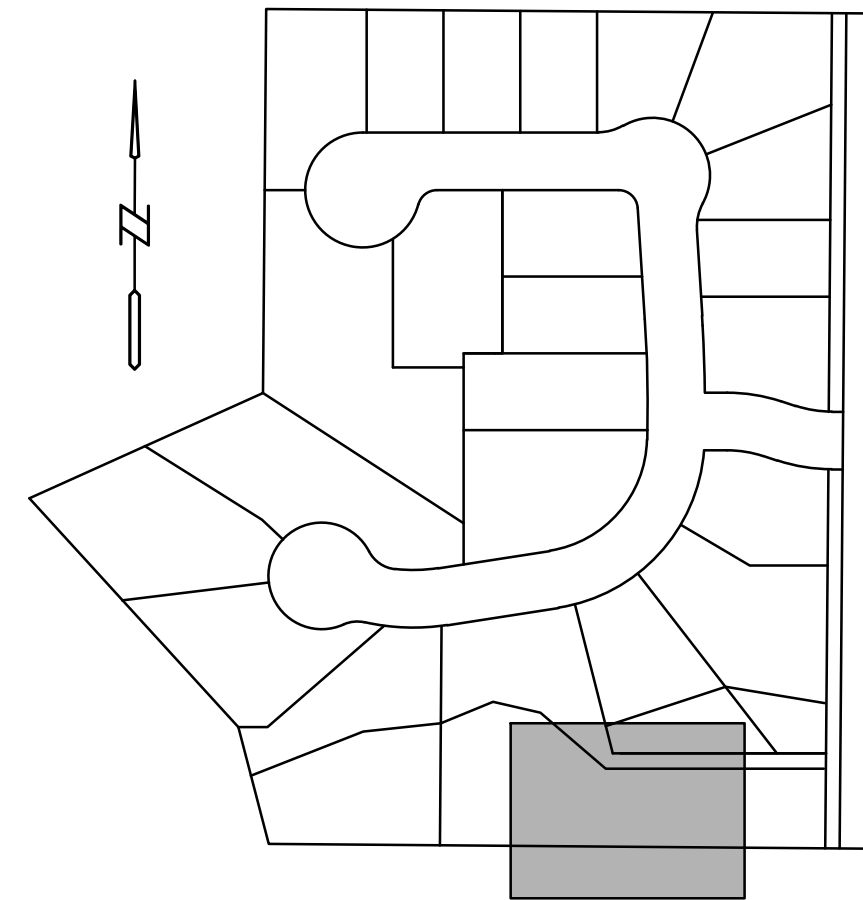
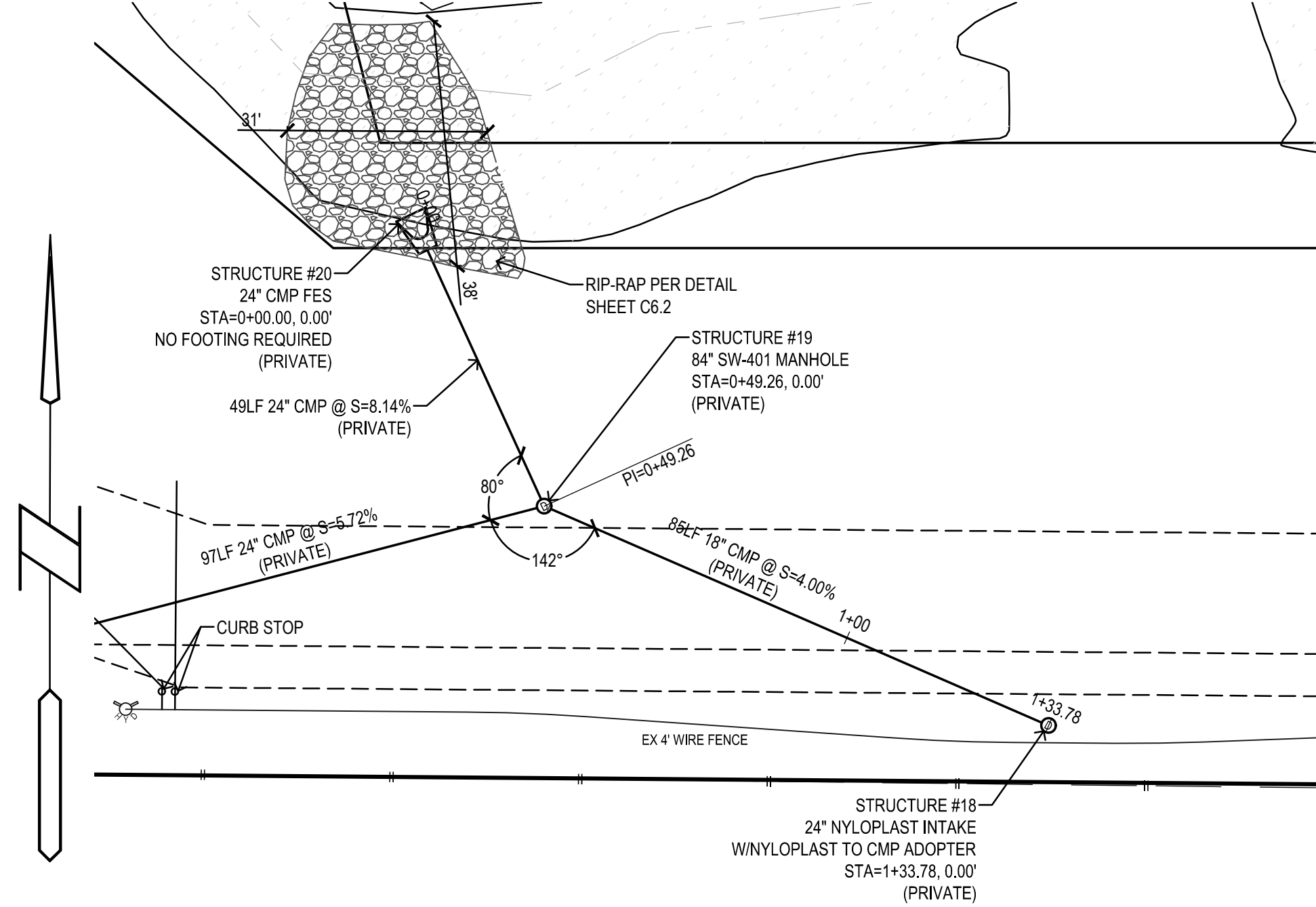
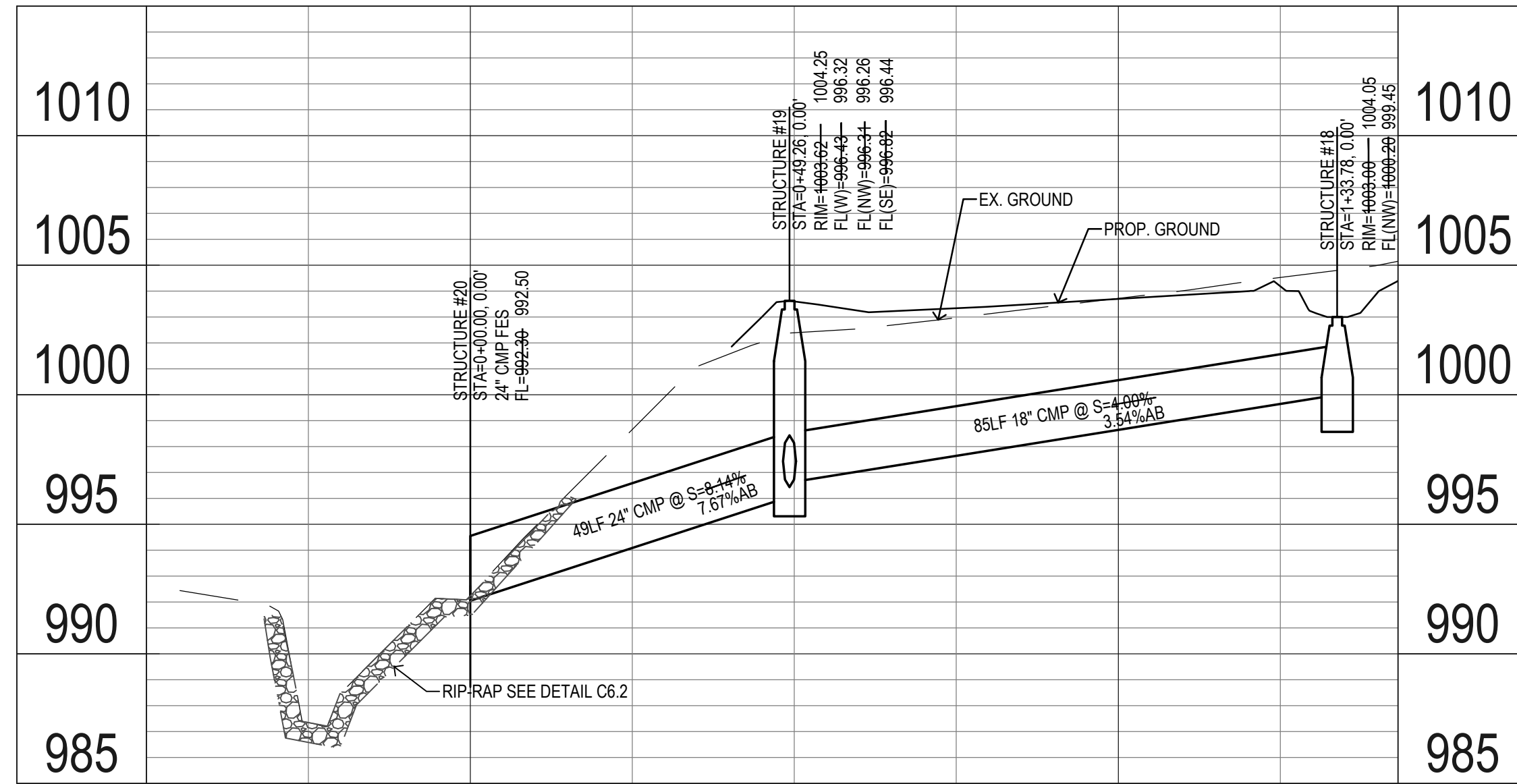
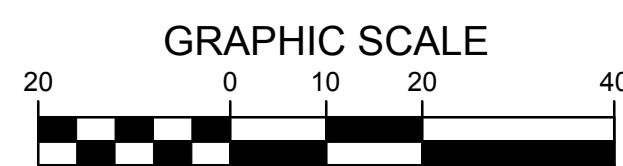
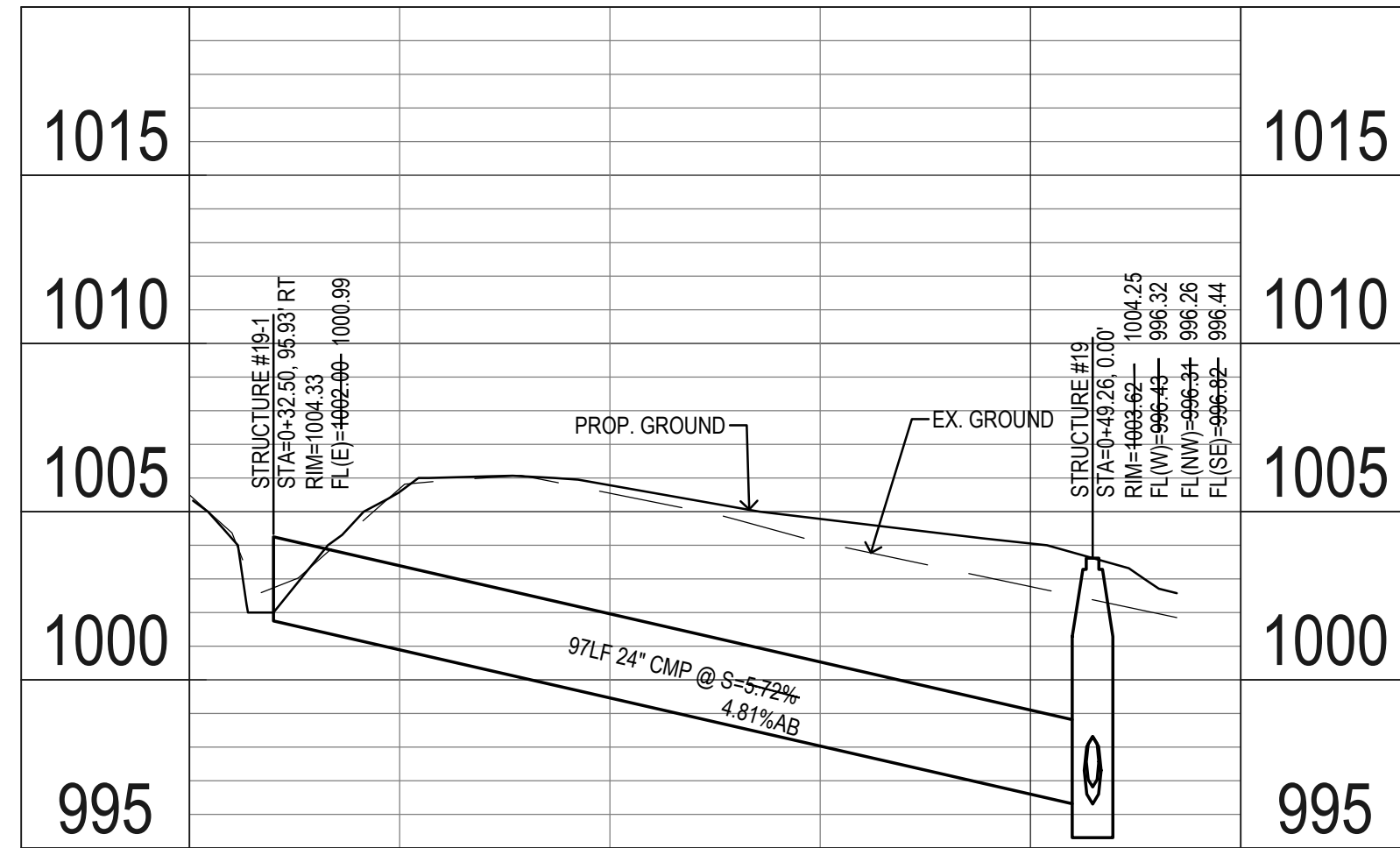
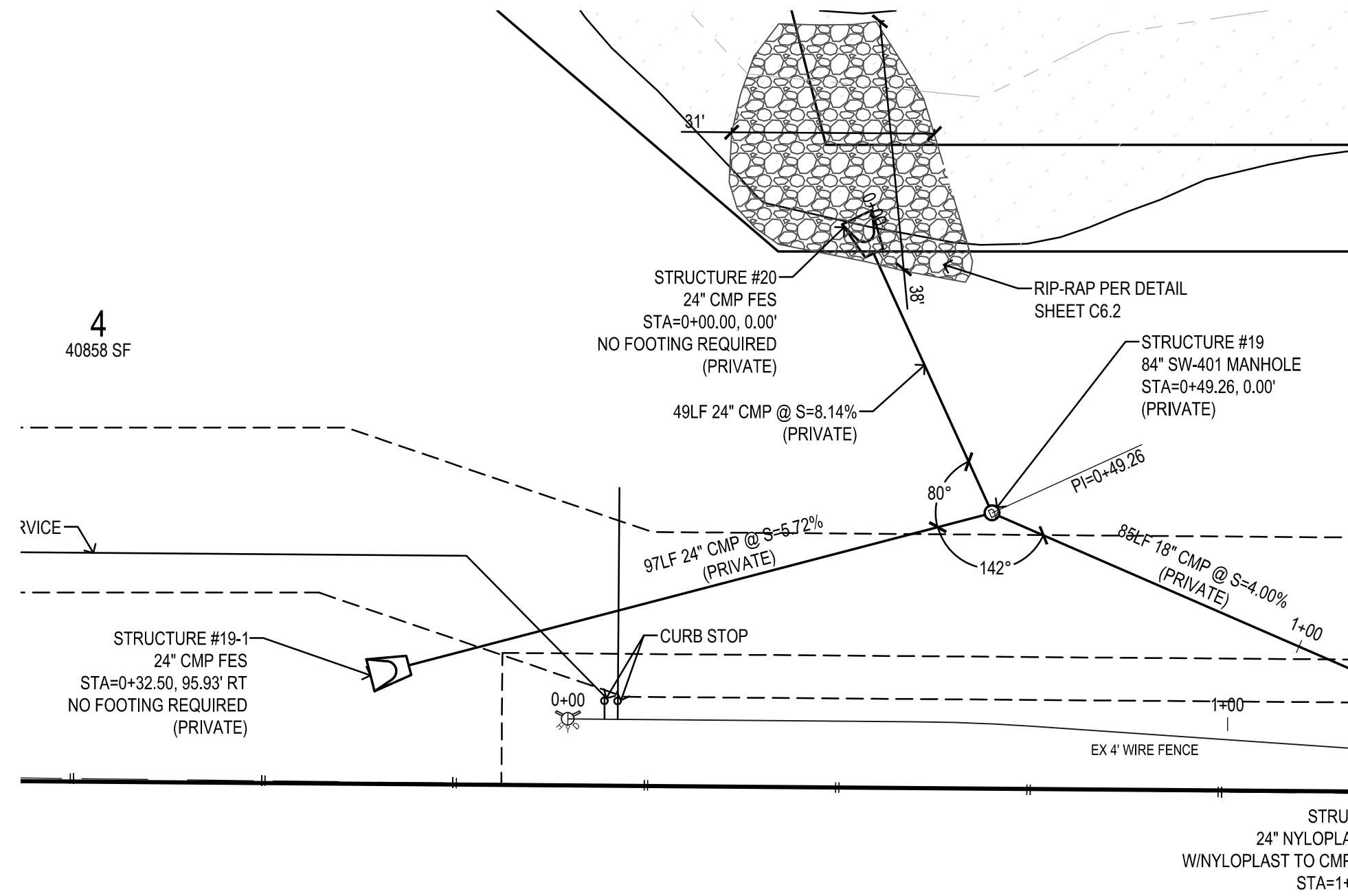
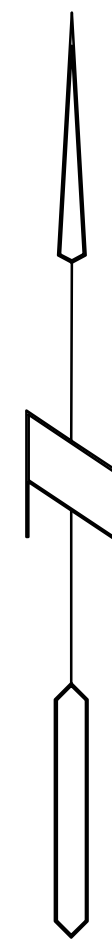
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CHECKED BY:  
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REVISION DATE:  
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 3-14-16 2ND SUBMITTAL  
 3-30-16 3rd SUBMITTAL  
 4-11-16  
 6-30-16 C3.6 WATER REV  
 7-07-16 C4.3 MAILPAD REV  
 7-20-16 MULTIPLE REV.  
 12-7-16 AS BUILT

