



**METROPOLITAN**  
C O U N C I L



**SOUTHWEST**  
Green Line LRT Extension

# CIVIL WEST CONSTRUCTION

# VOLUME 7

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# UTILITIES

[illegible]

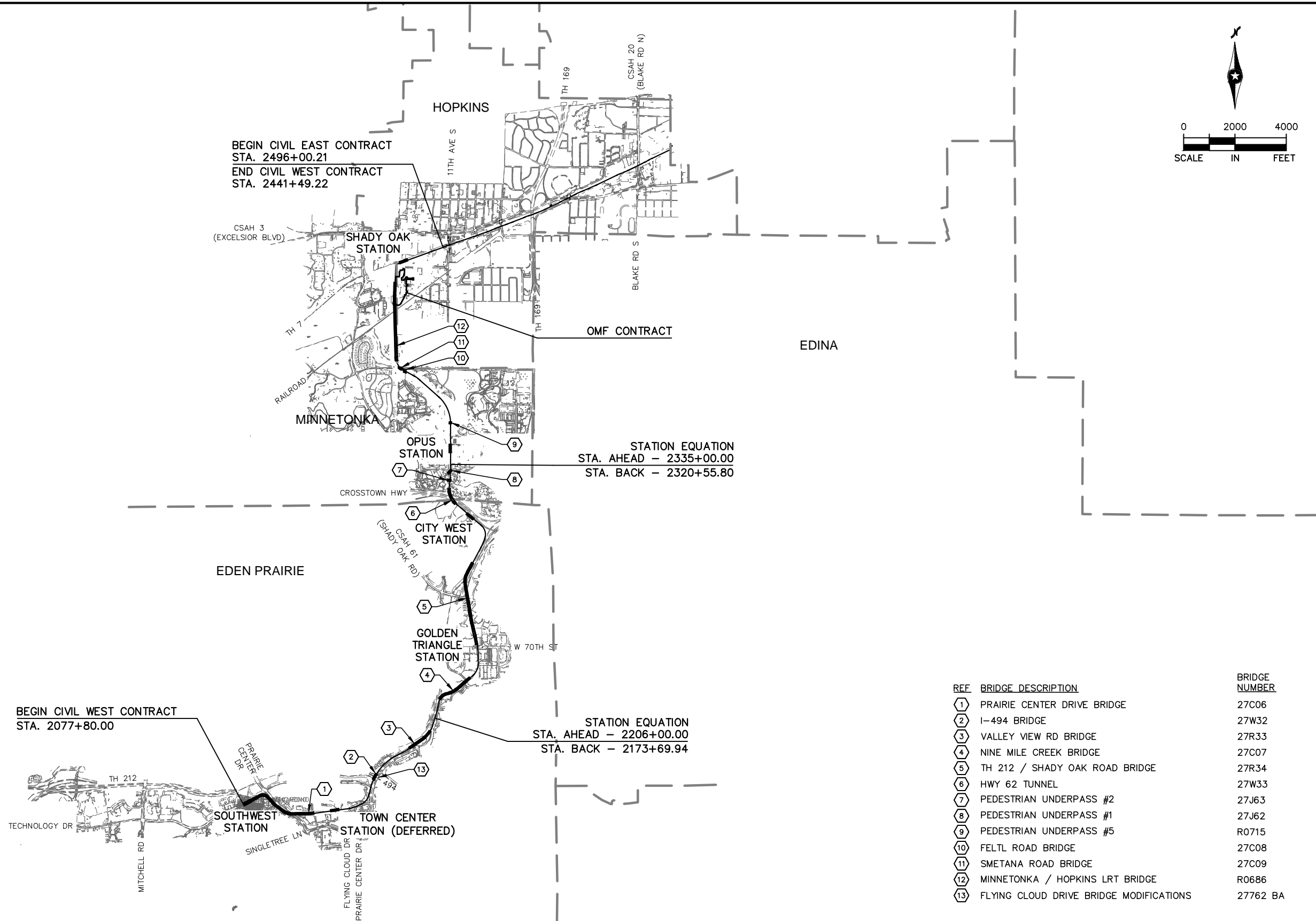
WARNING: THIS RECORD MAY CONTAIN SENSITIVE SECURITY INFORMATION THAT IS CONTROLLED UNDER 49 CFR PARTS 15 AND 1520. NO PART OF THIS RECORD MAY BE DISCLOSED TO PERSONS WITHOUT A "NEED TO KNOW", AS DEFINED IN 49 CFR PARTS 15 AND 1520, EXCEPT WITH THE WRITTEN PERMISSION OF THE ADMINISTRATOR OF THE TRANSPORTATION SECURITY ADMINISTRATION OR THE SECRETARY OF TRANSPORTATION. UNAUTHORIZED RELEASE MAY RESULT IN CIVIL PENALTY OR OTHER ACTION. FOR U.S. GOVERNMENT AGENCIES, PUBLIC DISCLOSURE IS GOVERNED BY 5 U.S.C. 552 AND 49 CFR PARTS 15 AND 1520.

60% SUBMISSION  
DATE : 09/28/15

**AECOM**

CIVIL WEST							CIVIL WEST							CIVIL WEST																		
SHT #	SHEET NAME		SHEET DESCRIPTION			STATION	STATION	REV	SHT #	SHEET NAME		SHEET DESCRIPTION			STATION	STATION	REV	SHT #	SHEET NAME		SHEET DESCRIPTION			STATION	STATION	REV						
VOLUME 7 - UTILITIES																																
1	W0-UTL-CVR-001		COVER SHEET																													
2	W0-UTL-IDX-001		VOLUME INDEX OF PLAN SHEETS																													
3	W0-GEN-KEY-001		GENERAL KEY MAP																													
4	W0-GEN-NTS-001		GENERAL LEGEND AND ABBREVIATIONS SHEET 1																													
5	W0-GEN-NTS-002		GENERAL LEGEND AND ABBREVIATIONS SHEET 2																													
6	W0-UTL-NTS-001		CONSTRUCTION NOTES																													
7	W0-UTL-NTS-002		CONSTRUCTION NOTES																													
8	W0-UTL-CNT-001		UTILITY CONTACTS																													
9	W0-UTL-LAY-001		UTILITY PLAN SHEET LAYOUT - SHEET 1																													
10	W0-UTL-LAY-002		UTILITY PLAN SHEET LAYOUT - SHEET 2																													
11	W0-UTL-LAY-003		UTILITY PLAN SHEET LAYOUT - SHEET 3																													
12	W1-UTL-PLN-001		SOUTHWEST STATION 1 OF 3 - REMOVALS																													
13	W1-UTL-PLN-002		SOUTHWEST STATION 2 OF 3 - PLAN																													
14	W1-UTL-PLN-003		SOUTHWEST STATION 3 OF 3 - PROFILES																													
15	W1-UTL-PLN-004		PRAIRIE CENTER DR BRIDGE - REMOVALS, PLAN, AND PROFILES																													
16	W1-UTL-PLN-005		EDEN RD 1 OF 3 - REMOVALS																													
17	W1-UTL-PLN-006		EDEN RD 2 OF 3 - PLAN																													
18	W1-UTL-PLN-007		EDEN RD 3 OF 3 - PROFILES																													
19	W1-UTL-PLN-008		TECHNOLOGY DR / FLYING CLOUD DR 1 OF 3 - REMOVALS																													
20	W1-UTL-PLN-009		TECHNOLOGY DR / FLYING CLOUD DR 2 OF 3 - PLAN																													
21	W1-UTL-PLN-010		TECHNOLOGY DR / FLYING CLOUD DR 3 OF 3 - PROFILES																													
22	W1-UTL-PLN-011		FLYING CLOUD DR 1 OF 5 - REMOVALS AND PLAN																													
23	W1-UTL-PLN-012		FLYING CLOUD DR 2 OF 5 - REMOVALS AND PLAN																													
24	W1-UTL-PLN-013		FLYING CLOUD DR 3 OF 5 - REMOVALS AND PLAN																													
25	W1-UTL-PLN-014		FLYING CLOUD DR 4 OF 5 - PROFILES																													
26	W1-UTL-PLN-015		FLYING CLOUD DR 5 OF 5 - PROFILES																													
27	W2-UTL-PLN-001		SAN SEWER AT FLYING CLOUD DR 1 OF 2 - REMOVALS AND PLAN																													
28	W2-UTL-PLN-002		SAN SEWER AT FLYING CLOUD DR 2 OF 2 - PROFILES																													
29	W2-UTL-PLN-003		GOLDEN TRIANGLE STATION 1 OF 3 - REMOVALS																													
30	W2-UTL-PLN-004		GOLDEN TRIANGLE STATION 2 OF 3 - PLAN																													
31	W2-UTL-PLN-005		GOLDEN TRIANGLE STATION 3 OF 3 - PROFILES																													
32	W2-UTL-PLN-006		WHITEBOARD 1 OF 2 - REMOVALS AND PLAN																													
33	W2-UTL-PLN-007		WHITEBOARD 2 OF 2 - PROFILES																													
34	W2-UTL-PLN-008		TH 212 - REMOVALS																													
35	W2-UTL-PLN-009		CITY WEST STATION 1 OF 3 - REMOVALS																													
36	W2-UTL-PLN-010		CITY WEST STATION 2 OF 3 - PLAN																													
37	W2-UTL-PLN-011		CITY WEST STATION 3 OF 3 - PROFILES																													
38	W2-UTL-PLN-012		RED CIR DR / YELLOW CIR DR 1 OF 2 - REMOVALS AND PLAN																													
39	W2-UTL-PLN-013		RED CIR DR / YELLOW CIR DR 2 OF 2 - PROFILES																													
40	W2-UTL-PLN-014		RED CIR DR / BREN RD - REMOVALS, PLAN, AND PROFILES																													
41	W3-UTL-PLN-001		OPUS STATION 1 OF 6 - REMOVALS																													
42	W3-UTL-PLN-002		OPUS STATION 2 OF 6 - REMOVALS																													
43	W3-UTL-PLN-003		OPUS STATION 3 OF 6 - PLAN																													
44	W3-UTL-PLN-004		OPUS STATION 4 OF 6 - PLAN																													
45	W3-UTL-PLN-005		OPUS STATION 5 OF 6 - PROFILES																													
46	W3-UTL-PLN-006		OPUS STATION 6 OF 6 - PROFILES																													
47	W3-UTL-PLN-007		SANITARY SEWER AT TRACK 2 STA 2357+67 - REMOVALS, PLAN, AND PROFILES																													
48	W3-UTL-PLN-008		OPUS HILL 1 OF 2 - REMOVALS AND PLAN																													
49	W3-UTL-PLN-009		OPUS HILL 2 OF 2 - PROFILES																													
50	W3-UTL-PLN-010		SANITARY SEWER AT TRACK 2 STA 2373+31 - REMOVALS, PLAN, AND PROFILES																													
51	W3-UTL-PLN-011		FELTL RD / SMETANA RD 1 OF 3 - REMOVALS																													
52	W3-UTL-PLN-012		FELTL RD / SMETANA RD 2 OF 3 - PLAN																													
53	W3-UTL-PLN-013		FELTL RD / SMETANA RD 3 OF 3 - PROFILES																													
54	W3-UTL-PLN-014		K-TEL DR TO 5TH ST S 1 OF 2 - REMOVALS AND PLAN																													
55	W3-UTL-PLN-015		K-TEL DR TO 5TH ST S 2 OF 2 - PROFILES																													
56	W3-UTL-PLN-016		SHADY OAK STATION 1 OF 5 - REMOVALS																													
57	W3-UTL-PLN-017		SHADY OAK STATION 2 OF 5 - REMOVALS																													
58	W3-UTL-PLN-018		SHADY OAK STATION 3 OF 5 - PLAN																													
59	W3-UTL-PLN-019		SHADY OAK STATION 4 OF 5 - PLAN																													
60	W3-UTL-PLN-020		SHADY OAK STATION 5 OF 5 - PROFILES																													
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<div>AECOM</div>												<div><div><div></div><div>METROPOLITAN COUNCIL</div></div><div><div>SOUTHWEST</div><div>Green Line LRT Extension</div><div></div></div></div>													CIVIL WEST - VOLUME 7 UTILITIES VOLUME INDEX OF PLAN SHEETS						SHEET 2 OF 60	
																									DISCIPLINE: GENERAL						SHEET NAME: W0-UTL-IDX - 001	
60% SUBMISSION - 09/28/15																																