PROJECT NUMBER:  
 150351

SHEET NUMBER:  
 C4.7



**BRANDON'S RESERVE AS BUILT**  
**1010 WARRIOR LANE, WAUKEE IA**

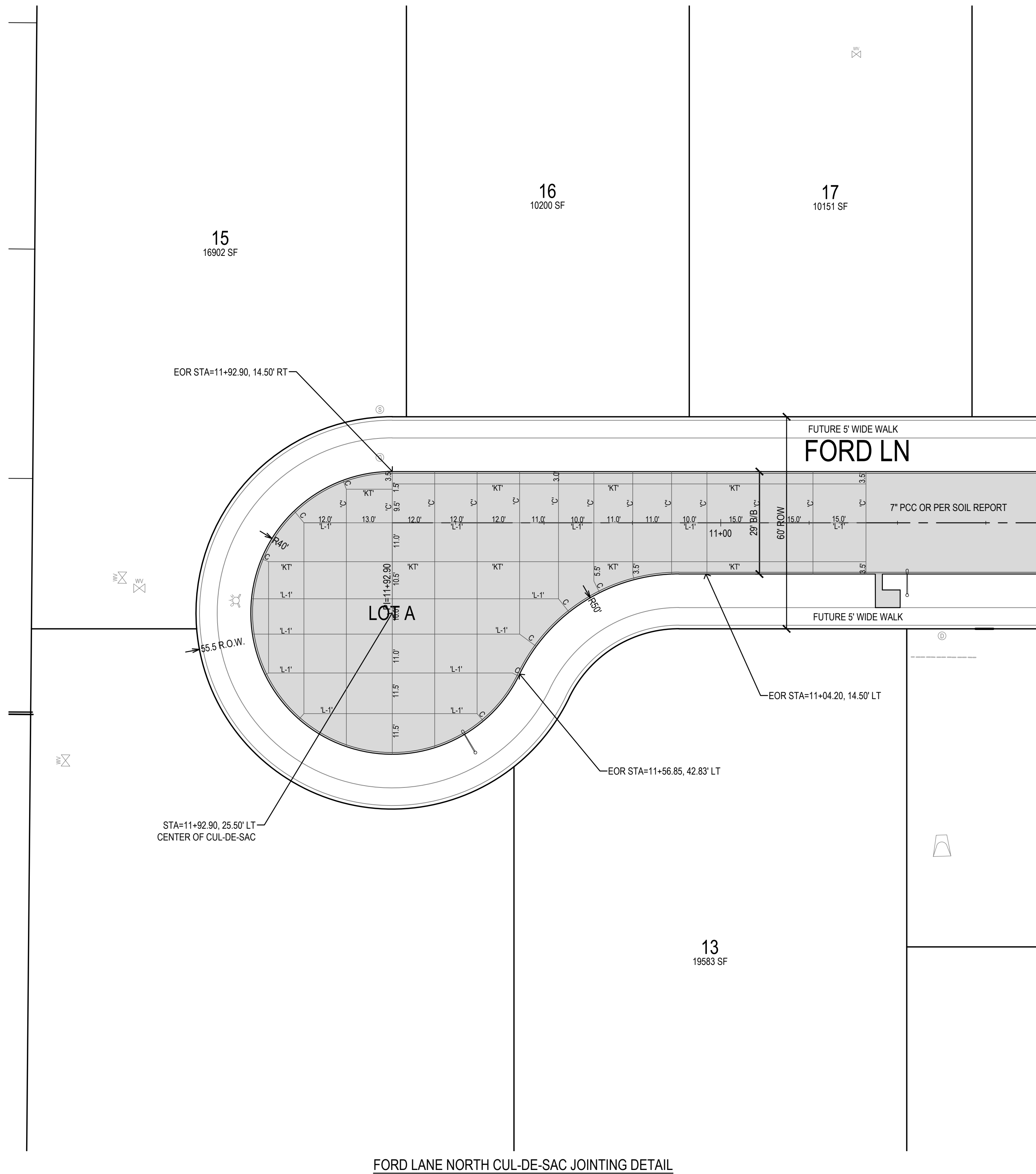
**STORM SEWER AND PAVING**

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PROJECT NUMBER:	150351
SHEET NUMBER:	C4.8

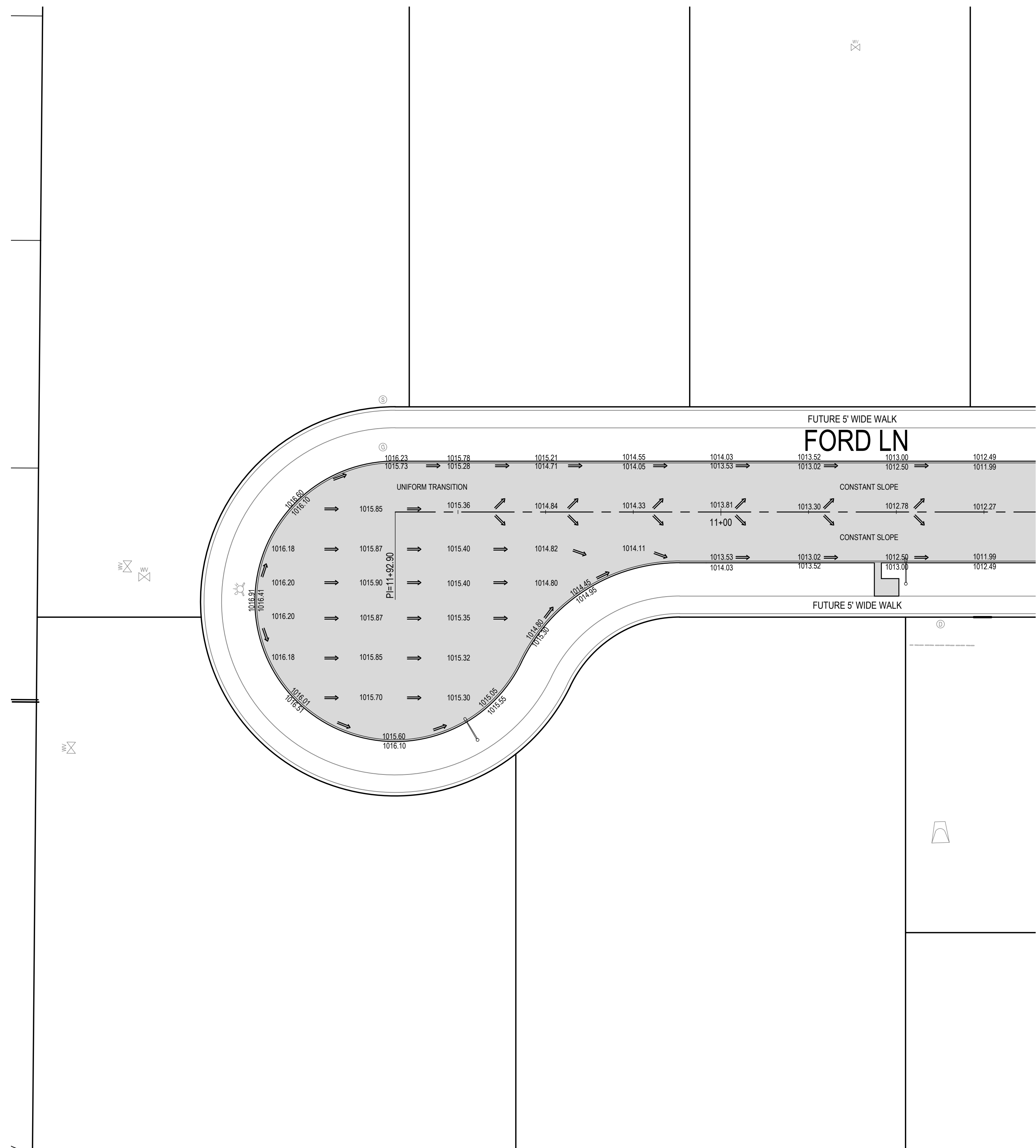
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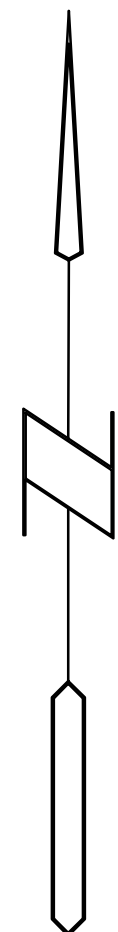
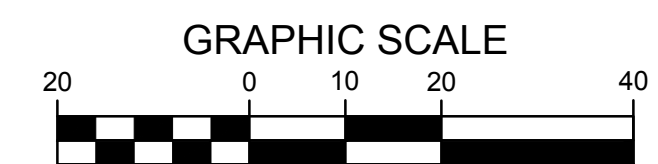
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FORD LANE NORTH CUL-DE-SAC JOINTING DETAIL



FORD LANE NORTH CUL-DE-SAC GRADING DETAIL



**BRANDON'S RESERVE AS BUILT**  
**1010 WARRIOR LANE, WAUKEE IA**

**INTERSECTION DETAILS**

REFERENCE NUMBER:

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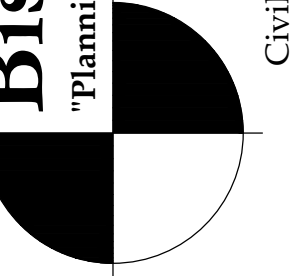
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 12-7-16 AS BUILT

PROJECT NUMBER:  
**150351**

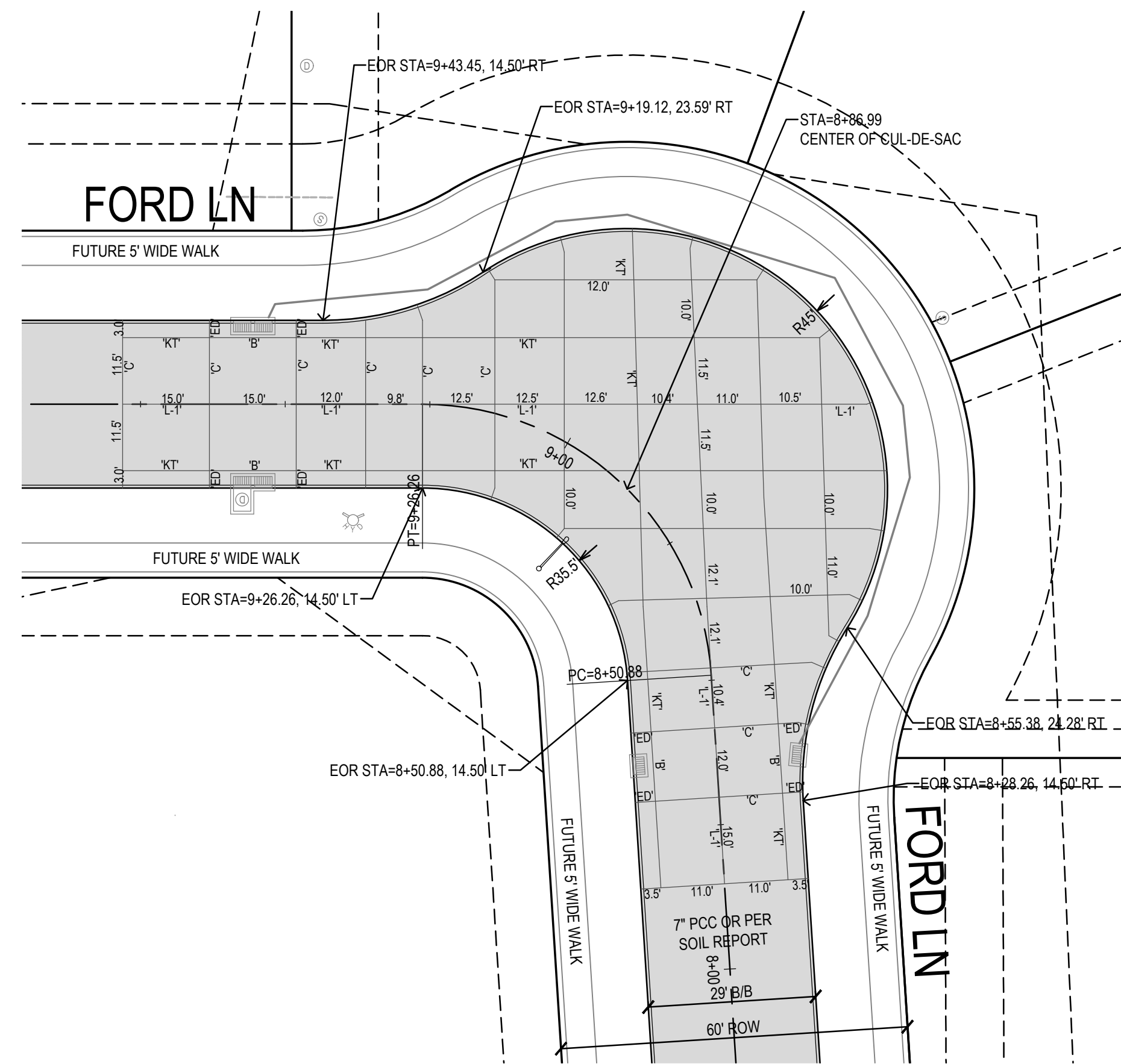
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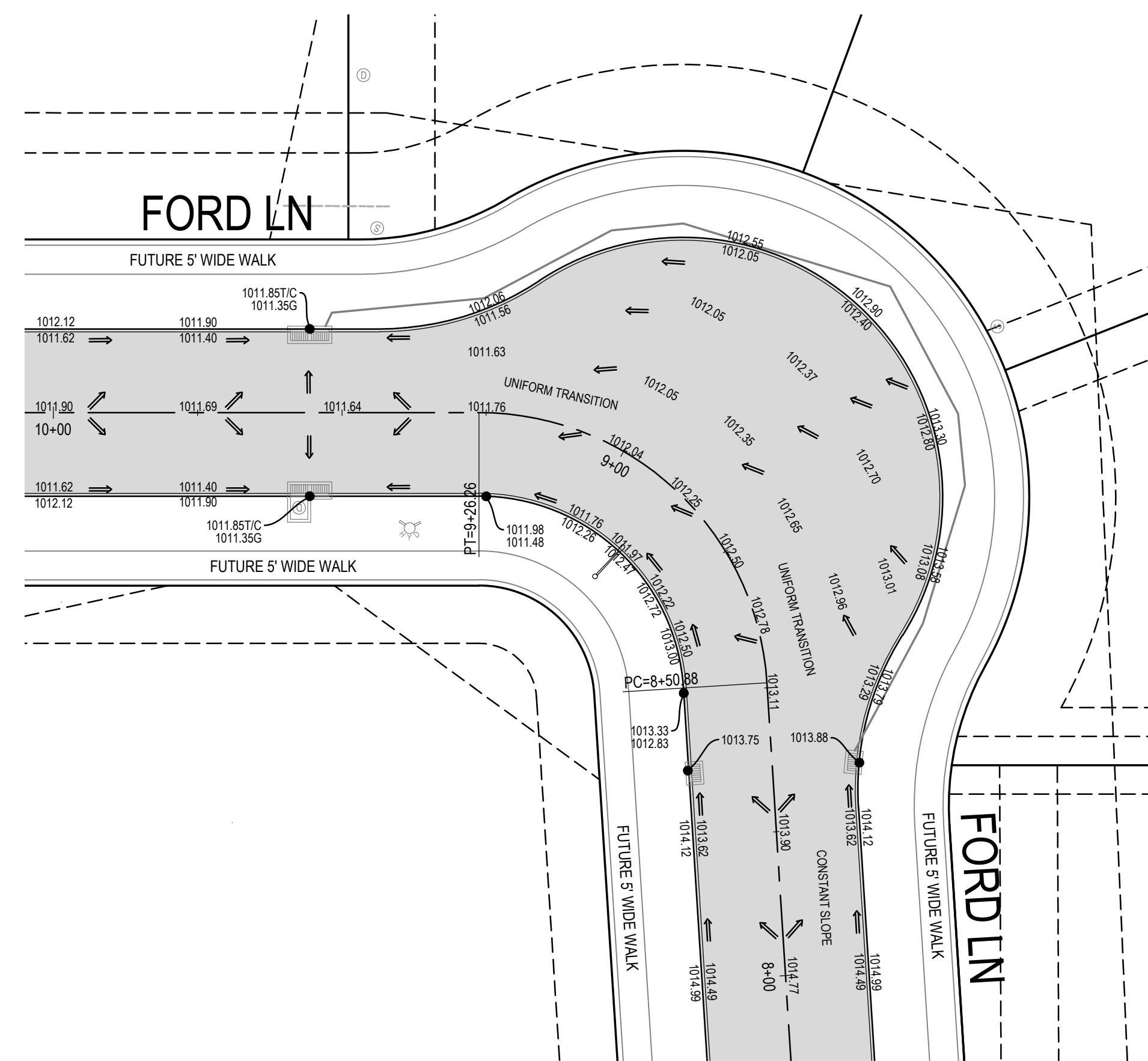
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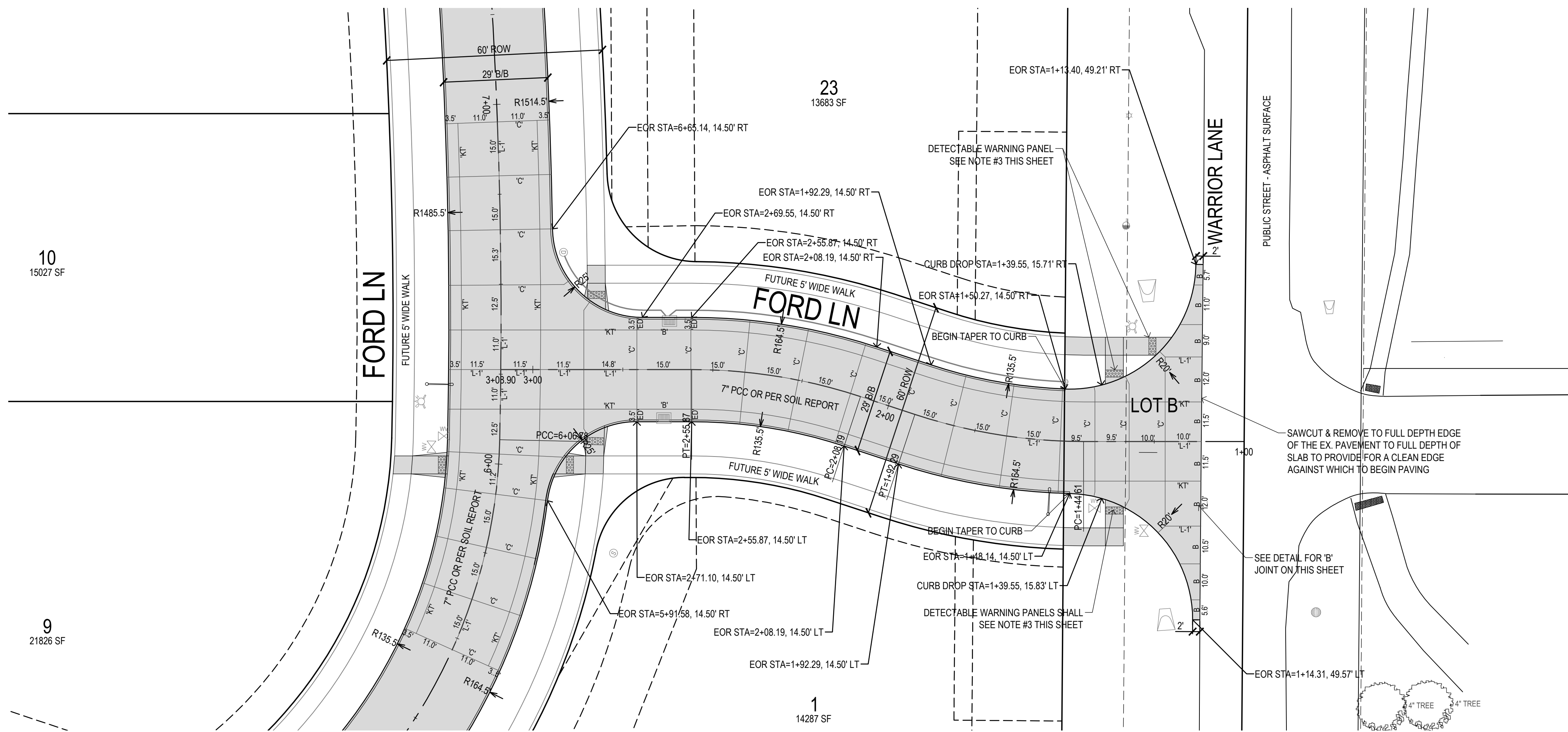
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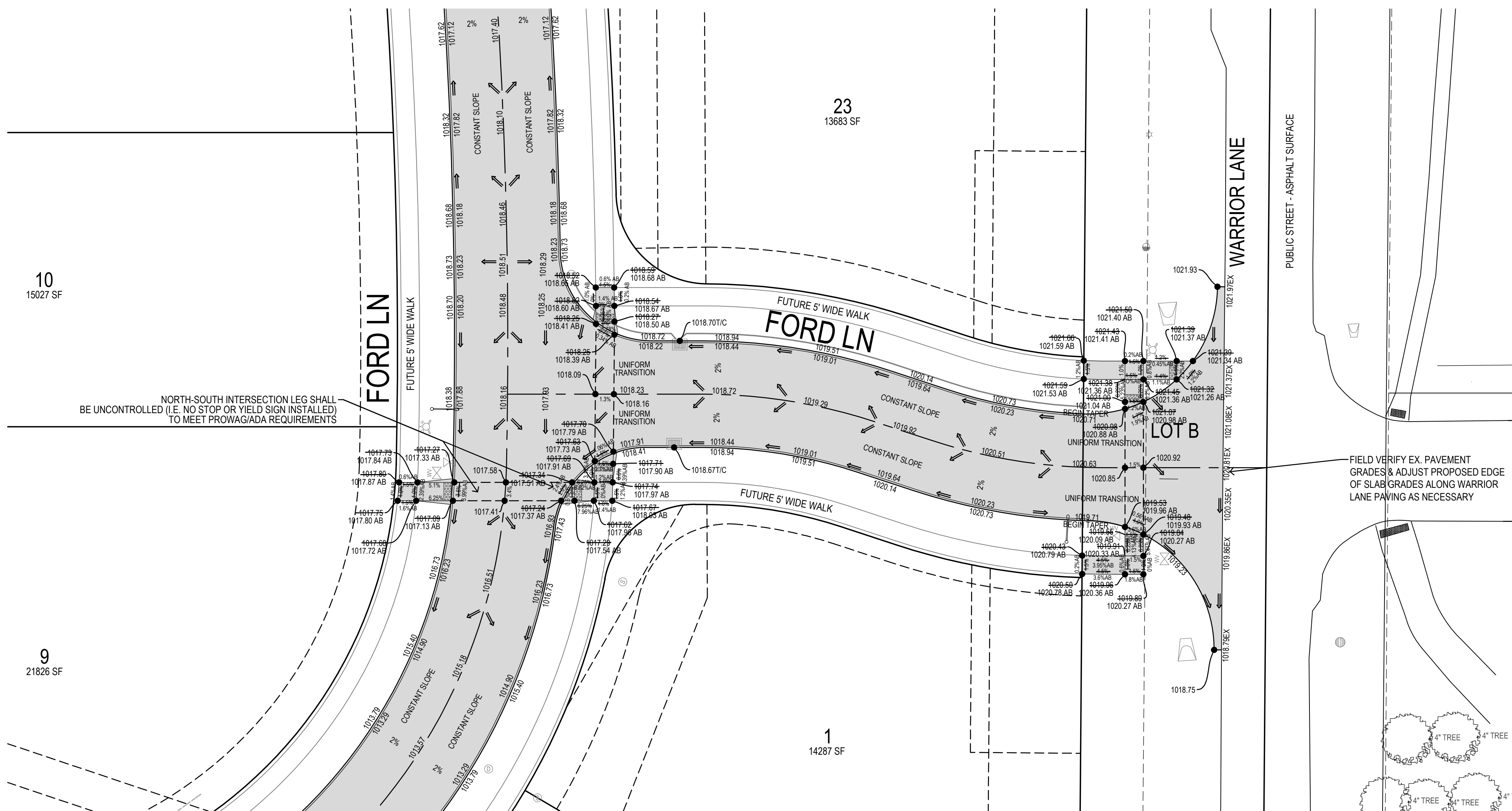
FORD LANE "KNUCKLE" JOINTING DETAIL



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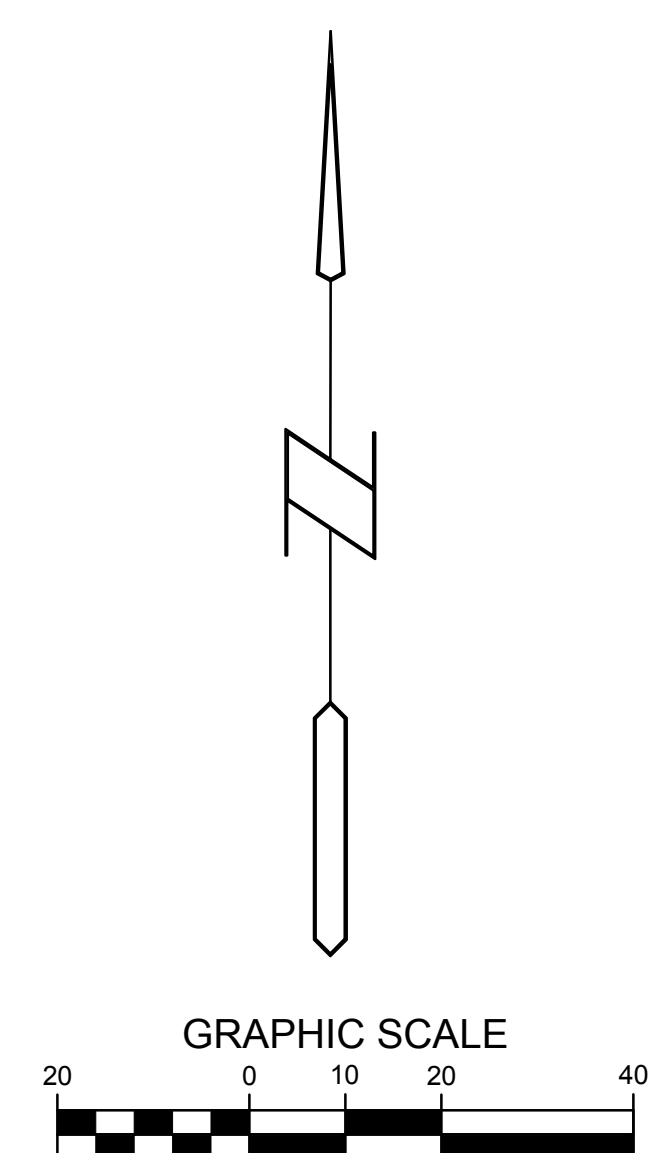
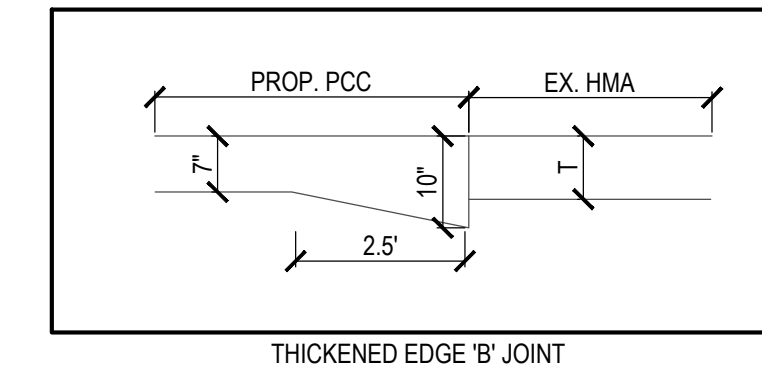
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FORD LANE GRADING DETAIL