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NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL



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CIVIL WEST - VOLUME 7  
GENERAL  
KEY MAP

DISCIPLINE: GENERAL  
SHEET NAME: W0-GEN-KEY - 001

SHEET  
3  
OF  
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TRACK LINETYPES

- ROADWAY
- TRACK (LRT)
- TRACK (FRT)
- RETAINING WALL
- BALLAST CURB
- TUNNEL WALL
- FENCE
- EX ROW
- PROP ROW
- PROP TCE
- PROP PE
- FENCE / RAILING
- ID ID INTRUSION DETECTION

CIVIL LINETYPES

- ROADWAY
- TRACK (LRT)
- TRACK (FRT)
- RETAINING WALL
- BALLAST CURB
- TUNNEL WALL
- CONCRETE CURB AND GUTTER
- TRAIL
- SIDEWALK
- DRIVEWAY
- BRIDGE
- SAWCUT
- FENCE
- DELINEATED WETLAND
- WATER EDGE
- EX ROW
- PROP ROW
- PROP TCE
- PROP PE
- CROSSWALK
- STOP BAR
- MEDIAN NOSE

TRACK SYMBOLS

- PROPOSED DIRECTIONAL LANE USE
- EXISTING DIRECTIONAL LANE USE
- PEDESTRIAN FLASHER
- AUTOMATIC GATE
- RAIL TURNOUT
- RAIL CROSSOVER (DOUBLE)
- RAIL CROSSOVER (SINGLE)
- POINT OF SWITCH (PS)
- OCS POLE FOUNDATION
- RAIL LUBRICATOR
- POINT OF INTERSECTION (PI) OF TURNOUT (TO)
- RAILROAD CURVE NUMBER

NOTE:  
ALL TURNOUTS AND CROSSOVERS TO BE EQUIPPED WITH POWER SWITCH MACHINES AND SWITCH HEATERS

CIVIL SYMBOLS

- ACCESSIBLE PEDESTRIAN CURB RAMP (DESIGN VARIES)
- PROPOSED DIRECTIONAL LANE USE
- EXISTING DIRECTIONAL LANE USE
- AUTOMATIC GATE
- HANDICAP PARKING STALL
- TACTILE WARNING STRIP
- TPSS BUILDING (TPSS-SW###)
- SIGNAL OR INTERMEDIATE OR PLATFORM OR XING OR TUNNEL HOUSE OR ANY COMBINATION OF THESE

SURVEY NOTES

- THE HORIZONTAL DATUM OF THIS MAP IS BASED ON THE HENNEPIN COUNTY COORDINATE SYSTEM WHICH IS RELATED TO THE MINNESOTA STATE PLANE COORDINATE SYSTEM NAD 83 (2007) ADJUSTMENT SOUTH ZONE.
- THE PLANIMETRIC FEATURES SHOWN ON THIS MAP ARE AS PREPARED BY AERO-METRIC, INC. FROM AERIAL DATA AND IMAGERY COLLECTED IN APRIL 2012, AS SUPPLEMENTED BY FIELD SURVEYS COMPLETED BY RANI ENGINEERING.
- HORIZONTAL POSITIONAL ACCURACY: USING THE NATIONAL STANDARD FOR SPATIAL DATA ACCURACY, THE DATA SET TESTED 0.14 FEET HORIZONTAL ACCURACY AT A 95% CONFIDENCE LEVEL.
- VERTICAL POSITIONAL ACCURACY: USING THE NATIONAL STANDARD FOR SPATIAL DATA ACCURACY, THE DATA SET TESTED 0.10 FEET VERTICAL ACCURACY AT 95% CONFIDENCE LEVEL.

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60% SUBMISSION - 09/28/15

CIVIL WEST - VOLUME 7  
GENERAL  
LEGEND AND ABBREVIATIONS  
SHEET 1

DISCIPLINE: GENERAL

SHEET NAME: W0-GEN-NTS - 001

SHEET  
4  
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ABBREVIATIONS

AD	ALGEBRAIC DIFFERENCE
AVE	AVENUE
BGN	BEGIN
BP	BEGINNING POINT
BVCE	BEGINNING VERTICAL CURVE ELEVATION
BVCS	BEGINNING VERTICAL CURVE STATION
BLVD	BOULEVARD
BNSF	BURLINGTON NORTHERN SANTA FE RAILWAY
C&G	CURB AND GUTTER
☉	CENTERLINE
CIR	CIRCLE
CP	CANADIAN PACIFIC
CPRAIL	CANADIAN PACIFIC RAILWAY
CS	CURVE TO SPIRAL
CSAH	COUNTY STATE AID HIGHWAY
D&U	DRAINAGE AND UTILITY
DF	DIRECT FIXATION
DR	DRIVE
DTL	DETAIL
DWY	DRIVEWAY
E	EAST
Ea	ACTUAL SUPERELEVATION (INCHES)
EB	EAST BOUND
EL or ELEV	ELEVATION
EP	END POINT
ESMT	EASEMENT
Eu	UNBALANCED SUPERELEVATION (INCHES)
EVCE	ENDING VERTICAL CURVE ELEVATION
EVCS	ENDING VERTICAL CURVE STATION
EX	EXISTING
HCRRRA	HENNEPIN COUNTY REGIONAL RAILROAD AUTHORITY
LH	LEFT HAND
LN	LANE
LRT	LIGHT RAIL TRANSIT
Lc	CURVE LENGTH (FEET)
Ls	SPIRAL LENGTH (FEET)
MIN	MINIMUM
MPH	MILES PER HOUR
MPLS	CITY OF MINNEAPOLIS
MPRB	MINNEAPOLIS PARK AND RECREATION BOARD
N	NORTH
NB	NORTH BOUND
NIC	NOT IN CONTRACT
NO	NUMBER
OMF	OPERATIONS AND MAINTENANCE FACILITY
OCS	OVERHEAD CONTACT SYSTEM
OH	OVERHEAD
PC	POINT OF CURVE
PE	PERMANENT EASEMENT
PITO	POINT OF INTERSECTION OF TURNOUT
PKWY	PARKWAY
POT	POINT ON TANGENT
PROP	PROPOSED
PS	POINT OF SWITCH
PT	POINT OF TANGENT
PVI	POINT OF VERTICAL INTERSECTION
R	RADIUS (FEET)
RD	ROAD
RL	RAIL LUBRICATOR
r	RATE OF CHANGE VERTICAL CURVE
RH	RIGHT HAND
ROW	RIGHT OF WAY
S	SOUTH
SB	SOUTH BOUND
SC	SPIRAL TO CURVE
SIG-COMM	SIGNAL COMMUNICATION
ST	STREET
ST	SPIRAL TO TANGENT
STA	STATION
TCE	TEMPORARY CONSTRUCTION EASEMENT
TH	TRUNK HIGHWAY
THRU	THROUGH
TOR	TOP OF RAIL
TPSS	TRACTION POWER SUBSTATION
TRK	TRACK
TS	TANGENT TO SPIRAL
TYP	TYPICAL
UG	UNDERGROUND
V	DESIGN VELOCITY (MPH)
VC	VERTICAL CURVE
W	WEST
WB	WEST BOUND

TRAIL INDEX

ABBREVIATED NAME	FULL NAME / LOCATION
TRAIL 1	UNDER RED CIRCLE DR, LRT, AND YELLOW CIRCLE DR
TRAIL 2	FROM TRAIL 1 TO GREEN CIRCLE DR
TRAIL 3	OPUS STATION ACCESS FROM BREN RD E
TRAIL 4	FROM BREN RD W TO TRAIL 5
TRAIL 5	FROM OPUS STATION TO GREEN CIRCLE DR
TRAIL 6	FROM TRAIL 5 TO SMETANA RD
CEDAR LAKE TRAIL	CEDAR LAKE LRT REGIONAL TRAIL/FROM SHADY OAK STATION TO 11TH AVE
CEDAR LAKE TRAIL	CEDAR LAKE LRT REGIONAL TRAIL/WEST OF EXCELSIOR
CEDAR LAKE TRAIL	CEDAR LAKE LRT REGIONAL LRT TRAIL/BETWEEN EXCELSIOR AND KENILWORTH TRAIL CONNECTION
MIDTOWN GREENWAY	MIDTOWN GREENWAY/EAST OF KENILWORTH TRAIL CONNECTION
TRAIL A	KENILWORTH TRAIL (SECONDARY)/BETWEEN CEDAR-ISLES CHANNEL AND 21ST STREET STATION
TRAIL B	KENILWORTH TRAIL (SECONDARY)/BETWEEN 21ST STREET STATION AND PENN STATION
TRAIL B	CEDAR LAKE TRAIL (SECONDARY)/EAST OF PENN STATION
TRAIL C	10' CONNECTOR TRAIL FROM CEDAR LAKE LRT REGIONAL TRAIL TO TYLER AVE.
TRAIL D	10' CONNECTOR TRAIL/BELTLINE STATION TO CEDAR LAKE LRT REGIONAL TRAIL
KENILWORTH TRAIL	KENILWORTH TRAIL (MAIN)/W LAKE ST TO PENN STATION
CEDAR LAKE TRAIL	CEDAR LAKE TRAIL (MAIN)/PENN STATION TO TH 394
TRAIL E	KENILWORTH TRAIL (SECONDARY)/EAST OF W LAKE ST
TRAIL F	KENILWORTH TRAIL (SECONDARY)/WEST OF CEDAR LAKE PKWY
TRAIL G	KENILWORTH TRAIL (SECONDARY)/WEST OF PENN STATION
TRAIL G	CEDAR LAKE TRAIL (SECONDARY)/EAST OF PENN STATION
TRAIL H	10' CONNECTOR TRAIL/EAST OF PENN STATION TO KENWOOD PKWY
TRAIL I	NOT USED
CEDAR LAKE TRAIL	CEDAR LAKE TRAIL (MAIN)/AT-GRADE CROSSING AT PENN STATION
TRAIL J	CEDAR LAKE TRAIL (SECONDARY)/NORTHWEST OF PENN STATION
TRAIL K	CEDAR LAKE TRAIL (SECONDARY)/NORTHWEST OF PENN STATION
TRAIL L	CEDAR LAKE TRAIL (SECONDARY)/EAST OF PENN STATION
TRAIL M	NOT USED
TRAIL N	8' CONNECTOR TRAIL FROM CEDAR LAKE TRAIL TO EDGEBROOK DRIVE
TRAIL O	8' CONNECTOR TRAIL FROM CEDAR LAKE TRAIL TO W LAKE STREET
TRAIL P	8' CONNECTOR TRAIL FROM CEDAR LAKE TRAIL TO LOUISIANA AVE
TRAIL Q	10' CONNECTOR TRAIL FROM CEDAR LAKE TRAIL TO TH 7 SERVICE ROAD
TRAIL R	20' CONNECTOR TRAIL FROM VAN WHITE STATION TO CEDAR LAKE TRAIL
TRAIL S	NOT USED
TRAIL T	8' CONNECTOR TRAIL FROM VAN WHITE STATION TO VAN WHITE MEMORIAL BLVD
TRAIL U	10' TRAIL PARALLEL TO CEDAR LAKE PKWY
LUCE LINE TRAIL	LUCE LINE REGIONAL TRAIL/ON BRIDGE OVER LIGHT RAIL
TRAIL V	CONNECTOR TRAIL TO LUCE LINE REGIONAL TRAIL WEST OF LIGHT RAIL
TRAIL W	CONNECTOR TRAIL TO LUCE LINE REGIONAL TRAIL WEST OF LIGHT RAIL