**GENERAL NOTES:**

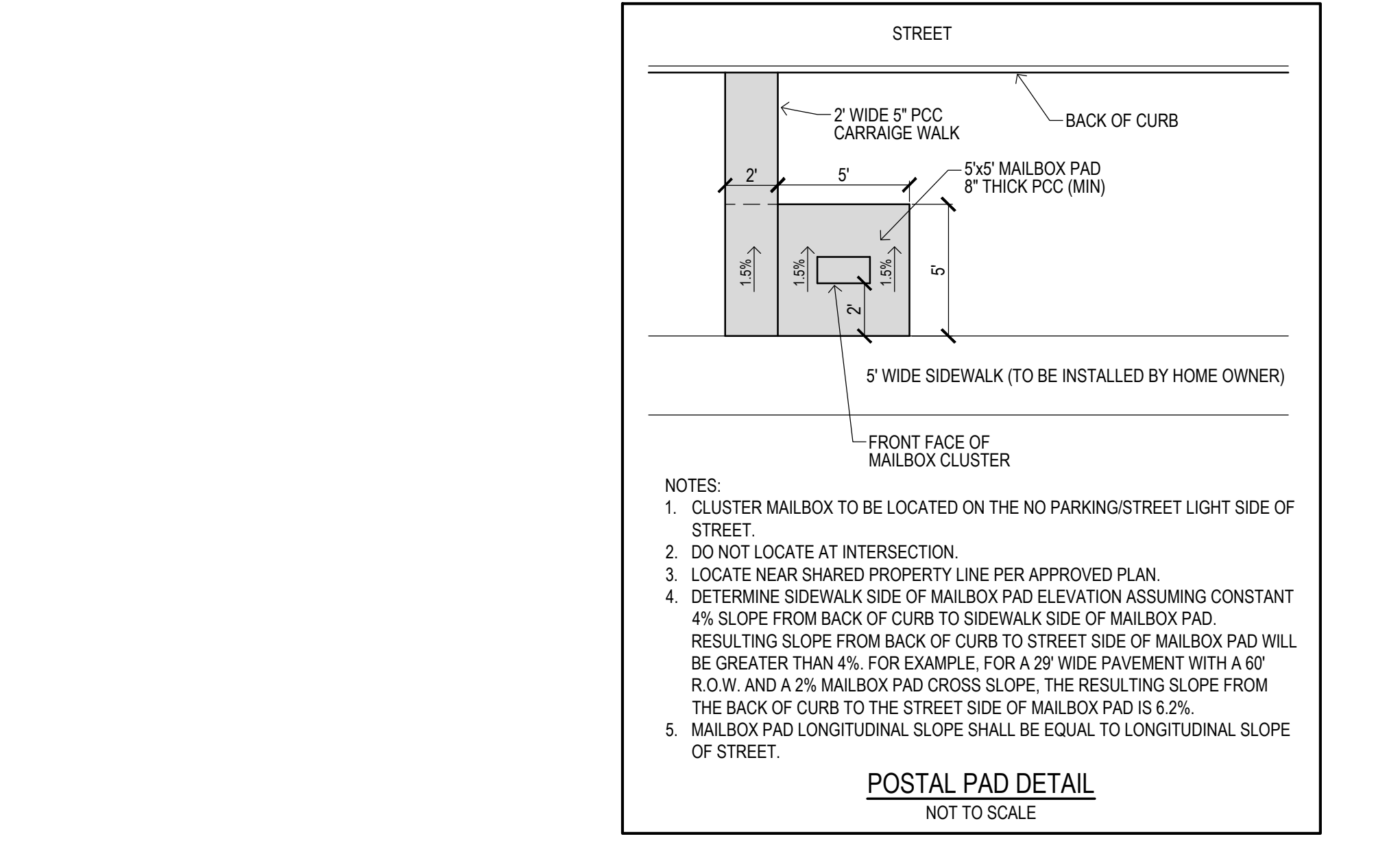
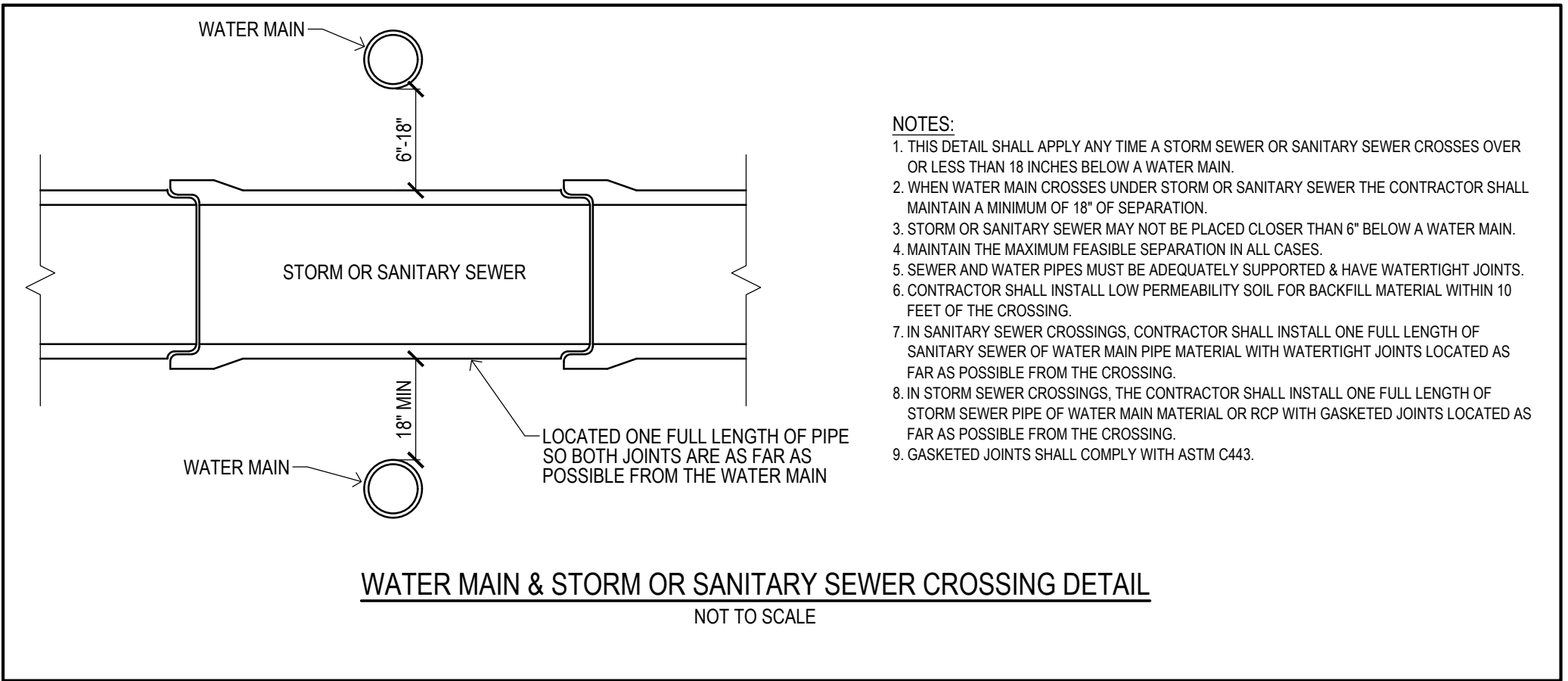
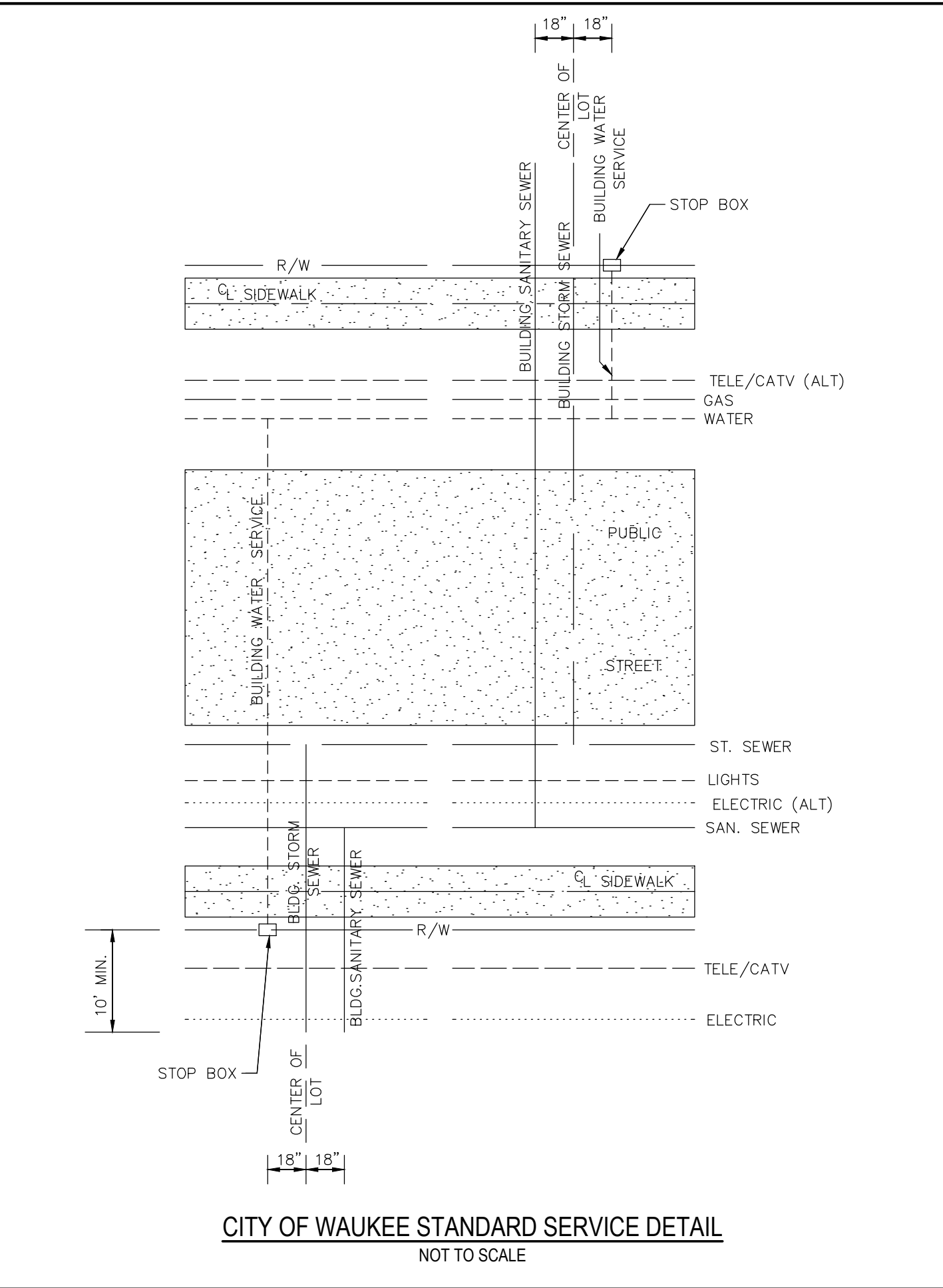
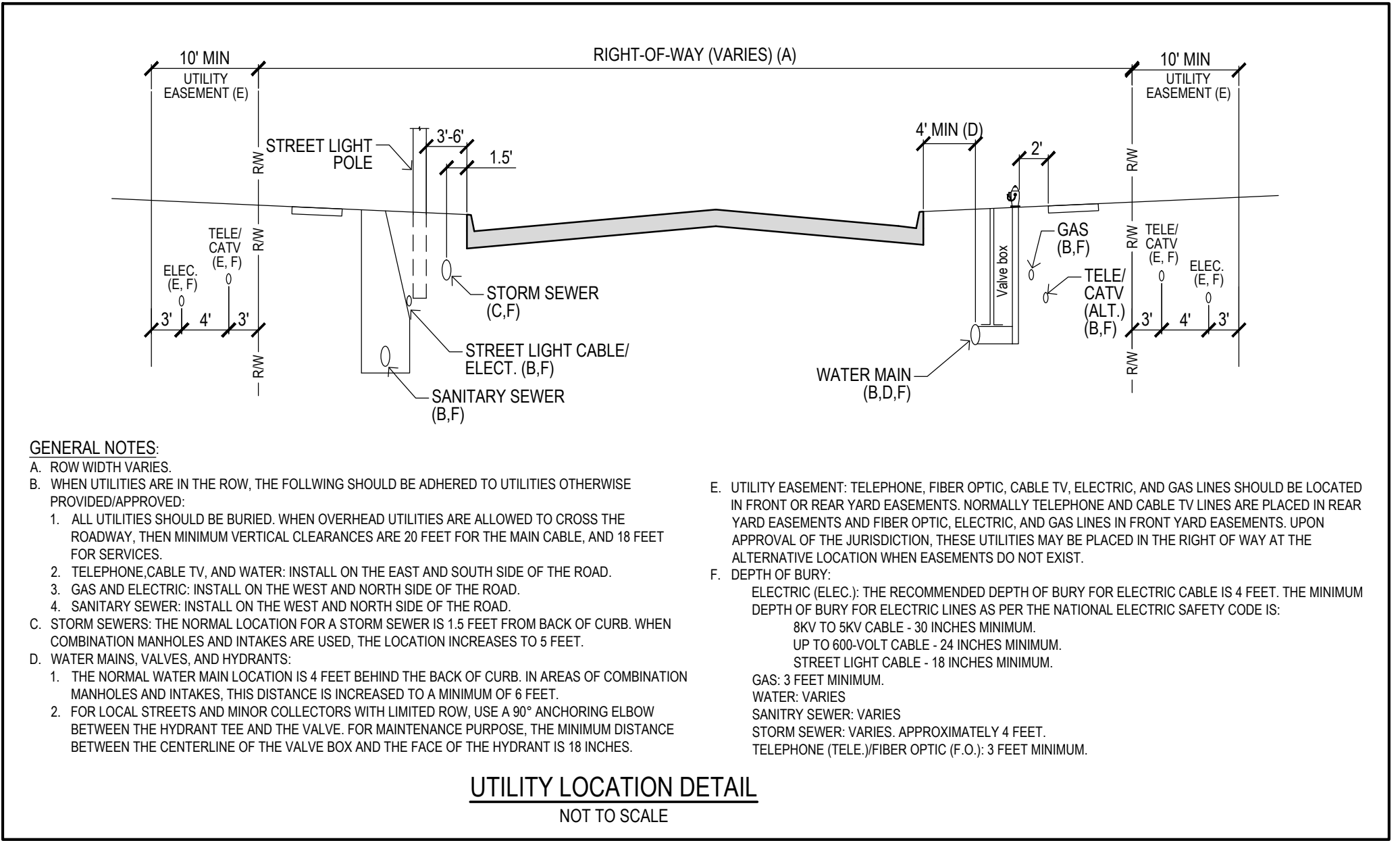
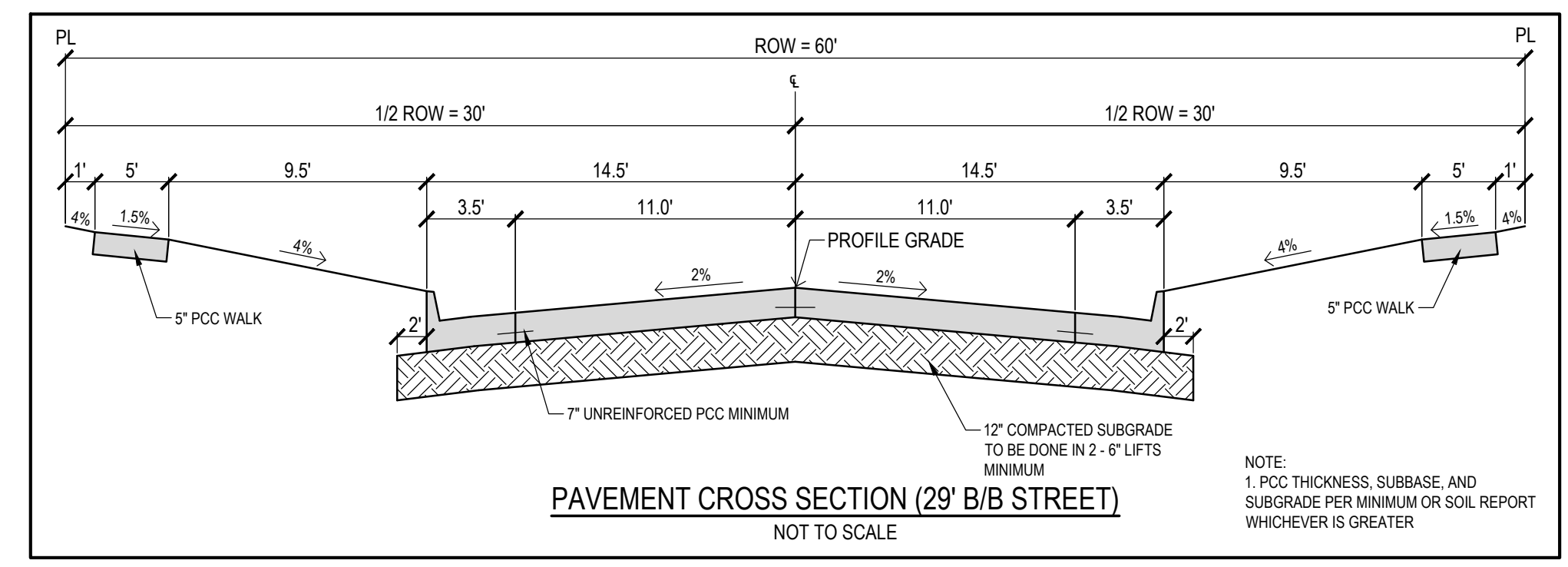
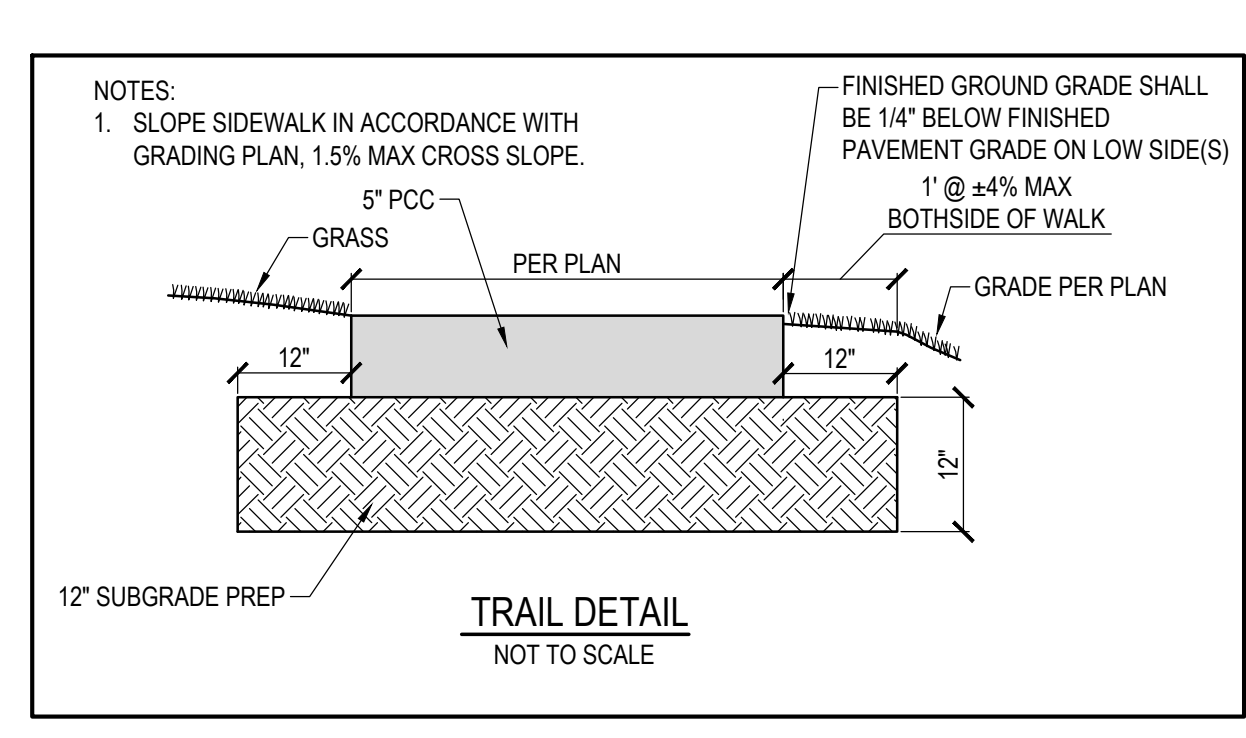
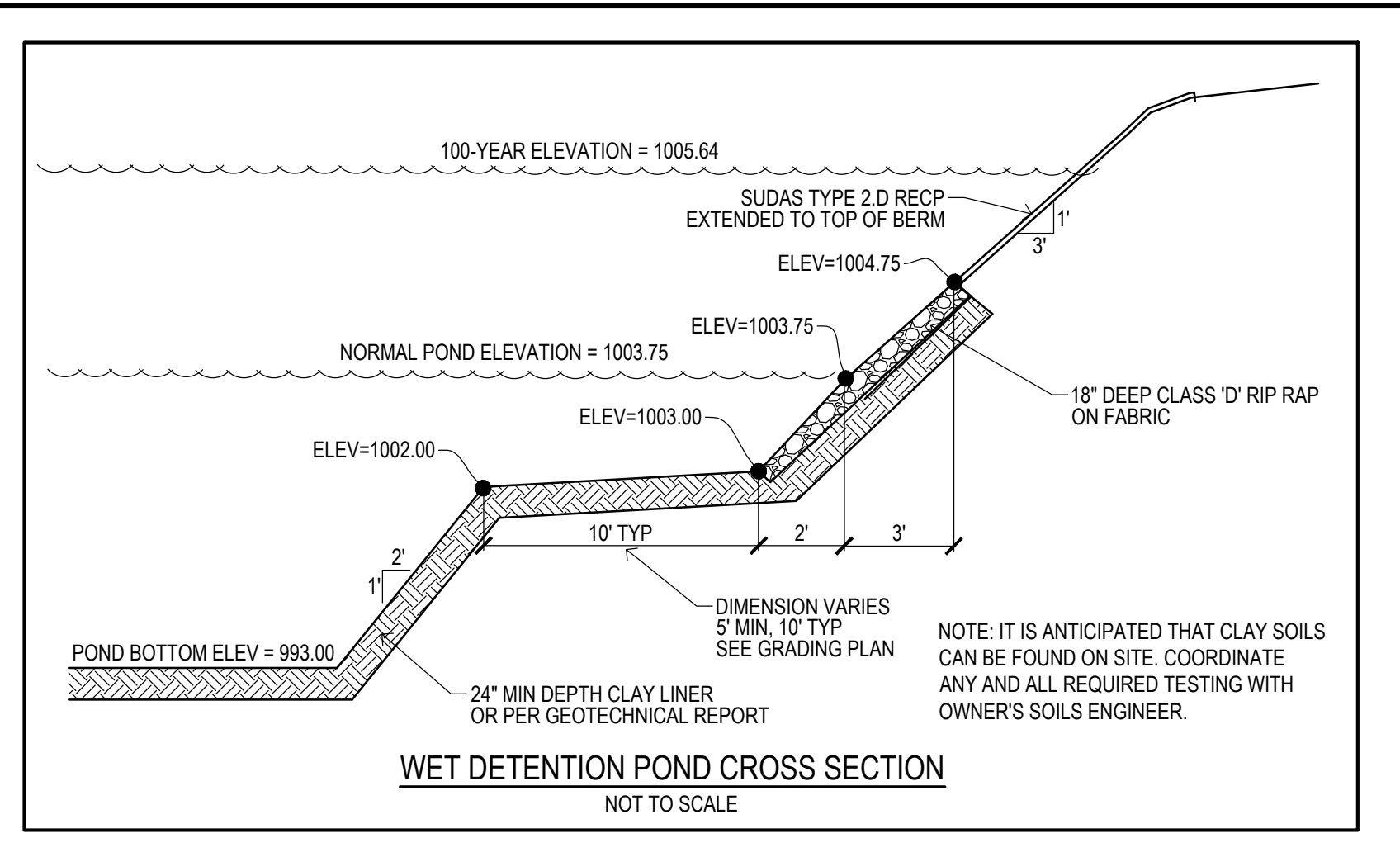
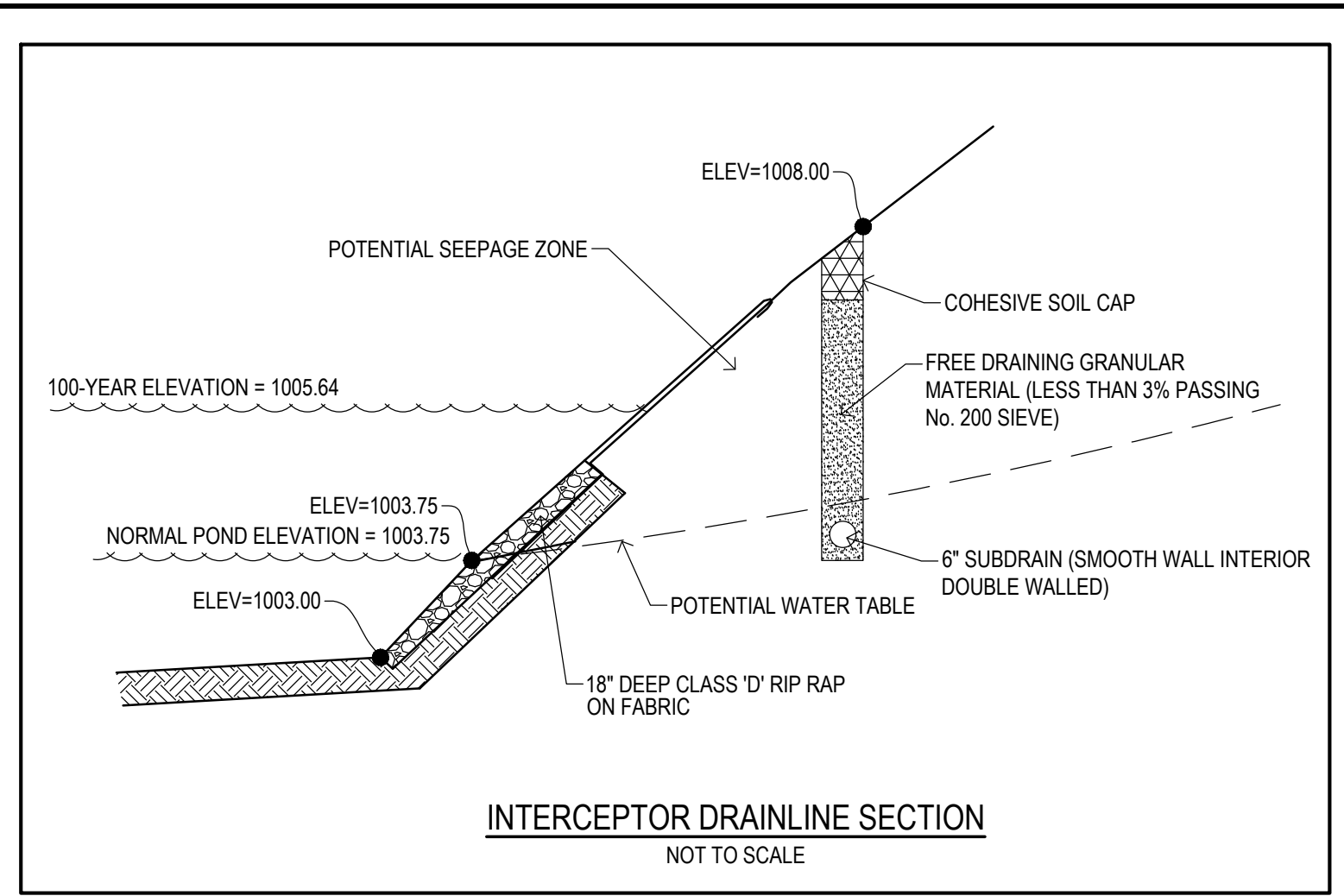
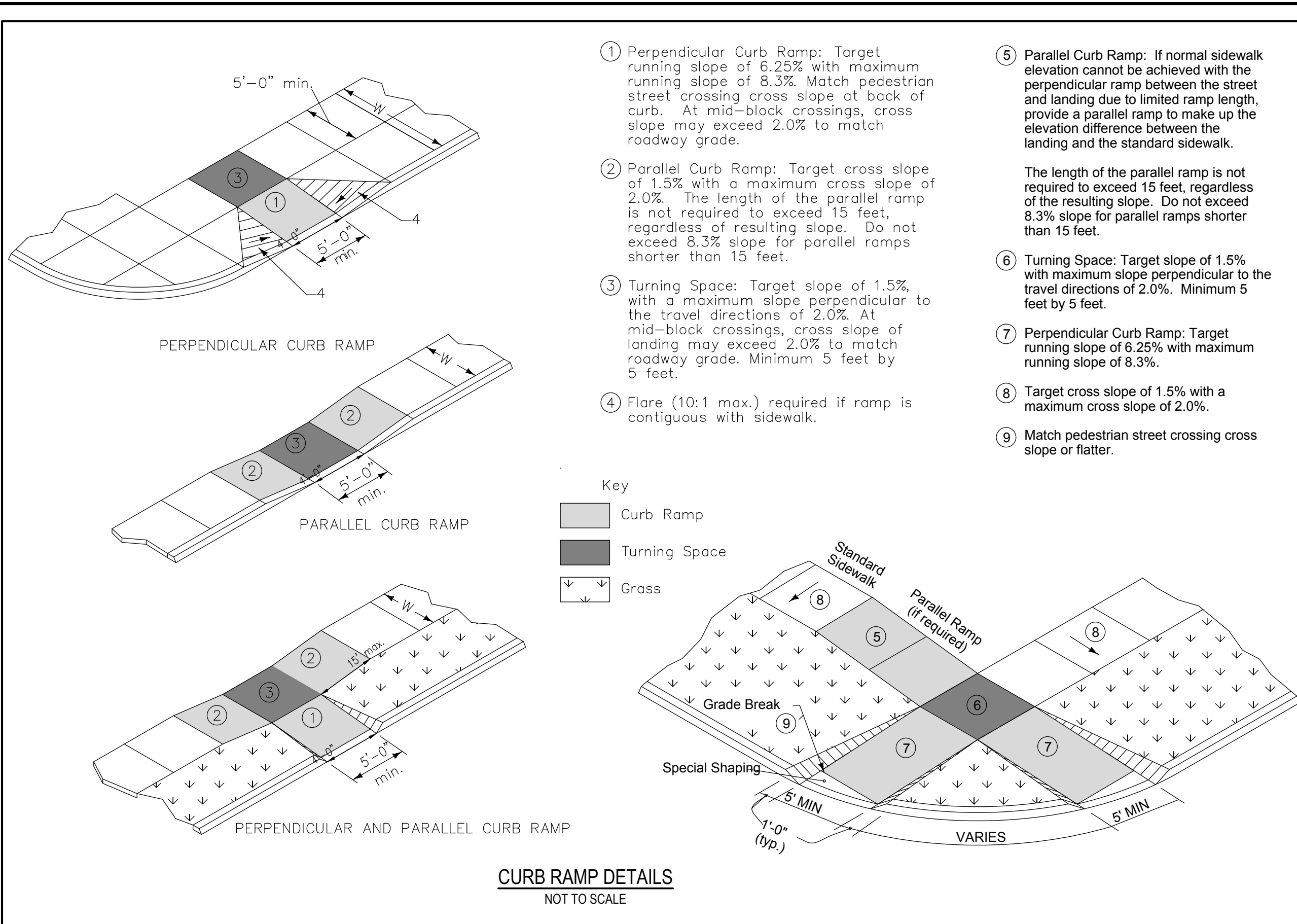
1. FIELD VERIFY EXISTING PAVEMENT GRADES & ADJUST PROPOSED EDGE OF SLAB GRADES ALONG WARRIOR LANE PAVING AS NECESSARY.
2. SAWCUT & REMOVE TO FULL DEPTH OF EX. PAVEMENT TO FULL DEPTH OF SLAB TO PROVIDE FOR A CLEAN EDGE AGAINST WHICH TO BEGIN PAVING.
3. DETECTABLE WARNING PANELS SHALL EXTEND A MINIMUM OF 2 FEET IN THE DIRECTION OF PEDESTRIAN TRAVEL AND SHALL BE CONTINUOUS, EXTENDING THE FULL WIDTH OF THE CURB RAMP OR PEDESTRIAN ACCESS ROUTE.
4. ALL SPOT GRADES INDICATED FOR PEDESTRIAN CROSSWALKS SHALL BE FIELD VERIFIED TO BE ADA COMPLIANT BASED ON ASBUILT ELEVATIONS OF GUTTER GRADE AT CROSSWALKS LOCATIONS PRIOR TO ANY STAKING OF CURB RAMP. SHOULD ASBUILT GUTTER GRADES NOT MATCH THE PLANS A SURVEYOR OR LICENSED ENGINEER SHALL REDESIGN THE CROSSWALK RAMP GRADES TO CONFORM TO ADA CODES.



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**BRANDON'S RESERVE AS BUILT**  
**1010 WARRIOR LANE, WAUKEE IA**  
**INTERSECTION DETAILS**

REFERENCE NUMBER:	
DRAWN BY:	EAV
CHECKED BY:	DBB
REVISION DATE:	2-19-16 1ST SUBMITTAL 3-14-16 2ND SUBMITTAL 3-30-16 3rd SUBMITTAL 4-11-16 6-30-16 C3.6 WATER REV 7-07-16 C4.3 MAILPAD REV 7-20-16 MULTIPLE REV. 12-7-16 AS BUILT
PROJECT NUMBER:	150351
SHEET NUMBER:	C5.3



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**DETAILS SHEET**

REFERENCE NUMBER:

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CHECKED BY:  
DDB

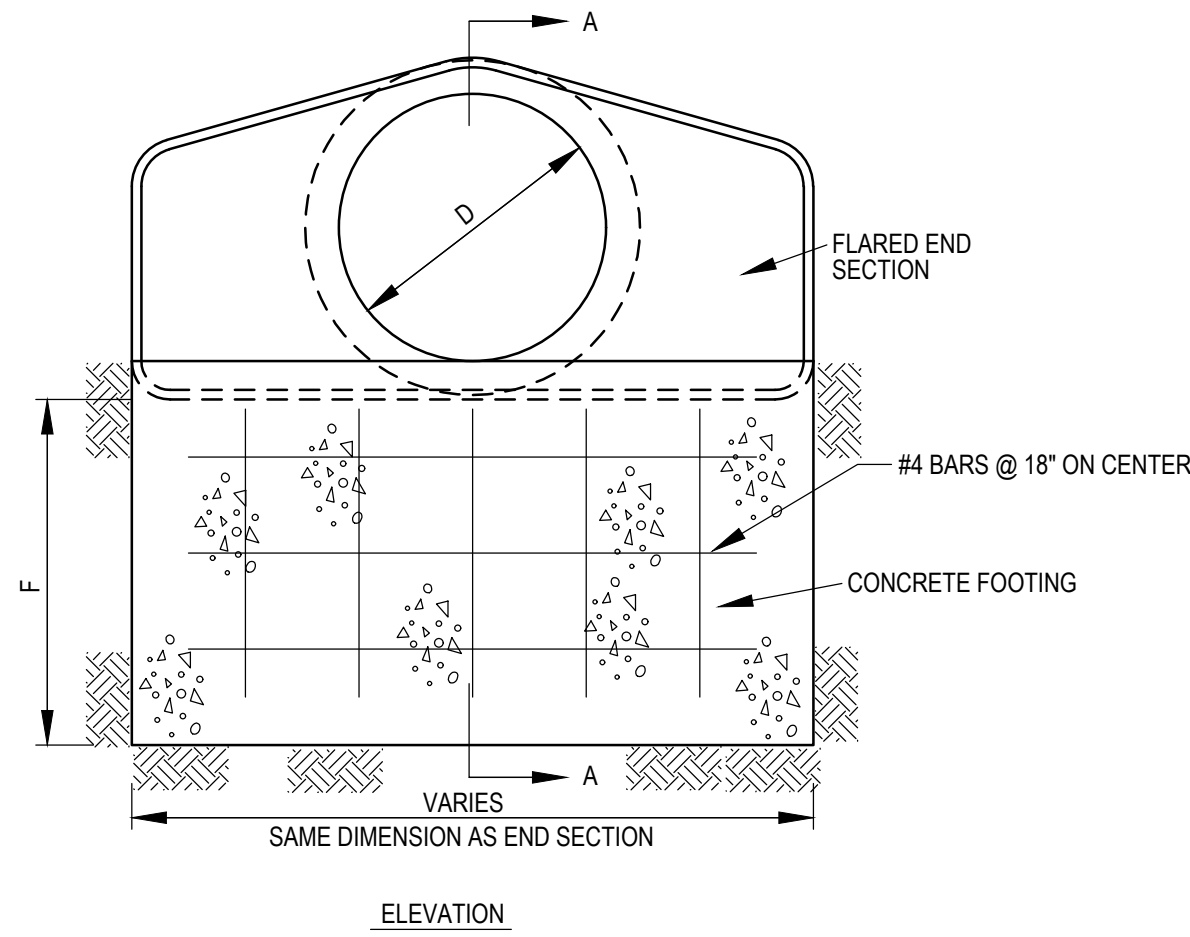
REVISION DATE:

- 2-19-16 1st SUBMITTAL
- 3-14-16 2ND SUBMITTAL
- 3-30-16 3rd SUBMITTAL
- 4-11-16
- 6-30-16 C3.6 WATER REV
- 7-07-16 C4.3 MAILPAD REV
- 7-20-16 MULTIPLE REV.
- 12-7-16 AS BUILT

PROJECT NUMBER:  
**150351**

SHEET NUMBER:  
**C6.1**

MILAND PROJECTS 2016110351DWGAB C6 DETAIL SHEETS DWG2016 2:06:48 PM

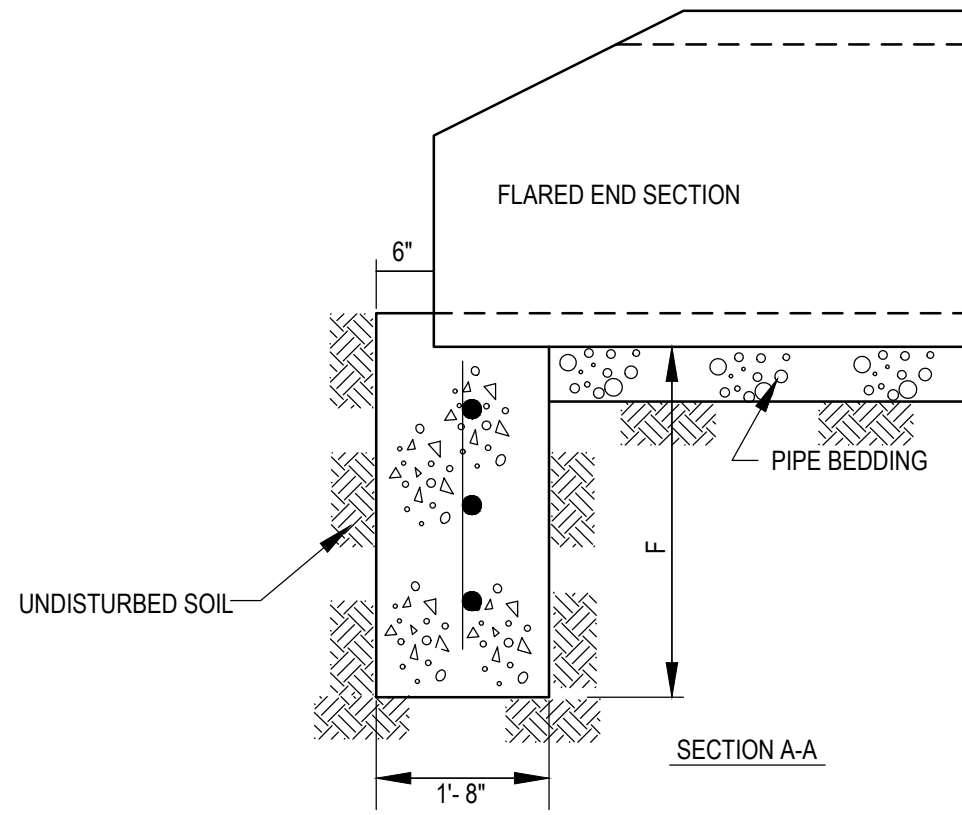


ELEVATION

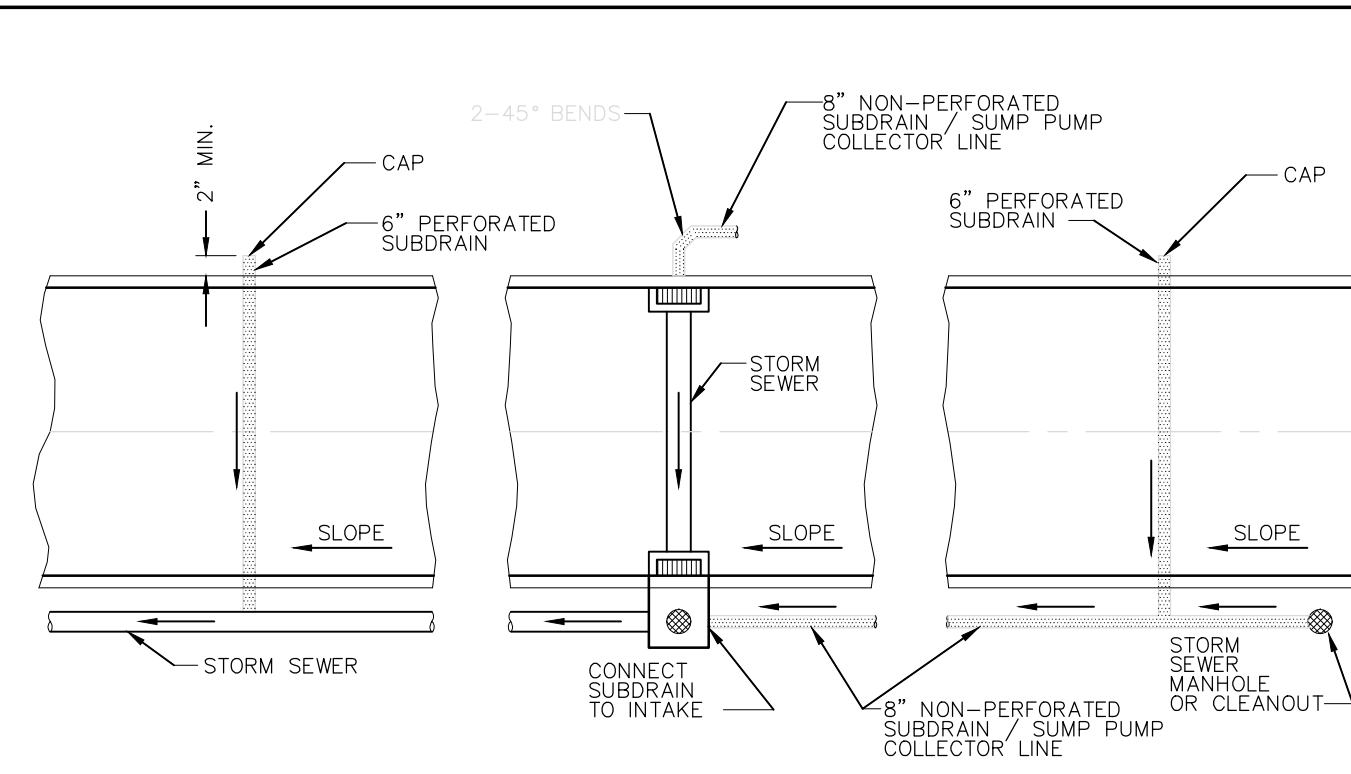
- NOTES:
- F=DIFFERENCE IN ELEVATION BETWEEN FLARED END INVERT AND DRAINAGE WAY CHANNEL FLOW LINE 300 FT DOWNSTREAM OF FLARED END; MINIMUM D=42"
  - INSTALL 3" WIDE CLAY WATERSTOP AT FLARED END SECTION PIPE JOINT.

REINFORCING BAR LIST

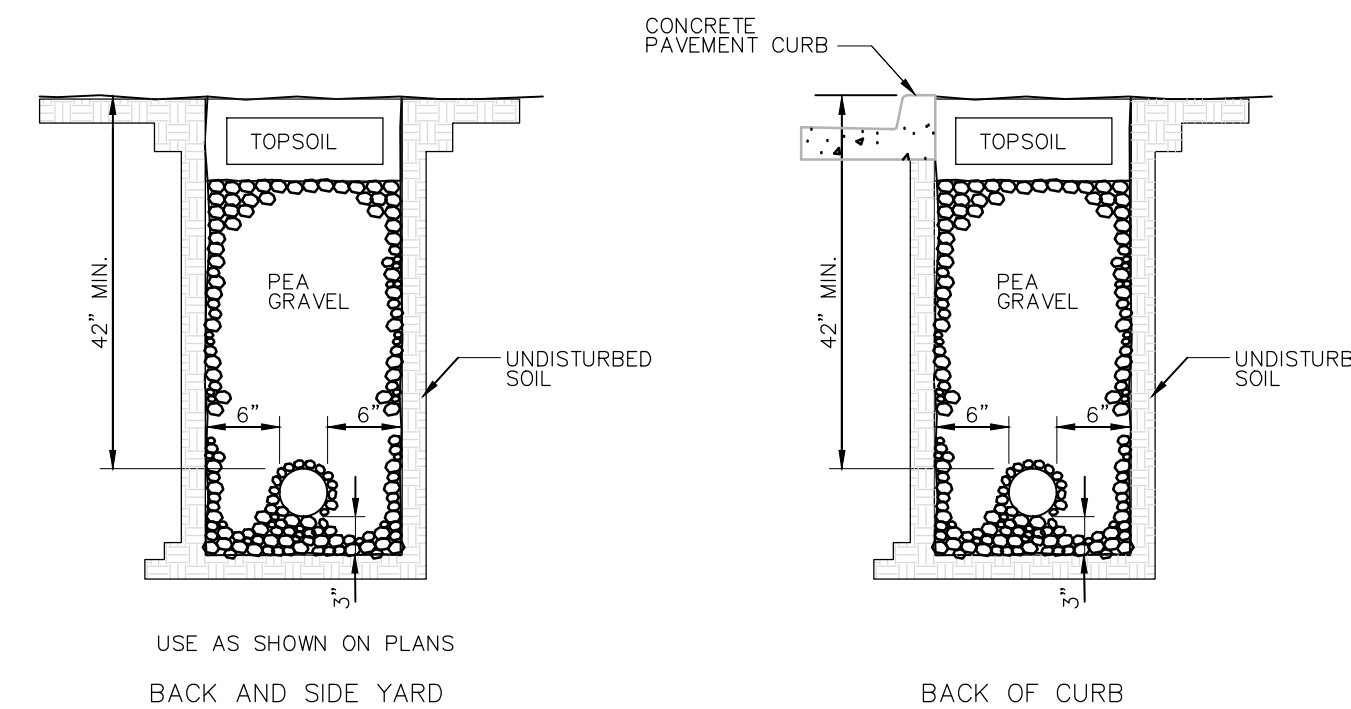
F	W	Mark	Size	Length	Count
42"	7'-3"	4f1	4	6'-11"	3
		4f2	4	3'-8"	5
48"	7'-10"	4f1	4	7'-6"	3
		4f2	4	3'-8"	6
54"	8'-5"	4f1	4	8'-1"	3
		4f2	4	3'-8"	6
60"	8'-11"	4f1	4	8'-7"	3
		4f2	4	3'-8"	6
66"	8'-11"	4f1	4	8'-7"	3
		4f2	4	3'-8"	6
72"	10'-0"	4f1	4	9'-8"	3
		4f2	4	3'-8"	7
78"	10'-7"	4f1	4	10'-3"	3
		4f2	4	3'-8"	7
84"	11'-1"	4f1	4	10'-9"	3
		4f2	4	3'-8"	8



FLARED END SECTION FOOTING DETAIL  
NOT TO SCALE



NOTE:  
CORE DRILL ALL STORM SEWER AND PLACE NON-SHRINK GROUT COLLAR AT CONNECTION.

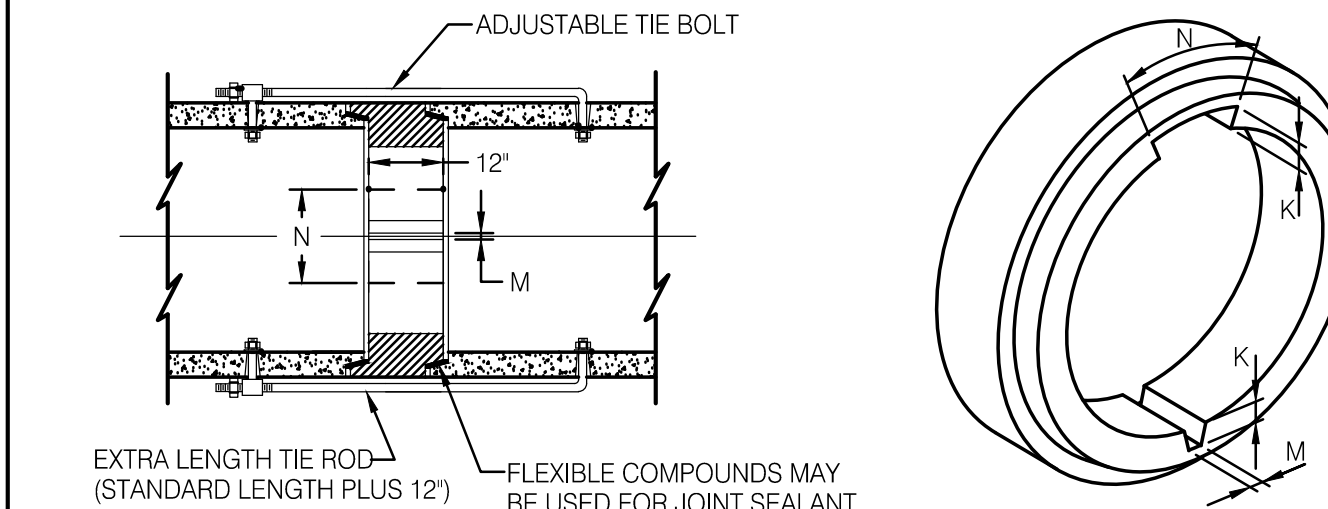
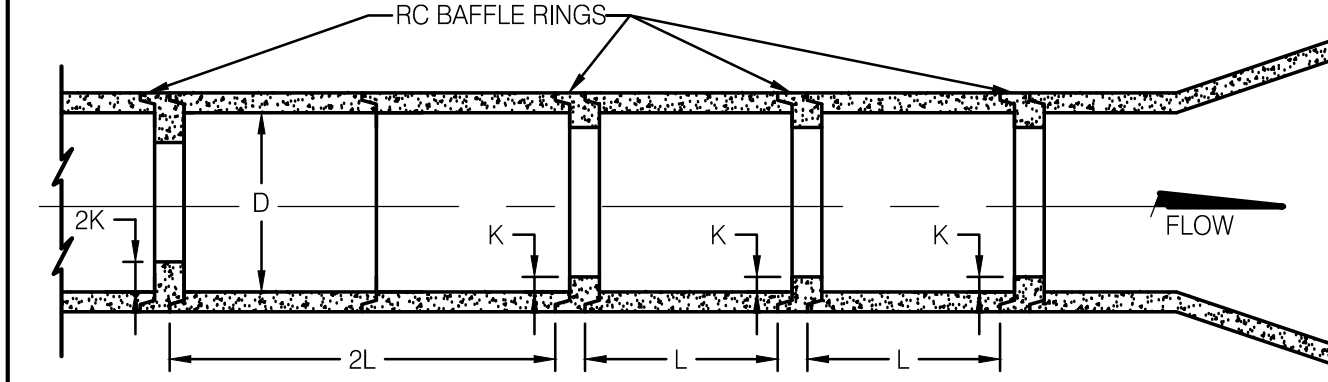


NOTES:  
1. SLOPE SUBDRAINS TO DRAIN.