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL




60% SUBMISSION - 09/28/15









CIVIL WEST - VOLUME 7  
GENERAL  
LEGEND AND ABBREVIATIONS  
SHEET 2

DISCIPLINE: GENERAL

SHEET NAME: W0-GEN-NTS - 002

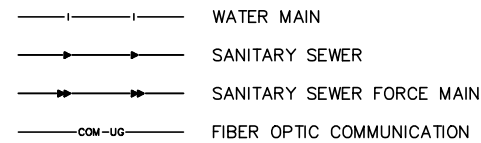
## GENERAL NOTES

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|--|--|--|
| <p>1. REFERENCE TO ROADWAY AND TRACK PLANS FOR GEOMETRICS, DIMENSIONS, PAVEMENT SECTIONS, DETAILS, STRIPING AND OTHER SITE FEATURES.</p> <p>2. PERFORM ALL UTILITY WORK IN ACCORDANCE WITH STATE AND CITY REQUIREMENTS.</p> <p>3. <b>TESTING AND INSPECTIONS:</b> ALL PLUMBING INSTALLATIONS, INCLUDING SEWER SERVICES, MUST BE TESTED AND INSPECTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE MINNESOTA PLUMBING CODE (MINNESOTA RULES CHAPTER 4715). COORDINATE TESTING AND INSPECTION WITH THE STATE HEALTH DEPARTMENT AND THE CITY PUBLIC WORKS DEPARTMENT. NO DRAINAGE OR PLUMBING WORK MAY BE COVERED PRIOR TO COMPLETING THE REQUIRED TESTS AND INSPECTIONS. THE CONTRACTOR SHALL RECORD LOCATIONS OF ALL SERVICE LEADS BEFORE BACKFILLING.</p> <p>4. PERFORM TRENCH EXCAVATIONS FOR ALL UTILITIES IN ACCORDANCE WITH THE REQUIREMENTS OF O.S.H.A. 29 CFR, PART 1926. SUBPART P, EXCAVATIONS (WWW.OSHA.GOV).</p> <p>5. COORDINATE BUILDING UTILITY CONNECTION WITH THE PROPERTY OWNER PRIOR TO CONSTRUCTION. VERIFY SEWER SERVICE LOCATIONS AND ELEVATIONS PRIOR TO CONSTRUCTION.</p> <p>6. SUPPORT ALL IN-PLACE UTILITIES DURING EXCAVATION AND CONSTRUCTION OF THE PROPOSED UTILITY. INCIDENTAL TO PROPOSED UTILITY WORK.</p> <p>7. ADJUST/RECONSTRUCT ALL MAINTENANCE MANHOLE CASTINGS AND STRUCTURES, CATCH BASIN CASTINGS AND STRUCTURES, CLEANOUT COVERS, VALVE BOXES, CURB STOPS, AND SIMILAR ITEMS TO ELEVATION 1/4" BELOW FINISHED GRADE. INCIDENTAL TO PROPOSED UTILITY WORK.</p> <p>8. INSTALL ALL PIPE WITH THE ASTM IDENTIFICATION NUMBERS ON THE TOP FOR INSPECTION. COMMENCE PIPE LAYING AT THE LOWEST POINT IN THE PROPOSED SEWER LINE. LAY THE PIPE WITH THE BELL END OR RECEIVING GROOVE END OF THE PIPE POINTING UPGRADE. WHEN CONNECTING TO AN EXISTING PIPE, UNCOVER THE EXISTING PIPE IN ORDER TO ALLOW ANY ADJUSTMENTS IN THE PROPOSED LINE AND GRADE BEFORE LAYING ANY PIPE.</p> <p>9. ABANDONING EXISTING SEWER SERVICE OR MAKING NEW CONNECTIONS TO CITY SEWER MUST BE DONE TO CITY STANDARDS BY A LICENSED HOUSE DRAIN CONTRACTOR UNDER A PERMIT FROM PUBLIC WORKS SEWER SECTION.</p> <p>10. CONTRACTOR MUST RESTORE OR REPAIR DAMAGED UTILITIES TO CONDITION EQUAL TO OR BETTER THAN PRE-CONSTRUCTION CONDITION AND AS REQUIRED BY OWNER.</p> <p>11. COORDINATE AND SEQUENCE WATER MAIN AND SEWER CONSTRUCTION WITH OTHER PROPOSED CONSTRUCTION.</p> <p>12. COORDINATE WITH COUNCIL AUTHORIZED REPRESENTATIVE (CAR) AND UTILITY OWNER FOR OPERATION OF VALVES AND HYDRANTS.</p> <p>13. MECHANICAL THRUST RESTRAINT SHALL BE USED FOR ALL WATER MAIN PIPE RESTRAINT. ADDITIONALLY, INSTALL CONCRETE THRUST BLOCKING AS SPECIFIED AND DETAILED.</p> <p>14. PIPE, CASING AND FITTING QUANTITIES AND SIZES SHOWN ARE BASED ON AS-BUILT INFORMATION AND MAY REQUIRE FIELD ADJUSTMENTS.</p> <p>15. ADJUST HYDRANT LOCATIONS AS NECESSARY TO ACCOMMODATE FIELD CONDITIONS. COORDINATE WITH CAR.</p> <p>16. SEE CORROSION CONTROL PLANS FOR CATHODIC PROTECTION MEASURES.</p> <p>17. ALL SECTION JOINTS OF STEEL CASING PIPE SHALL BE FULL PENETRATION WELDED. WELDS AT SECTION JOINTS SHALL BE CONTINUOUS FOR THE LENGTH OF THE JOINT.</p> <p>18. ALL PIPE JOINTS WITHIN CASING SHALL BE RESTRAINED WITH MECHANICAL RESTRAINT AT EACH JOINT.</p> <p>19. ALL HYDRANT LEADS SHALL BE 6" DUCTILE IRON PIPE. PROVIDE AND INSTALL MECHANICAL THRUST RESTRAINT FOR ALL JOINTS IN THE HYDRANT LEAD. ADDITIONALLY, INSTALL CONCRETE THRUST BLOCKING AS SPECIFIED AND DETAILED.</p> <p>20. SHORING, SHEETING, BRACING, TRENCH BOXING AND OTHER EXCAVATION PROTECTION MEASURES USED IN THE COURSE OF WORK FOR THE REMOVAL OR INSTALLATION OF ANY UTILITY OR USED TO SUPPORT, PROTECT OR MAINTAIN SURFACE AND SUBSURFACE STRUCTURES AND UTILITIES SHALL BE DESIGNED, FURNISHED, INSTALLED AND REMOVED AT THE CONTRACTOR'S EXPENSE. COSTS SHALL BE INCIDENTAL TO UTILITY INSTALLATION WORK.</p> | <p>21. THE UTILITIES PLANS DEPICT PROPOSED RELOCATIONS FOR SANITARY SEWER AND WATER MAIN AND EXISTING SANITARY SEWER AND WATER MAIN THAT ARE TO REMAIN IN PLACE AND IN SERVICE. PRIVATE UTILITIES NOT REMOVED BY THE PROJECT ARE SHOWN WHERE THEY CURRENTLY EXIST. REFER TO EXISTING CONDITIONS PLANS FOR UTILITY LOCATION QUALITY LEVEL. COORDINATE WITH PRIVATE UTILITY OWNERS SO THAT PRIVATE UTILITY OWNERS MAY SCHEDULE AND CONDUCT THEIR REMOVALS AND RELOCATIONS WITHIN THE SCHEDULE AND CONSTRUCTION OF THE PROJECT.</p> <p>22. ALL WATER MAINS TO BE INSTALLED ACCORDING TO CITY STANDARD SPECIFICATIONS, THE PROJECT MANUAL AND PLANS.</p> <p>23. ALL EXISTING WATER SERVICES NOT BEING REUSED MUST BE REMOVED IN THEIR ENTIRETY PER CITY STANDARD SPECIFICATIONS.</p> <p>24. PROVIDE MINIMUM COVER FOR WATER MAIN AS REQUIRED BY CITY STANDARD SPECIFICATIONS UNLESS NOTED OTHERWISE.</p> <p>25. VERIFY LOCATION AND ELEVATION OF EXISTING AND PROPOSED UTILITIES PRIOR TO WORK.</p> <p>26. PROTECT AND SUPPORT UNDERGROUND FACILITIES DURING CONSTRUCTION OPERATIONS.</p> <p>27. EXCAVATION, BACKFILLING AND COMPACTING REQUIRED FOR REMOVAL OF ITEMS INDICATED TO BE REMOVED SHALL BE CLASSED AS INCIDENTAL TO THE REMOVAL WORK.</p> <p>28. REMOVAL OF ANY EXISTING CONCRETE THRUST BLOCKING AND EXISTING MECHANICAL RESTRAINTS SHALL BE CLASSED AS INCIDENTAL TO REMOVE WATER MAIN WORK.</p> <p>29. EXCAVATION, BACKFILLING, COMPACTING AND BEDDING REQUIRED FOR INSTALLATION OF PROPOSED WATER MAIN PIPING AND APPURTENANCES AND PROPOSED SEWER PIPING, MANHOLES AND APPURTENANCES SHALL BE CLASSED AS INCIDENTAL TO THE PROPOSED WORK.</p> <p>30. CONTRACTOR SHALL PROVIDE A MINIMUM 10 DAY NOTICE TO THE CAR PRIOR TO SHUTDOWN OF ANY WATER MAIN OR WATER SERVICE. SHUTDOWNS AND START-UPS OF WATER MAIN AND WATER SERVICES ARE SUBJECT TO APPROVAL BY CITY. ALL VALVE OPERATION SHALL BE DONE BY CITY AND IS SUBJECT TO PERSONNEL AVAILABILITY. CONTRACTOR SHALL SCHEDULE SHUTDOWNS TO MINIMIZE SERVICE DISRUPTION. SHUTDOWNS MAY NEED TO OCCUR ON WEEKENDS AND/ OR DURING NON-BUSINESS HOURS. COORDINATE SCHEDULE WITH CAR.</p> <p>31. CONTRACTOR SHALL MAINTAIN, ON HAND, A STOCK OF WATER MAIN PIPE AND FITTINGS AT ALL PLAN SIZES THAT THE CONTRACTOR DEEMS ADEQUATE TO ACCOMMODATE UNFORESEEN OBSTACLES TO CONSTRUCTION. DELAY DUE TO LACK OF MATERIALS IS SOLELY THE CONTRACTOR'S RESPONSIBILITY.</p> <p>32. ALL CONSTRUCTED WATER MAIN MUST BE APPROVED BY THE CAR, RECONNECTED TO EXISTING WATER MAIN, AND MADE OPERATIONAL PRIOR TO CEASING WATER MAIN CONSTRUCTION OPERATIONS FOR TIME PERIODS GREATER THAN 1 WEEK. CONTRACTOR IS RESPONSIBLE FOR DESIGNING, FURNISHING AND INSTALLING, AND REMOVING ANY TEMPORARY VALVES, PIPE, RESTRAINT, AND OTHER MATERIAL AND EQUIPMENT REQUIRED TO MAKE CONNECTION BETWEEN NEWLY CONSTRUCTED WATER MAIN AND EXISTING WATER MAIN WHEN CONSTRUCTION IS HALTED PRIOR TO COMPLETION OF ALL PROPOSED WORK. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH TEMPORARY WORK COMPLETED FOR THE CONVENIENCE OF THE CONTRACTOR. ALL TEMPORARY VALVES, PIPE, RESTRAINT, AND OTHER MATERIAL AND EQUIPMENT SHALL BE DESIGNED BY AN ENGINEER LICENSED IN THE STATE OF MINNESOTA, REVIEWED BY THE COUNCIL PRIOR TO INSTALLATION, AND MEET PROJECT SPECIFICATIONS. REMOVAL OF TEMPORARY FACILITIES AND SUBSEQUENT CONSTRUCTION AT PLAN ALIGNMENT MAY REQUIRE RETESTING OF ALL OR PORTIONS OF PREVIOUSLY CONSTRUCTED AND TESTED NEW WATER MAIN.</p> <p>33. PROVIDE A SEWER BYPASS PUMPING AND/OR DIVERSION PLAN FOR REVIEW BY THE CAR AT LEAST 10 WORKING DAYS PRIOR TO BEGINNING SEWER WORK. INCLUDE AN EMERGENCY RESPONSE PLAN TO BE FOLLOWED IN THE EVENT OF A FAILURE OF THE BYPASS PUMPING AND/OR DIVERSION SYSTEM. THE PLAN MUST BE APPROVED BY THE CAR BEFORE THE CONTRACTOR PROCEEDS WITH SEWER BYPASS PUMPING AND/OR DIVERSION. THE CONTRACTOR MAY BE REQUIRED TO PROVIDE MULTIPLE SEWER BYPASS PUMPING AND/OR DIVERSION PLANS SUBJECT TO (BUT NOT LIMITED TO) SEWER SIZE, SEWER LOCATION, PROJECT SCHEDULE AND PHASING AND SEWER CUSTOMER SCHEDULES AND REQUIREMENTS.</p> | <p>34. DRAINAGE SHOWN IN THIS VOLUME IS FOR INFORMATION ONLY. SEE VOLUME 8 - DRAINAGE FOR DRAINAGE DESIGN.</p> <p>35. PROTECT IN-PLACE ALL PUBLIC AND PRIVATE UTILITIES NOT INDICATED FOR REMOVAL. PROTECT IN-PLACE ALL PUBLIC AND PRIVATE UTILITIES THAT ARE INDICATED FOR REMOVAL UNTIL THEY HAVE BEEN DEACTIVATED AND TAKEN OUT OF SERVICE. COORDINATE WITH THE CAR AND UTILITY OWNER. PROTECTION OF IN-PLACE UTILITIES IS INCIDENTAL TO PROPOSED UTILITY WORK.</p> <p>36. FURNISH &amp; INSTALL MECHANICAL THRUST RESTRAINT FOR ALL JOINTS IN WATER SERVICE LEADS GREATER THAN 2" IN DIAMETER.</p> <p>37. INSULATE WATER MAIN AND SANITARY SEWER WHERE INDICATED AND ADDITIONALLY AS REQUIRED BY THE PROJECT MANUAL.</p> <p>38. ALL WATER MAIN CROSSING PROPOSED LRT AND FREIGHT TRACK SHALL BE CASED.</p> <p>39. UTILITIES AND UTILITY STRUCTURES INDICATED FOR REMOVAL SHALL BE REMOVED AND DISPOSED OF IN THEIR ENTIRETY REGARDLESS OF TYPE, MATERIAL, SIZE, OR DEPTH. REMOVALS SHALL INCLUDE PIPE AND STRUCTURE APPURTENANCES SUCH AS BENDS, ELBOWS, TIES, FITTINGS, CASTING FRAMES, GRATES, LIDS, STEPS, ETC. EXCAVATION AND BACKFILLING FOR REMOVALS ARE INCIDENTAL.</p> <p>40. CONTRACTOR SHALL COORDINATE AND SCHEDULE ALL WATER MAIN WORK WITH THE CAR AND THE CITY.</p> <p>41. CONTINUOUS SYSTEM WIDE WATER SERVICE AND WATER SYSTEM PRESSURES MUST BE MAINTAINED. CONTRACTOR MUST SCHEDULE ALL WATER SHUTDOWNS (SCHEDULE TO INCLUDE START, DURATION, AND END OF SHUTDOWN) WITH CAR AND THE CITY. MAINTENANCE OF SYSTEM WIDE WATER SERVICE AND WATER MAIN OPERATING PRESSURES MAY NOT ALLOW SHUT DOWN OF MORE THAN ONE WATER MAIN CROSSING AT A TIME. AUTHORIZATION FOR COINCIDENT SHUTDOWNS OF MULTIPLE WATER MAIN CROSSINGS MUST BE OBTAINED FROM THE CAR AND THE CITY. THE CONTRACTOR SHALL COORDINATE WITH THE CAR AND CITY TO SCHEDULE THE SHUTDOWNS TO MINIMIZE DISRUPTION. THE SCHEDULE SHALL BE APPROVED BY THE CAR AND CITY PRIOR TO COMMENCING WORK. APPROVAL OF THE SHUTDOWN SCHEDULE, INCLUDING SHUTDOWN DURATION, IS SUBJECT TO (BUT NOT LIMITED TO) PERSONNEL AVAILABILITY, SEASONAL WATER DEMANDS, WATER MAIN SIZE, WATER MAIN LOCATION, PROJECT SCHEDULE AND PHASING, AND WATER CUSTOMER SCHEDULES AND REQUIREMENTS. ADDITIONAL VALVING BEYOND THAT SHOWN IN THE PLANS MAY BE NECESSARY FOR THE SHUTDOWN PROCEDURES.</p> <p>42. WATER MAIN APPURTENANCES, STATIONS, AND OFFSETS FOR MAIN LINE WATER MAIN ARE INDICATED ON WATER MAIN PROFILES.</p> <p>43. NEW CASTINGS, FRAMES, LIDS, GRATES, AND ADJUSTING MANHOLE RINGS SHALL BE FURNISHED &amp; INSTALLED FOR ALL NEW, RECONSTRUCTED, AND ADJUSTED MANHOLES AND CATCH BASINS. EXISTING CASTINGS, FRAMES, LIDS, GRATES, AND ADJUSTING MATERIALS THAT ARE REPLACED SHALL BE REMOVED AND DISPOSED.</p> <p>44. ALL WATER MAIN FITTINGS SHALL BE DUCTILE IRON.</p> <p>45. ALL TREES NOT INDICATED FOR REMOVAL ARE TO REMAIN AND SHALL BE PROTECTED DURING CONSTRUCTION ACTIVITIES. SEE LANDSCAPE DETAILS FOR TREE PROTECTION REQUIREMENTS.</p> <p>46. AIR VENTS AND/OR BLOW-OFFS MAY BE NECESSARY FOR TESTING NEW WATER MAIN INSTALLATIONS. LOCATION OF AIR VENTS AND BLOW-OFFS WILL BE FIELD COORDINATED BY THE CAR AND CITY INSPECTOR. CONSTRUCTION OF AIR VENTS AND BLOW-OFFS IS INCIDENTAL TO WATER MAIN CONSTRUCTION.</p> <p>47. ADDING BENDS AND FITTINGS TO PROPOSED WATER MAIN WILL REQUIRE ADDITIONAL MECHANICAL RESTRAINT AND MAY REQUIRE RESTRAINT LENGTHS THAT EXCEED THOSE SHOWN IN THE PLANS AND PROFILES. COORDINATE WITH CAR PRIOR TO ADDING BENDS AND FITTINGS.</p> <p>48. ALL BENDS AND FITTINGS SHALL BE INSTALLED WITH MECHANICAL RESTRAINT AT THE BEND OR FITTING.</p> <p>49. DO NOT REMOVE UTILITIES UNTIL GIVEN PERMISSION BY UTILITY OWNER. BEFORE STARTING REMOVALS, VERIFY THAT UTILITY HAS BEEN DEACTIVATED. COORDINATE REMOVALS WITH PROPOSED CONSTRUCTION.</p> <p>50. SYMBOLS USED TO DENOTE STRUCTURES ARE NOT TO SCALE AND DO NOT DEPICT ACTUAL SIZE. REMOVE STRUCTURES IDENTIFIED FOR REMOVAL IN THEIR ENTIRETY.</p> |
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NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL	 		 		<b>CIVIL WEST - VOLUME 7</b> <b>UTILITIES</b> <b>CONSTRUCTION NOTES</b>		<b>SHEET</b>  <b>6</b>  <b>OF</b>  <b>60</b>
						<b>60% SUBMISSION - 9/28/15</b>		DISCIPLINE: <b>UTILITIES</b>		SHEET NAME: <b>W0-UTL-NTS - 001</b>		