CITY OF WAUKEE  
SUBDRAINS

STD.DWG.NO.37

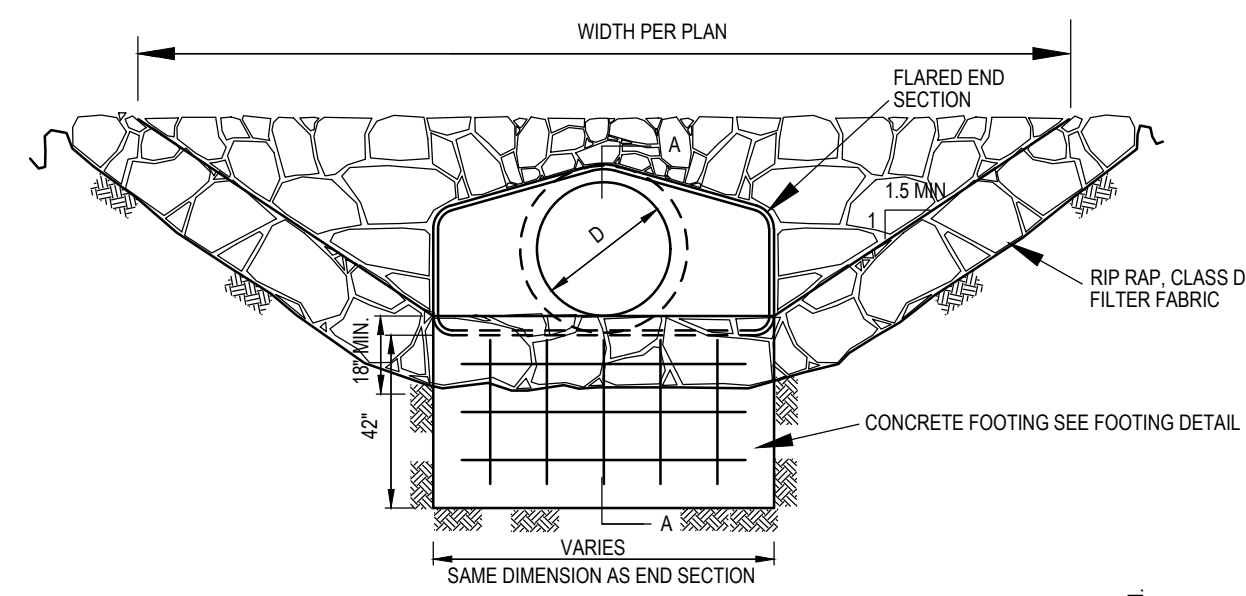
ENERGY DISSIPATER BAFFLES ARE INSTALLED IN THE PIPE LINE TO REDUCE THE OUTLET FLOW VELOCITY IN THE LINE. BAFFLE RINGS CONFORM TO THE MATERIAL STRENGTH AND REQUIREMENTS OF THE PIPE LINE AND ARE USUALLY SPECIFIED IN SETS OF FOUR.



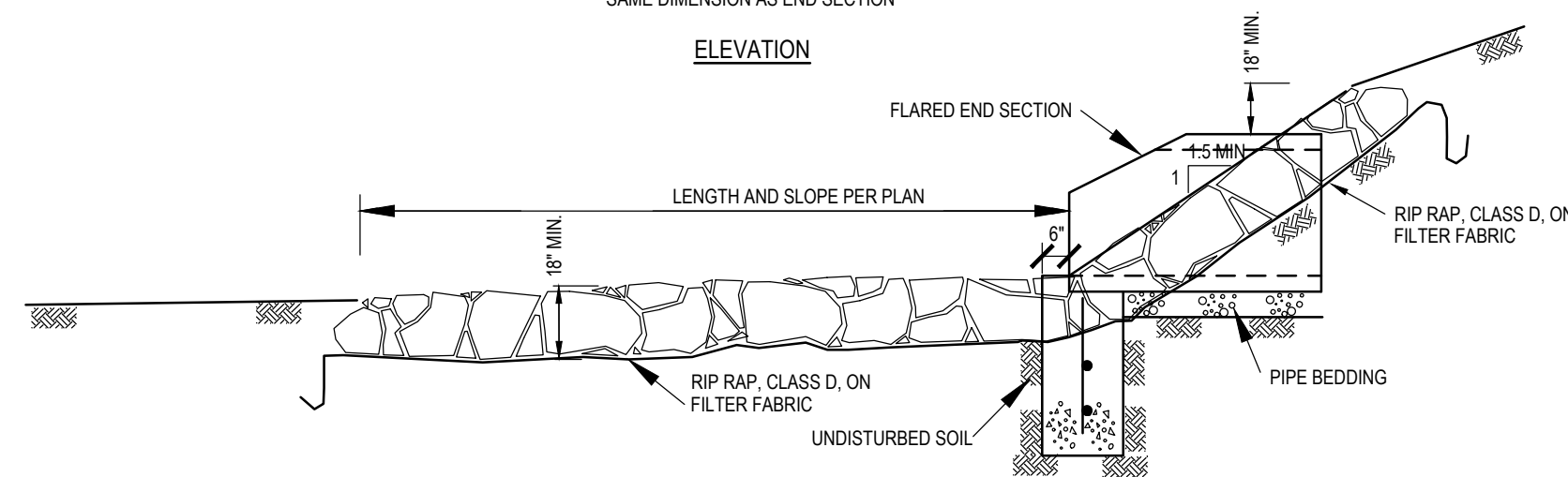
CULVERT DIA D INCHES	K INCHES	L FEET	M (MINIMUM) INCHES	N (MINIMUM) INCHES
24	1 1/2	4	1	7
30	3	4	1	9
36	3	4	1	10
42	3	4	2	12
48	3	6	2	14
54	6	6	2	16
60	6	8	3	18
66	6	8	3	20
72	6	8	3	22
78	6	10	3	24

Notes:  
Baffle rings conform to the material strength and requirements of the pipe line and are usually specified in sets of four.

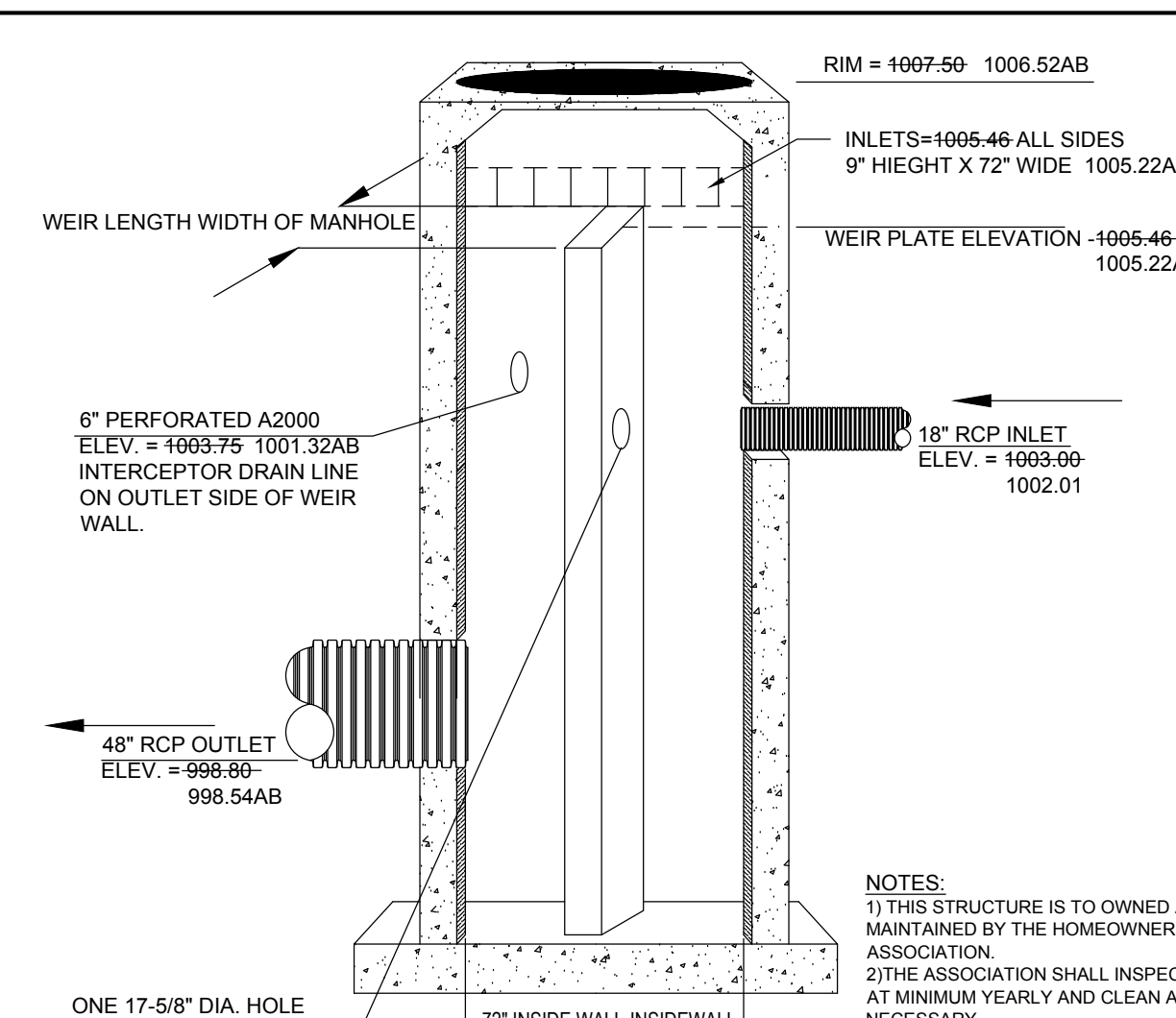
ENERGY DISSIPATER BAFFLES  
NOT TO SCALE



ELEVATION



FLARED END SECTION OUTLET DETAIL  
NOT TO SCALE



NOTES:  
1) THIS STRUCTURE IS TO OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION.  
2) THE ASSOCIATION SHALL INSPECT AT MINIMUM YEARLY AND CLEAN AS NECESSARY.

STRUCTURE #12 SW-513 MODIFIED  
NOT TO SCALE

REFERENCE NUMBER:

DRAWN BY:  
EAV

CHECKED BY:  
DDB

REVISION DATE:  
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12-7-16 AS BUILT

PROJECT NUMBER:  
150351

SHEET NUMBER:  
C6.2

# STORM WATER POLLUTION PREVENTION PLAN

**PROPERTY DESCRIPTION:**  
 (WARRENTY DEED BOOK 2015, PAGE 16065)  
 INFORMATION OBTAINED FROM DALLAS COUNTY OFFICE OF THE ASSESSOR WEB PAGE AND THE IOWA LAND RECORDS WEB PAGE.

BEGINNING AT A POINT BEING 454.7 FEET N 0° 00' OF THE SOUTHEAST CORNER OF SECTION 33, THENCE S 89° 59' W 968.2 FEET, THENCE N 0° 06' E 318.0 FEET, THENCE N 65° 16' E 363.6 FEET, THENCE N 0° 06' E 400.0 FEET, THENCE N 89° 59' E 636.7 FEET, THENCE S 0° 00' ALONG THE EAST LINE OF THE SE 1/4 OF SECTION 33 AND ALONG THE CENTERLINE OF EAST ROAD 870.0 FEET TO THE POINT OF BEGINNING, ALL OF SAID PARCEL BEING IN THE SE 1/4 OF SECTION 33, TOWNSHIP 79 NORTH, RANGE 26 WEST OF THE 5TH P.M., DALLAS COUNTY, IOWA AND BEING IN AND FORMING A PART OF THE TOWN OF WAUKEE, DALLAS COUNTY, IOWA. SUBJECT TO AN EASEMENT FOR PUBLIC HIGHWAY ON THE EAST 33.0 FEET THEREOF, AND EXCEPT THE FOLLOWING DESCRIBED REAL ESTATE: BEGINNING AT A POINT 454.7 FEET NORTH 0° 00' AND 627.2 FEET SOUTH 89° 59' WEST OF THE SOUTHEAST CORNER OF SECTION 33, TOWNSHIP 79 NORTH, RANGE 26 WEST OF THE 5TH P.M., CITY OF WAUKEE, DALLAS COUNTY, IOWA; THENCE SOUTH 89° 59' WEST 341.0 FEET; THENCE NORTH 0° 00' EAST 318.0 FEET; THENCE NORTH 65° 16' EAST 36.4 FEET; THENCE SOUTH 42° 55' EAST 322.5 FEET; THENCE SOUTH 15° 15' EAST 128.49 FEET TO THE POINT OF BEGINNING; ALL OF SAID DESCRIBED PARCEL BEING IN THE SOUTHEAST QUARTER OF THE SOUTHEAST QUARTER (SE 1/4 SE 1/4) OF SECTION 33, TOWNSHIP 79 NORTH, RANGE 26 WEST OF THE 5TH P.M., IN THE CITY OF WAUKEE, DALLAS COUNTY, IOWA, AND SAID PARCEL CONTAINS APPROXIMATELY 1.94 ACRES.

**ADDRESS:**  
 1010 WARRIOR LANE  
 WAUKEE, IOWA  
 INFORMATION OBTAINED FROM DALLAS COUNTY OFFICE OF THE ASSESSOR WEB PAGE

**OWNER:**  
 M & R HOLDINGS, LLC  
 15602 WILDEN DR  
 URBANDALE, IOWA 50323  
 515-306-8090  
 INFORMATION OBTAINED FROM DALLAS COUNTY OFFICE OF THE ASSESSOR WEB PAGE

**SITE AREA:**  
 13.75

**INITIAL EROSION CONTROL QUANTITIES:**  
 ARE LUMP SUM BECAUSE THIS IS A LIVING DOCUMENT AND THE QUANTITIES ARE PAID BY THE UNIT BASED ON NEED.

**EROSION CONTROL NOTES:**

- SEE SUPPLEMENTAL DETAIL STORM WATER POLLUTION PLAN NARRATIVE FOR ALL EROSION CONTROL MEASURES. ADDITIONAL DETAILS AND NOTE. ADDITIONAL NOTES AND MEASURES IN NARRATIVE SHALL BE CONSIDERED INCIDENTAL AND SHALL BE INCLUDED IN THE ORIGINAL BID.
- SWPPP PLAN AND NARRATIVE ARE CONSIDERED A LIVING DOCUMENT AND WILL NEED PERIODIC UPDATES AND ADJUSTMENTS AS NECESSARY DEPENDING ON SITE CONDITIONS TO ASSURE COMPLIANCE WITH NPDES GENERAL PERMIT NO. 2. IT IS THE CONTRACTOR'S RESPONSIBILITY TO UPDATE THE SWPPP AND IMPLEMENT ANY AND ALL MEASURES NECESSARY TO COMPLY WITH SAID PERMIT NO. 2.
- INSTALL PERIMETER SILT FENCE AS SHOWN ON PLANS PRIOR TO CONSTRUCTION.
- INSTALL INTAKE PROTECTION WITH SILT FENCE IMMEDIATELY AFTER STORM SEWER CONSTRUCTION.
- INSTALL FINISHED PAVING INLET PROTECTION IMMEDIATELY AFTER PAVING IS COMPLETED AROUND INTAKE.
- OTHER EROSION CONTROL TYPES MAY NOT BE SUBSTITUTED FOR SILT FENCE.
- CONTRACTOR SHALL BE RESPONSIBLE FOR SUPPLYING A CONCRETE WASHOUT IN ACCORDANCE WITH NPDES GENERAL PERMIT NO. 2 AND SUDAS SPECIFICATIONS DURING ALL CONCRETE WORK.
- CONTRACTOR SHALL BE RESPONSIBLE FOR SUPPLYING TEMPORARY RESTROOM FACILITIES. SANITARY WASTE SHALL BE DISPOSED OF PER ALL FEDERAL, STATE AND LOCAL REGULATIONS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING ALL TOPSOIL REQUIREMENTS OF NPDES GENERAL PERMIT NO. 2 ARE MET.
- ALL DISTURBED AREAS SHALL BE SEEDDED WITH A SUBDIVISION MIX FROM UNITED SEED OR EQUIVALENT.