LEGEND

### PROPOSED UTILITY LINE TYPES



### PROPOSED UTILITY SYMBOLS

- WATER MANHOLE
- ✕ WATER VALVE
- ◆ WATER HYDRANT
- SANITARY SEWER MANHOLE

SANITARY AND WATER PLAN  
CONSTRUCTION NOTES

- ① CONNECT TO EXISTING WATER MAIN. VERIFY EXISTING WATER MAIN SIZE AND LOCATION. PROVIDE AND INSTALL FITTINGS AS NECESSARY TO MAKE CONNECTION, PIPE COUPLING (ISOLATING COUPLING WHERE REQUIRED – SEE CORROSION CONTROL PLANS) AND MECHANICAL THRUST RESTRAINT AT THE FITTINGS, COUPLING AND ACROSS COUPLING.
  - ② SEE TYPICAL PIPE CASING DETAIL.
  - ③ PROVIDE AND INSTALL MECHANICAL THRUST RESTRAINT FOR ALL JOINTS.
  - ④ GATE VALVE AND VALVE BOX PER CITY OF HOPKINS STANDARD DETAIL W-4.
  - ⑤ NOT USED.
  - ⑥ 6" GATE VALVE, VALVE BOX, HYDRANT, AND DIP LEAD PER CITY OF HOPKINS STANDARD DETAIL W-2. PROVIDE AND INSTALL MECHANICAL THRUST RESTRAINT FOR ALL JOINTS.
  - ⑦ STATION WATER SERVICE. INSTALL PER TYPICAL WATER SERVICE TRACK CROSSING FOR 2" COPPER SERVICE OR SMALLER DETAIL. COORDINATE WITH STATION MECHANICAL PLANS FOR SIZE AND LOCATION. SEE STATION MECHANICAL PLANS FOR CONTINUATION AND DETAIL. COORDINATE WITH COUNCIL AUTHORIZED REPRESENTATIVE FOR LOCATION OF CURB STOP.
  - ⑧ CONNECT TO EXISTING SANITARY FORCE MAIN. VERIFY EXISTING SANITARY FORCE MAIN SIZE AND LOCATION. PROVIDE FITTINGS, PIPE COUPLING (ISOLATING COUPLING WHERE REQUIRED – SEE CORROSION CONTROL PLANS) AND MECHANICAL THRUST RESTRAINT AT THE FITTINGS, COUPLING AND ACROSS COUPLING.
  - ⑨ PROVIDE A SANITARY FORCE MAIN TEMPORARY CONVEYANCE PLAN FOR REVIEW BY THE CITY AND COUNCIL AUTHORIZED REPRESENTATIVE AT LEAST 10 BUSINESS DAYS PRIOR TO BEGINNING SANITARY FORCE MAIN WORK. INCLUDE AN EMERGENCY RESPONSE PLAN TO BE FOLLOWED IN THE EVENT OF A FAILURE OF THE TEMPORARY CONVEYANCE SYSTEM. BOTH THE TEMPORARY CONVEYANCE PLAN AND THE EMERGENCY RESPONSE PLAN MUST BE APPROVED BY THE CITY AND THE COUNCIL AUTHORIZED REPRESENTATIVE PRIOR TO PROCEEDING WITH THE TEMPORARY CONVEYANCE SYSTEM. THE CONTRACTOR MAY BE REQUIRED TO PROVIDE MULTIPLE TEMPORARY CONVEYANCE PLANS SUBJECT TO (BUT NOT LIMITED TO) SANITARY FORCE MAIN SIZE AND LOCATION, PROJECT SCHEDULE AND PHASING, AND SEWER CUSTOMER SCHEDULES AND REQUIREMENTS.
  - ⑩ BUTTERFLY VALVE AND VALVE BOX PER CITY OF HOPKINS STANDARD DETAIL W-5.
  - ⑪ CONSTRUCT MANHOLE OVER EXISTING SEWER.
  - ⑫ CONNECT TO EXISTING WATER SERVICE. VERIFY EXISTING WATER SERVICE SIZE AND LOCATION. PROVIDE FITTINGS, PIPE COUPLING, (ISOLATING COUPLING WHERE REQUIRED – SEE CORROSION CONTROL PLANS) AND MECHANICAL THRUST RESTRAINT AT THE FITTINGS, COUPLING AND ACROSS COUPLING. CONSTRUCT WATER SERVICES 4" AND LARGER WITH MECHANICAL JOINT DIP. PROVIDE MECHANICAL THRUST RESTRAINT FOR ALL JOINTS. INSTALL WITH A CAP AND OUTLET OF SUFFICIENT SIZE TO ALLOW FOR FLUSHING AND TESTING OF THE SERVICE LINE. ALL SERVICES WILL BE SUBJECT TO THE SAME TESTING AS WATER MAIN. AFTER SUCCESSFUL COMPLETION OF TESTING, REMOVE CAP AND CONNECT TO EXISTING SERVICE PIPE. CONNECTION TO EXISTING PIPE WILL BE VISUALLY INSPECTED UNDER CITY OPERATING PRESSURE PRIOR TO BURYING. COORDINATE TESTING WITH CITY AND COUNCIL AUTHORIZED REPRESENTATIVE.
  - ⑬ GATE VALVE AND VALVE BOX PER CITY OF ST. LOUIS PARK STANDARD DETAIL W-3.
  - ⑭ 6" GATE VALVE, VALVE BOX, HYDRANT, AND DIP LEAD PER CITY OF ST. LOUIS PARK STANDARD DETAIL W-2. PROVIDE AND INSTALL MECHANICAL THRUST RESTRAINT FOR ALL JOINTS.
  - ⑮ RECONSTRUCT MANHOLE TO MATCH PROPOSED GRADE.
  - ⑯ 72" TRIPLE DOG WATER VALVE MANHOLE.
  - ⑰ 6" GATE VALVE, VALVE BOX, HYDRANT, AND DIP LEAD PER CITY OF MINNEAPOLIS STANDARD PLATE WATR-1000A-R2. PROVIDE AND INSTALL MECHANICAL THRUST RESTRAINT FOR ALL JOINTS.
  - ⑱ RECONSTRUCT MANHOLE PER DETAIL XXXXX. ROTATE ACCESS OUT OF CURB AND GUTTER.
  - ⑲ NOT USED.
  - ⑳ BUTTERFLY VALVE AND VALVE BOX PER CITY OF MINNETONKA STANDARD PLATES 520 AND 540. INSTALL VALVE WITH ENOUGH STRAIGHT DIP BEYOND THE VALVE AND BEFORE OTHER FITTINGS, PIPE MATERIAL CHANGES, ETC. TO ALLOW FULL OPERATION OF VALVE.
  - ㉑ GATE VALVE AND VALVE BOX PER CITY OF MINNETONKA STANDARD PLATE 540.
  - ㉒ 6" GATE VALVE, VALVE BOX, HYDRANT, AND DIP LEAD PER CITY OF MINNETONKA STANDARD PLATE 500. PROVIDE AND INSTALL MECHANICAL THRUST RESTRAINT FOR ALL JOINTS.
  - ㉓ EXTEND CASING FLUSH TO INSIDE WALL OF MANHOLE. PROVIDE AND INSTALL WATER-TIGHT FLEXIBLE BOOT-TYPE MANHOLE CONNECTION AT CASING.
  - ㉔ RECONSTRUCT SEWER SERVICE PER RECONNECTION OF HOUSE SERVICES DETAIL. COORDINATE WITH PROPERTY OWNER TO MINIMIZE INTERRUPTION OF SERVICE. COORDINATE WITH LOCATION AND ELEVATION OF PUBLIC AND PRIVATE UTILITIES AND PROPOSED RELOCATION OF PUBLIC AND PRIVATE UTILITIES.
  - ㉕ 6" GATE VALVE, VALVE BOX, HYDRANT, AND DIP LEAD PER CITY OF EDEN PRAIRIE TYPICAL HYDRANT DETAIL W-3. PROVIDE AND INSTALL MECHANICAL THRUST RESTRAINT FOR ALL JOINTS.
  - ㉖ GATE VALVE AND VALVE BOX PER CITY OF EDEN PRAIRIE SPECIFICATIONS.
  - ㉗ HDPE PIPE TO DUCTILE IRON PIPE TRANSITION. PROVIDE AND INSTALL FITTINGS AND ADAPTORS TO COMPLETE A MECHANICALLY RESTRAINED AND FUSED TRANSITION BETWEEN PIPE MATERIALS AND PIPE DIAMETERS.
  - ㉘ BUTTERFLY VALVE AND MANHOLE PER CITY OF EDEN PRAIRIE SPECIFICATIONS AND CITY OF EDEN PRAIRIE STANDARD DETAIL W-5. INSTALL VALVE WITH ENOUGH STRAIGHT DIP BEYOND THE VALVE AND BEFORE OTHER FITTINGS, PIPE MATERIAL CHANGES, ETC. TO ALLOW FULL OPERATION OF VALVE.

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60% SUBMISSION - 9/28/15



**CIVIL WEST - VOLUME 7  
UTILITIES  
CONSTRUCTION NOTES**

DISCIPLINE: **UTILITIES**

SHEET NAME:	W0-UTL-NTS - 002
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**SHEET**  
**7**  
**OF**  
**60**

**SHEET**  
**8**  
**OF**  
**60**







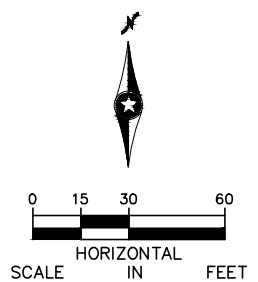








\* (XX) = SANITARY AND WATER PLAN  
CONSTRUCTION NOTE. REFER TO  
SHEET WO-UTL-NTS-002 FOR  
NOTES.

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**METROPOLITAN**  
COUNCIL



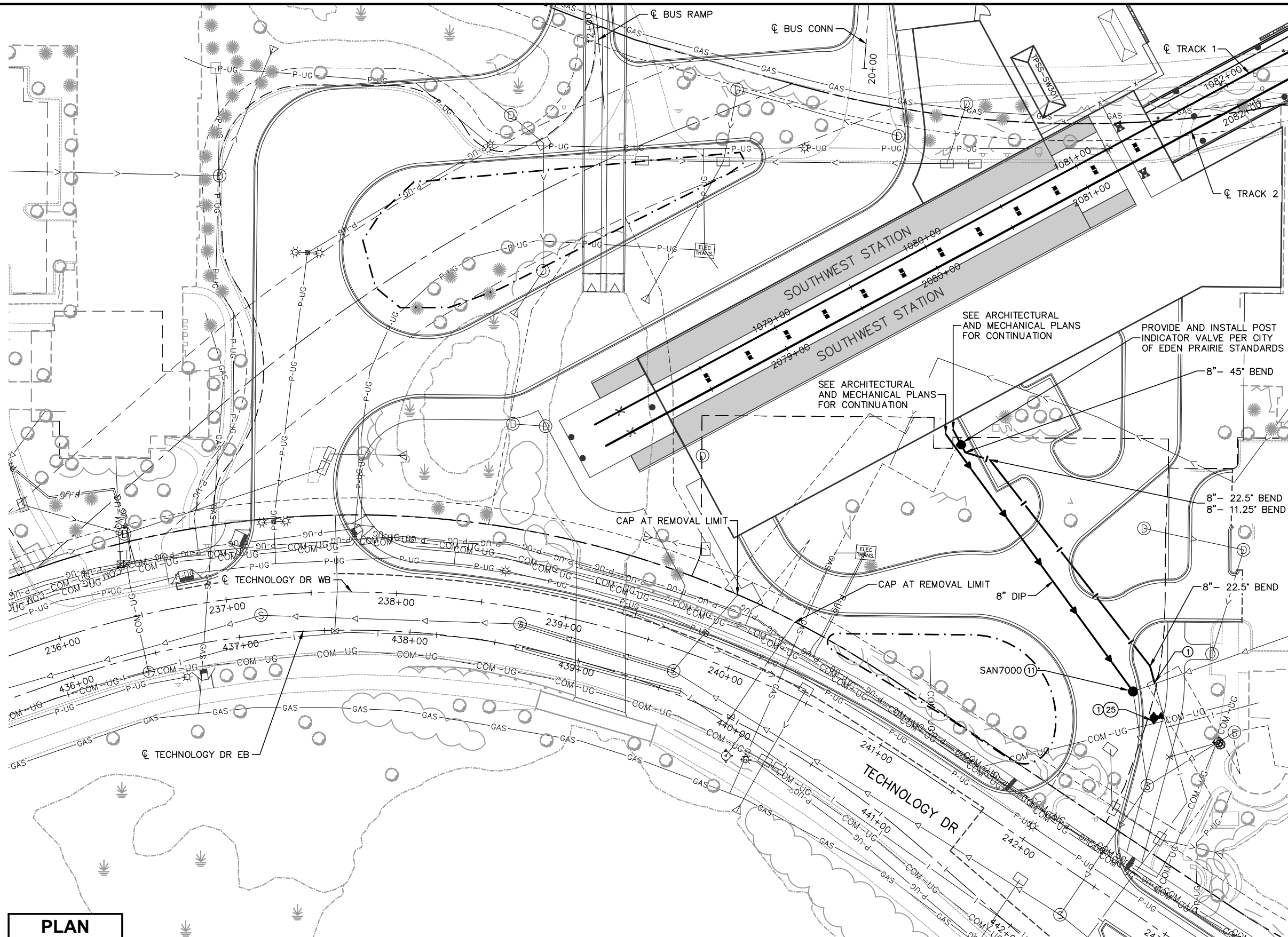
DISCIPLINE: **UTILITIES**

SHEET NAME:	W1-UTL-PLN - 001
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	<b>SHEET</b>
	<b>12</b>
	<b>OF</b>
	<b>60</b>



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NOTES:

- \* SEE SHEET W0-UTL-NTS-002 FOR UTILITY LEGEND.
- \* (XX) = SANITARY AND WATER PLAN CONSTRUCTION NOTE. REFER TO SHEET W0-UTL-NTS-002 FOR NOTES.

PLAN

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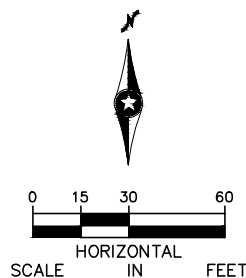


60% SUBMISSION - 9/28/15

CIVIL WEST - VOLUME 7  
UTILITIES  
SOUTHWEST STATION 2 OF 3  
PLAN

DISCIPLINE:  
UTILITIES

SHEET NAME:  
W1-UTL-PLN - 002



SHEET  
13  
OF  
60

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PROTECT EXISTING WATER MAIN AND SANITARY SEWER IN PLACE AND IN SERVICE UNTIL COMPLETION OF PILE DRIVING OPERATIONS. PROVIDE AN EMERGENCY RESPONSE PLAN TO BE FOLLOWED IN THE EVENT OF A FAILURE OF EITHER EXISTING UTILITY FOR REVIEW BY THE CITY AND COUNCIL AUTHORIZED REPRESENTATIVE AT LEAST 10 BUSINESS DAYS PRIOR TO BEGINNING PILE DRIVING OPERATIONS. THE EMERGENCY RESPONSE PLAN MUST BE APPROVED BY THE CITY AND THE COUNCIL AUTHORIZED REPRESENTATIVE PRIOR TO PROCEEDING WITH PILE DRIVING OPERATIONS. AFTER COMPLETION OF PILE DRIVING OPERATIONS, REMOVE WATER MAIN AND SANITARY SEWER, AT A MINIMUM, TO THE LIMITS SHOWN, AND AS NEEDED, REMOVE ANY ADDITIONAL WATER MAIN AND SANITARY SEWER DAMAGED BY PILE DRIVING OPERATIONS. REPLACE PER PLANS AND RETURN BOTH UTILITIES TO FULL SERVICE AS SOON AS POSSIBLE TO MINIMIZE DISRUPTION

EX ROW

316+00

1099+00

2099+00

415+00

314+00

414+00

413+00

313+00

312+00

ST. STA. BACK 1100+27.5

STA. AHEAD 1100+36.87

CL TRACK 1

1101+00

1102+00

2100+00

2101+00

2102+00

CL TRACK 2

CL PRAIRIE CENTER DR NB

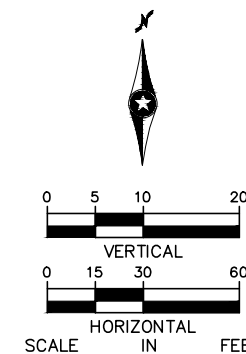
PRAIRIE CENTER DR

CL PRAIRIE CENTER DR SB

REMOVALS

## REMOVALS

## PLAN

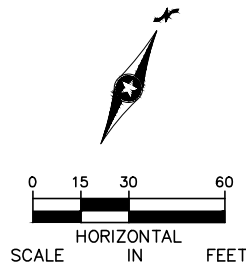
[illegible]

Sep, 21 2015 10:22 am V: \\3400\_ADC\CAD\00\_WEST\PLANSHEETS\UTILITIES\W1-UTL-PLN.dwg By: V-YoungbJR



\* SEE SHEET WO-UTL-NTS-002 FOR UTILITY LEGEND.

\* (XX)=SANITARY AND WATER PLAN CONSTRUCTION NOTE. REFER TO SHEET WO-UTL-NTS-002 FOR NOTES.

[illegible][illegible]

**METROPOLITAN**  
COUNCIL



SHEET NAME:
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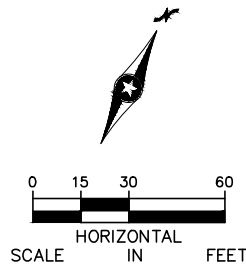
**SHEET**  
**16**  
**OF**  
**60**

**CIVIL WEST - VOLUME 7  
UTILITIES  
EDEN RD 1 OF 3  
REMOVALS**



\* SEE SHEET W0-UTL-NTS-002 FOR UTILITY LEGEND.

\* (XX)=SANITARY AND WATER PLAN CONSTRUCTION NOTE. REFER TO SHEET W0-UTL-NTS-002 FOR NOTES.

[illegible]

SHEET NAME:	W1-UTL-PLN - 006
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HEET  
17  
OF  
60

[illegible][illegible]

[illegible]

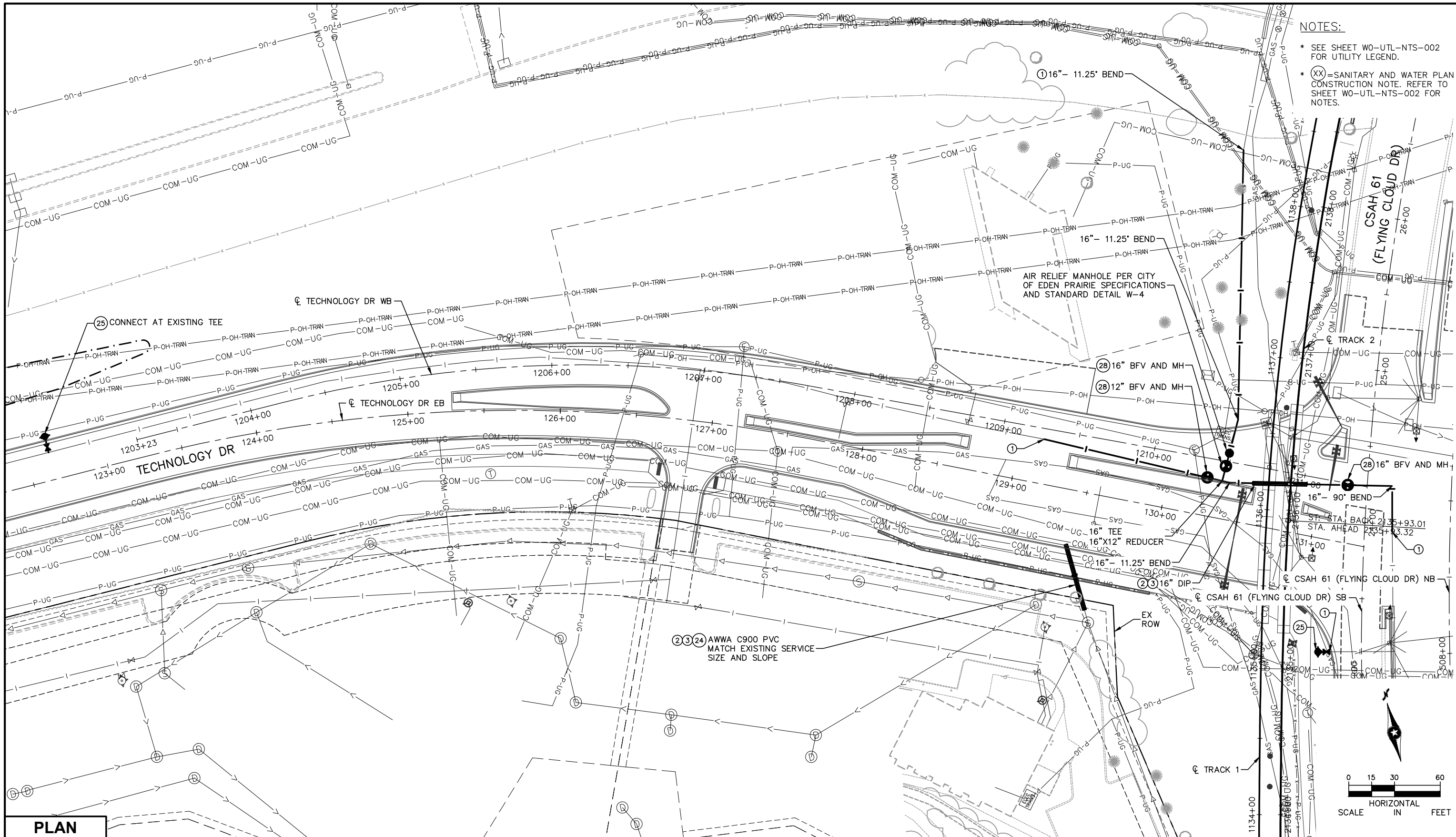
**SOUTHWEST**  
Green Line LRT Extension

<p align="center"><b>CIVIL WEST - VOLUME 7</b></p> <p align="center"><b>UTILITIES</b></p> <p align="center"><b>TECHNOLOGY DR / FLYING CLOUD DR 1 OF 3</b></p> <p align="center"><b>REMOVALS</b></p>	
<p>DISCIPLINE:</p> <p align="center"><b>UTILITIES</b></p>	<p>SHEET NAME:</p> <p align="center"><b>W1-UTL-PLN - 008</b></p>

SHEET  
19  
OF  
60



Sep. 21 2015 10:27 am V:\3400\_ADC\CAD\00\_WEST\PLANSHEETS\UTILITIES\W1-UTL-PLN.dwg By: V-YoungJR



NOTES:

- \* SEE SHEET W0-UTL-NTS-002 FOR UTILITY LEGEND.
- \* (XX) = SANITARY AND WATER PLAN CONSTRUCTION NOTE. REFER TO SHEET W0-UTL-NTS-002 FOR NOTES.