**EROSION CONTROL REMOVAL NOTES:**

- AFTER FINAL STABILIZATION HAS OCCURRED, AS DEFINED IN NPDES GENERAL PERMIT NO. 2, CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL TEMPORARY EROSION CONTROL DEVICES INCLUDING, BUT NOT LIMITED TO, SILT FENCE, INLET PROTECTION, AND TEMPORARY STANDPIPES.

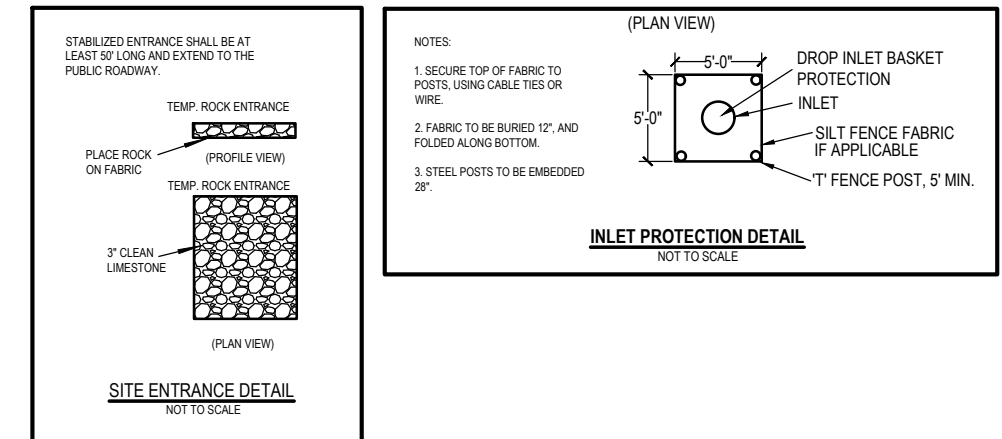
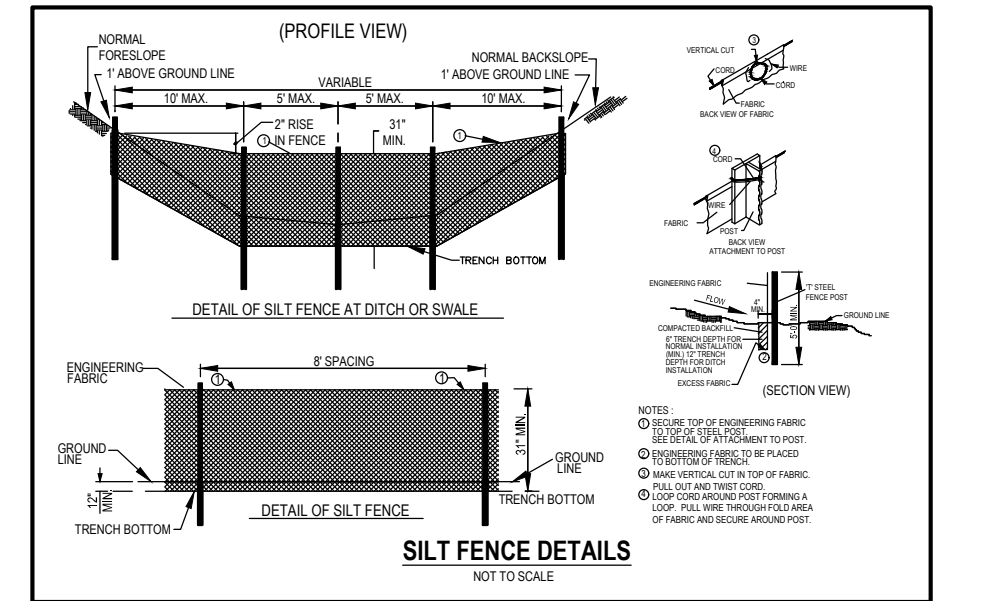
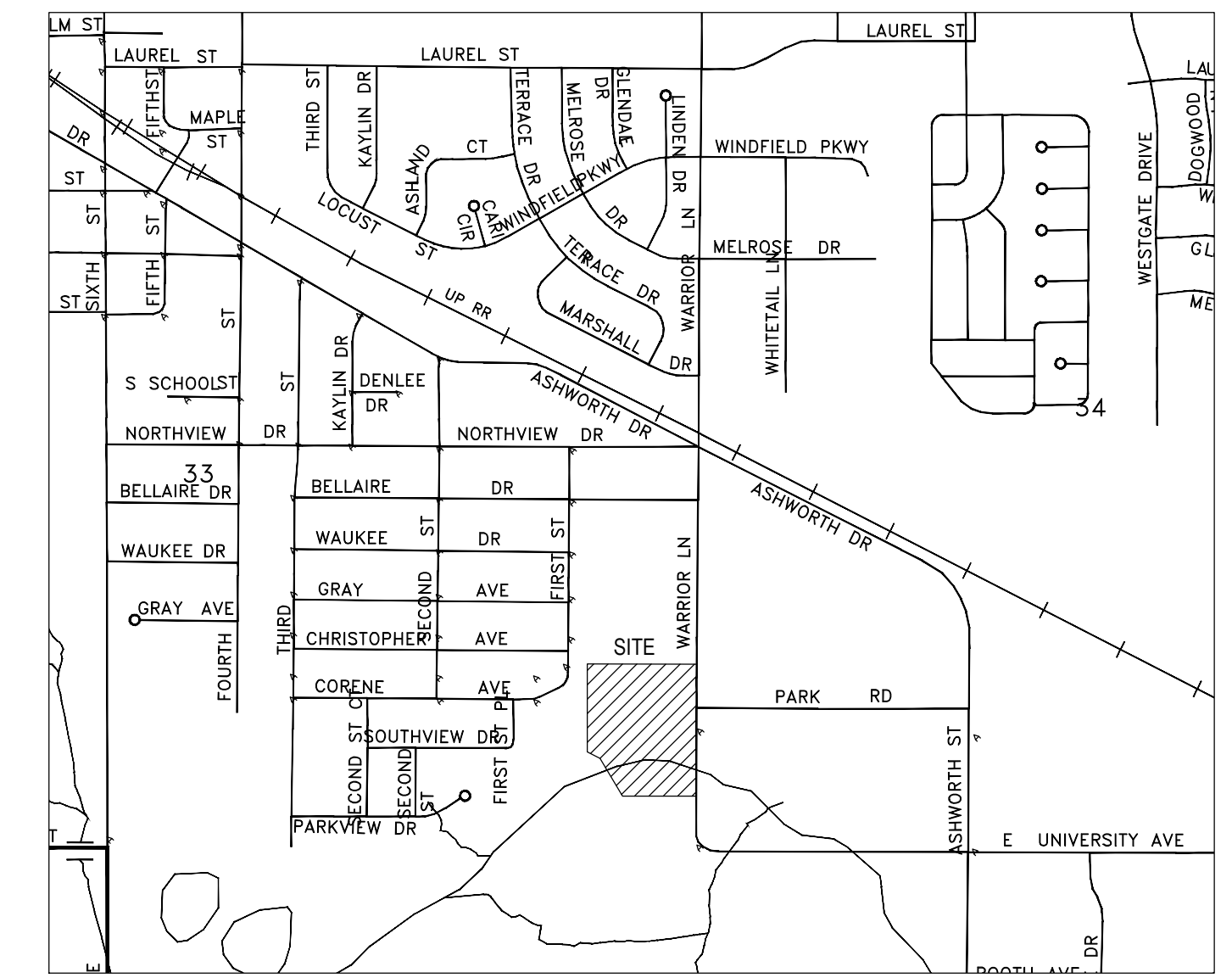
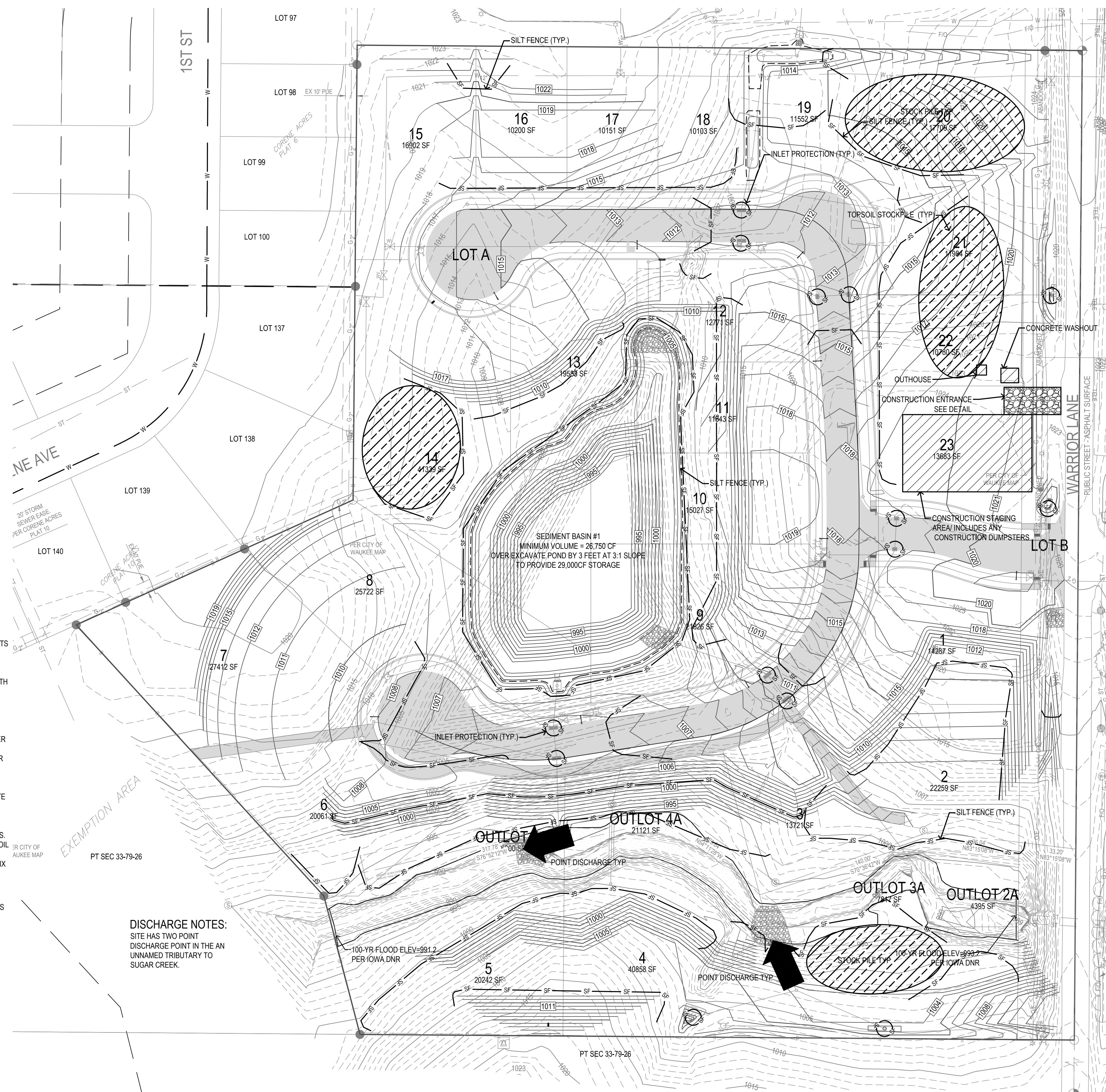
**DISCHARGE NOTES:**  
 SITE HAS TWO POINT DISCHARGE POINT IN THE AN UNNAMED TRIBUTARY TO SUGAR CREEK.

- LEGEND:**
- SF-SF-SR SILT FENCE (TYP)
  - 120- EXISTING CONTOUR
  - 120- PROPOSED CONTOUR
  - STABILIZED ENTRANCE 24"x50'-6" DEEP 2' CLEAN CRUSHED ROCK DRIVE ON GEOTEXTILE

**DISTURBED AREA = 13 ACRES**



**UTILITY NOTE:**  
 THE LOCATION OF THE UTILITIES INDICATED ON THE PLANS ARE TAKEN FROM EXISTING PUBLIC RECORDS AND ARE APPROXIMATE LOCATIONS. THE EXACT LOCATIONS OF ALL UTILITIES MUST BE ASCERTAINED IN THE FIELD. IT SHALL BE THE DUTY OF THE CONTRACTOR TO DETERMINE WHETHER ANY ADDITIONAL FACILITIES OTHER THAN THOSE SHOWN ON THE PLANS MAY BE PRESENT.

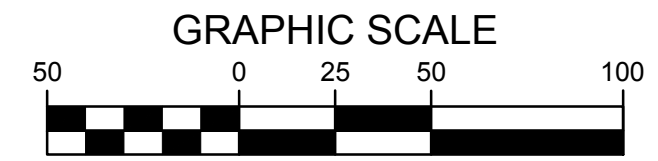


**SWPPP QUANTITIES:**  
 QUANTITIES LISTED ARE FOR INITIAL PLAN ONLY  
 ADDITIONAL QUANTITIES WILL BE NEEDED BASED ON FIELD CONDITIONS.

SILT FENCE	5500 LF
SEDIMENT POND	1 LS
EROSION CONTROL SEEDING	15 +/- AC
ROCK ENTRANCE	1 LS
CONCRETE WAS OUTS	1 LS
INTAKE PRTECTION CONTROLS	17 EA

**LEGEND:**

-120-	EXISTING CONTOUR	⊗	YARD HYDRANT
-120-	PROPOSED CONTOUR	⊕	ELECTRIC MANHOLE
-SF-	SILT FENCE	⊖	ELECTRIC METER
-SAN-	SANITARY SEWER	⊗	ELECTRIC RISER
-ST-	STORM SEWER	⊕	ELECTRIC VAULT
-W-	WATER LINE	⊗	POWER POLE
-G-	GAS LINE	⊕	TRANSFORMER POLE
-U/E-	UNDERGROUND ELECTRIC	⊗	LIGHT POLE
-O/E-	OVERHEAD ELECTRIC	⊕	ELECTRIC JUNCTION BOX
-TELE-	TELEPHONE LINE	⊖	ELECTRIC PANEL
-F/O-	FIBER OPTIC	⊕	TRANSFORMER
-CATV-	CABLE TV	⊗	GROUND LIGHT
⊕	STORM MANHOLE	⊕	GUY WIRE
⊖	CURB INTAKE	⊗	ELECTRIC HANDHOLE
⊕	SURFACE INTAKE	⊕	GAS METER
⊖	FLARED END SECTION	⊗	GAS VALVE
⊕	SANITARY MANHOLE	⊕	AIR CONDITIONING UNIT
⊖	CLEANOUT	⊗	TELEPHONE RISER
⊕	FIRE HYDRANT	⊕	TELEPHONE VAULT
⊖	SPRINKLER	⊗	TELEPHONE MANHOLE
⊕	IRRIGATION CONTROL VALVE	⊕	TRAFFIC SIGNAL MANHOLE
⊖	WATER MANHOLE	⊗	FIBER OPTIC RISER
⊕	WELL	⊕	FIBER OPTIC FAULT
⊖	WATER VALVE	⊗	CABLE TV RISER
⊕	WATER SHUT OFF	⊕	SIGN



1/27/2016 2:05:18 PM M:\LAND PROJECTS 2015\19335\DWG\AB C7 SWPPP.DWG

**Bishop Engineering**  
 "Planning Your Successful Development"  
 3501 104th Street  
 Des Moines, Iowa 50322-3825  
 Phone: (515) 276-0467 Fax: (515) 276-0217  
 Established 1959  
 Civil Engineering & Land Surveying

**BRANDON'S RESERVE AS BUILT**  
 1010 WARRIOR LANE, WAUKEE IA

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