PLAN

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

AECOM

pce



SOUTHWEST  
Green Line LRT Extension



CIVIL WEST - VOLUME 7  
UTILITIES  
TECHNOLOGY DR / FLYING CLOUD DR 2 OF 3  
PLAN

DISCIPLINE: UTILITIES

SHEET NAME: W1-UTL-PLN - 009

SHEET  
20  
OF  
60

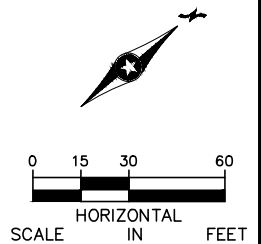
60% SUBMISSION - 9/28/15



[illegible]

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL	<div><div><div>AECOM</div><div>pce</div></div></div>		<div><div><div><div><div></div><div>METROPOLITAN COUNCIL</div></div><div><div>SOUTHWEST</div><div>Green Line LRT Extension</div></div><div><div></div><div></div></div></div></div></div>		CIVIL WEST - VOLUME 7 UTILITIES TECHNOLOGY DR / FLYING CLOUD DR 3 OF 3 PROFILES		SHEET
						60% SUBMISSION - 9/28/15		<div>DISCIPLINE: UTILITIES</div>		<div>SHEET NAME: W1-UTL-PLN - 010</div>		21 OF 60

- \* SEE SHEET W0-UTL-NTS-002 FOR UTILITY LEGEND.
- \* (XX)=SANITARY AND WATER PLAN CONSTRUCTION NOTE. REFER TO SHEET W0-UTL-NTS-002 FOR NOTES.

[illegible]

**METROPOLITAN**  
COUNCIL

## SOUTHWEST

### Green Line LRT Extension

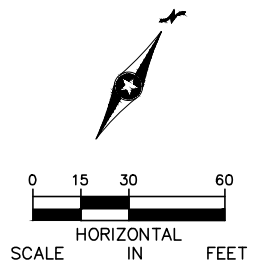
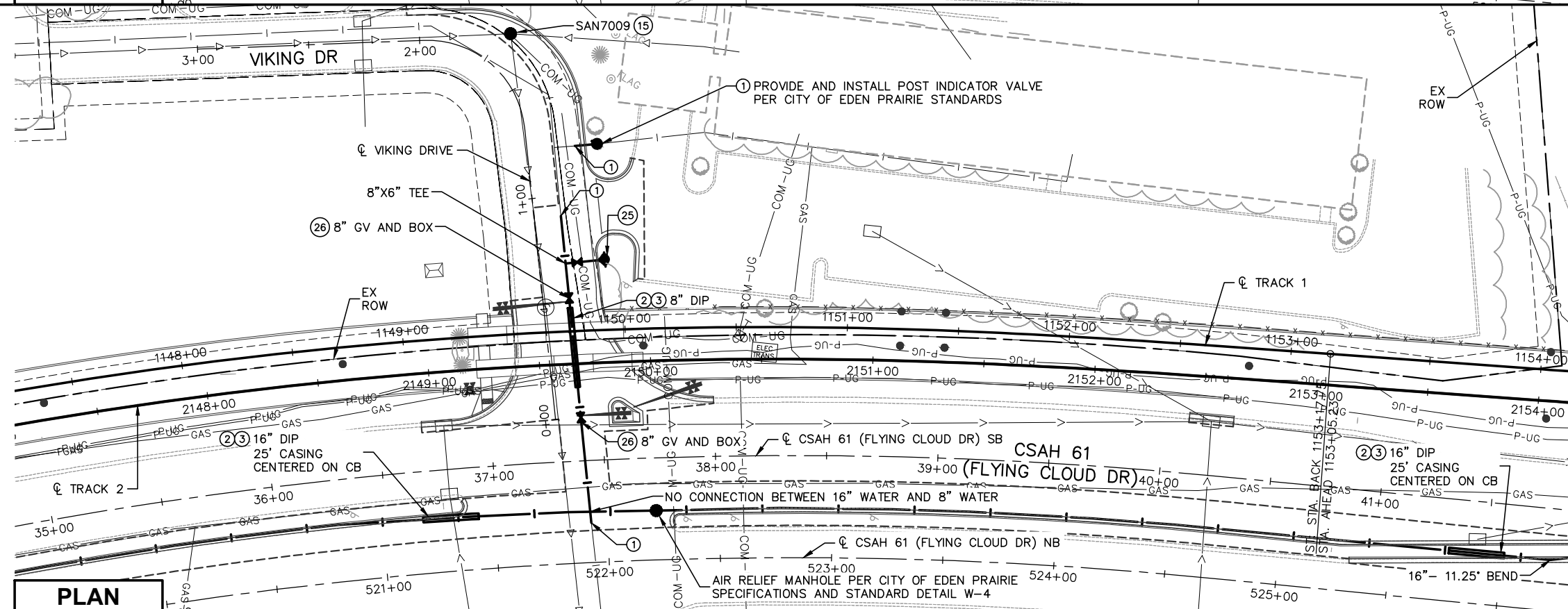
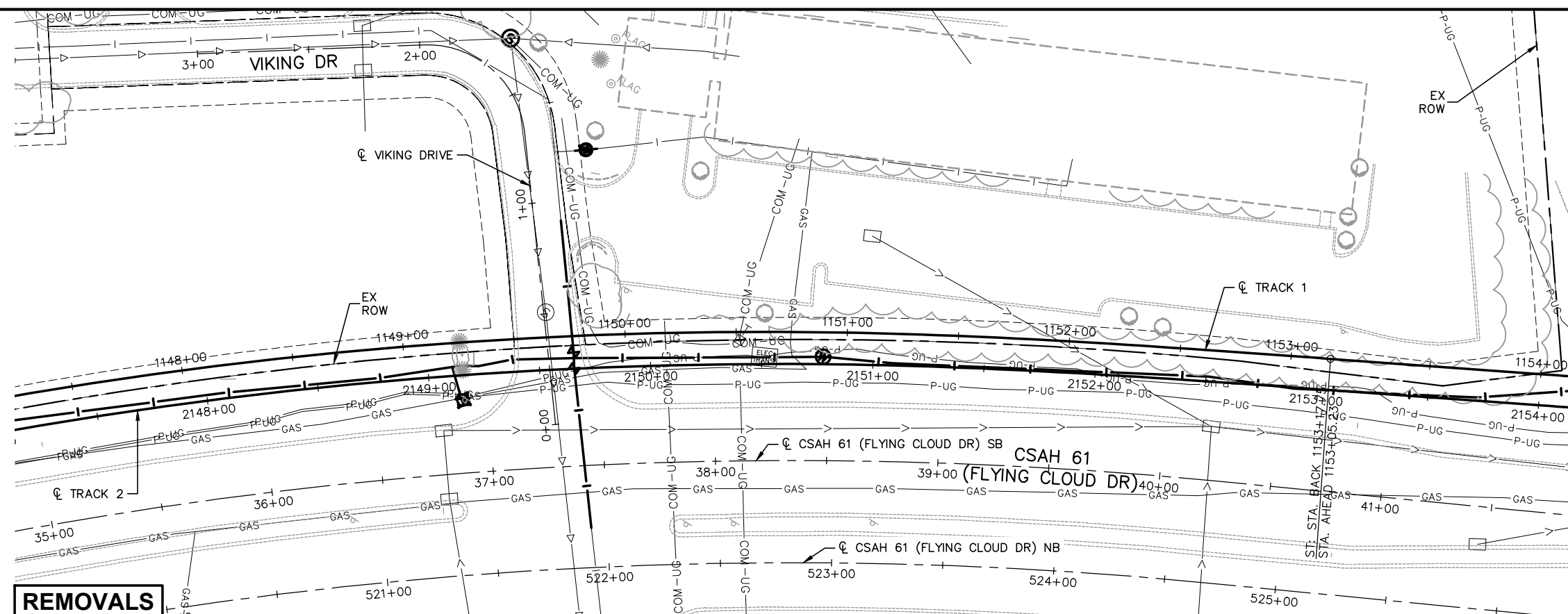


**CIVIL WEST - VOLUME 7  
UTILITIES  
FLYING CLOUD DR 1 OF 5  
REMOVALS AND PLAN**

DISCIPLINE: **UTILITIES**

SHEET NAME:	W1-UTL-PLN - 011
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**SHEET**  
**22**  
**OF**  
**60**

[illegible]**AECOM**

pce



**CIVIL WEST - VOLUME 7  
UTILITIES  
FLYING CLOUD DR 2 OF 5  
REMOVALS AND PLAN**

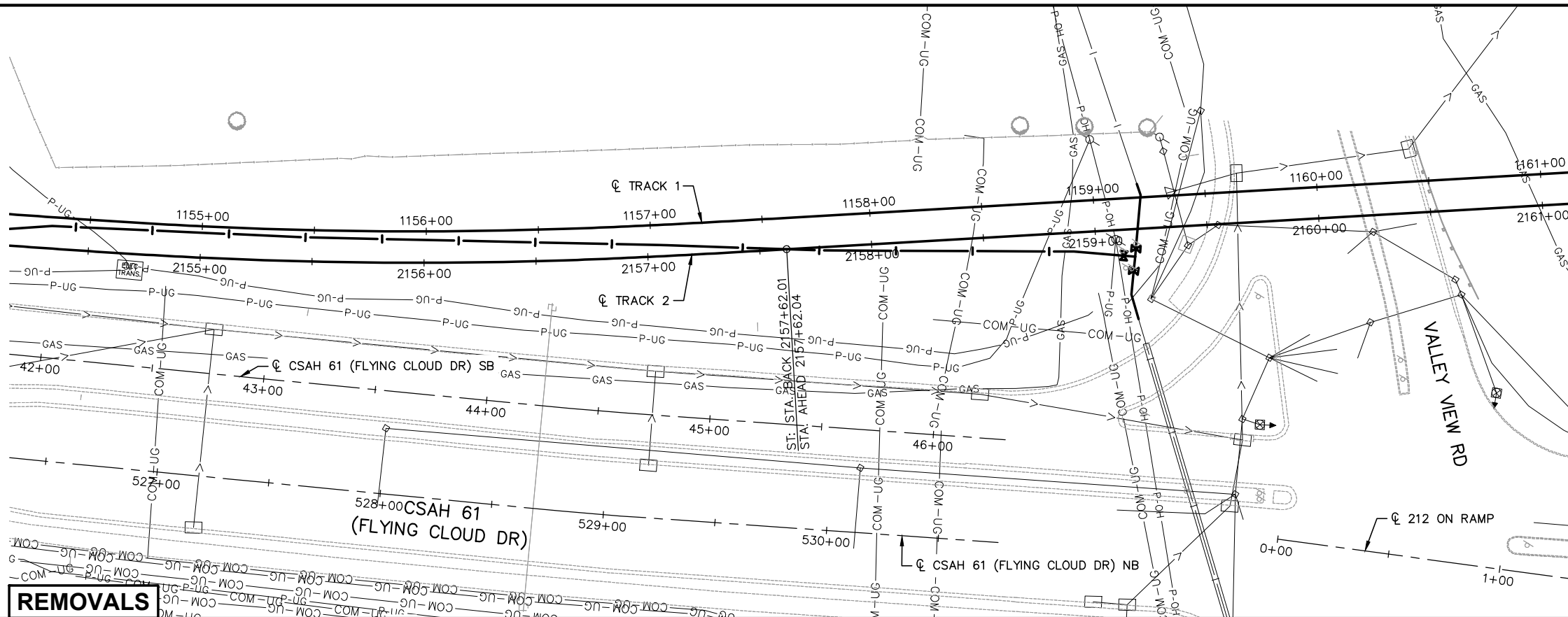
DISCIPLINE: **UTILITIES**

SHEET NAME:	W1-UTL-PLN - 012
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**SHEET**  
**23**  
**OF**  
**60**



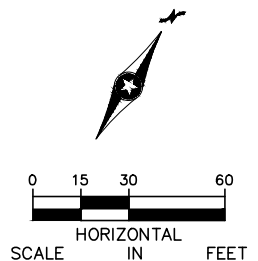
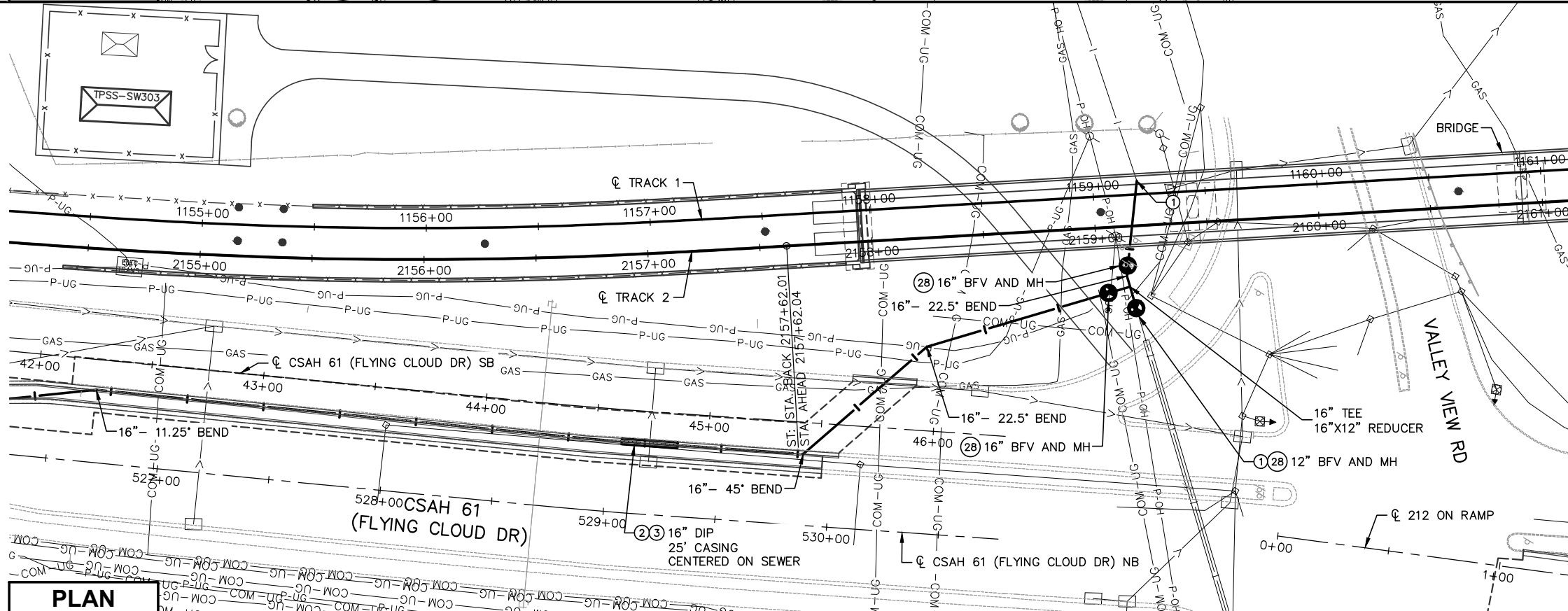
Sep. 21 2015 10:34 am V:\3400\_ADC\CAD\00\_WEST\PLANSHEETS\UTILITIES\W1-UTL-PLN.dwg By: V-YoungBJR



NOTES:

\* SEE SHEET W0-UTL-NTS-002 FOR UTILITY LEGEND.

\* (XX) = SANITARY AND WATER PLAN CONSTRUCTION NOTE. REFER TO SHEET W0-UTL-NTS-002 FOR NOTES.



PLAN

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

AECOM

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METROPOLITAN  
C O U N C I L

SOUTHWEST  
Green Line LRT Extension

CIVIL WEST - VOLUME 7  
UTILITIES  
FLYING CLOUD DR 3 OF 5  
REMOVALS AND PLAN





DISCIPLINE:  
UTILITIES

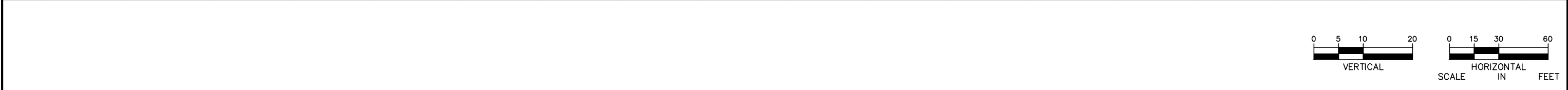
SHEET NAME:  
W1-UTL-PLN - 013





60% SUBMISSION - 9/28/15

SHEET  
24  
OF  
60

[illegible]

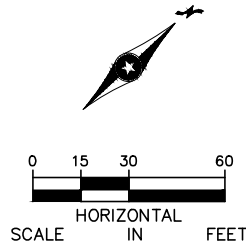
NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL	 		 		<b>CIVIL WEST - VOLUME 7</b> <b>UTILITIES</b> <b>FLYING CLOUD DR 4 OF 5</b> <b>PROFILES</b>		<b>SHEET</b> <b>25</b> <b>OF</b> <b>60</b>
						<b>60% SUBMISSION - 9/28/15</b>				DISCIPLINE: <b>UTILITIES</b>	SHEET NAME: <b>W1-UTL-PLN - 014</b>	

[illegible]

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL	 		 		<b>CIVIL WEST - VOLUME 7</b> <b>UTILITIES</b> <b>FLYING CLOUD DR 5 OF 5</b> <b>PROFILES</b>		<b>SHEET</b> 26 OF 60
						60% SUBMISSION - 9/28/15		DISCIPLINE: UTILITIES		SHEET NAME: W1-UTL-PLN - 015		

\* SEE SHEET W0-UTL-NTS-002 FOR UTILITY LEGEND.

\* (XX)=SANITARY AND WATER PLAN CONSTRUCTION NOTE. REFER TO SHEET W0-UTL-NTS-002 FOR NOTES.

[illegible]

**METROPOLITAN**  
COUNCIL





**CIVIL WEST - VOLUME 7  
UTILITIES  
SAN SEWER AT FLYING CLOUD DR 1 OF 2  
REMOVALS AND PLAN**

DISCIPLINE: **UTILITIES**

SHEET NAME:	W2-UTL-PLN - 001
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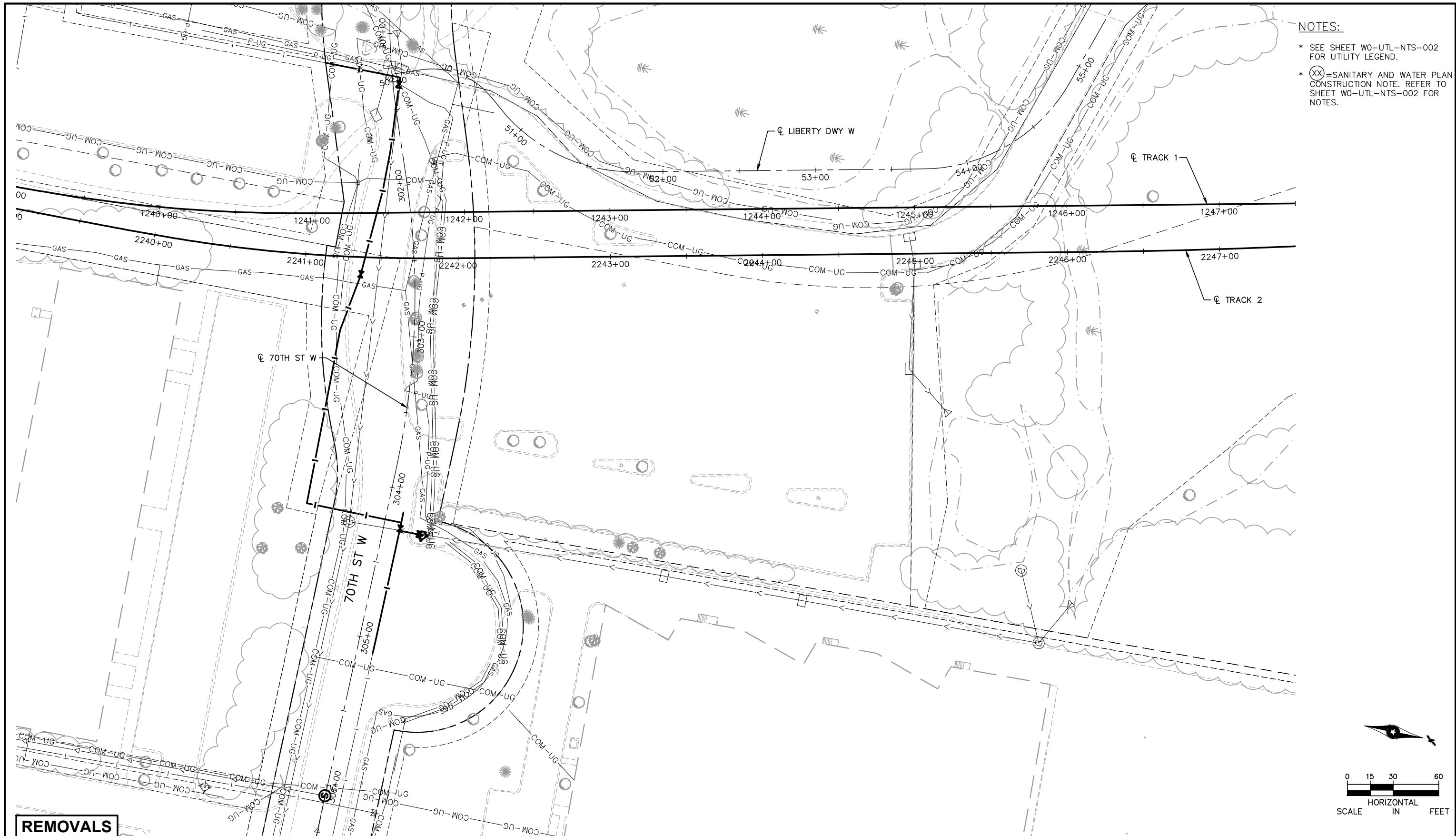
**SHEET**  
**27**  
**OF**  
**60**

[illegible]

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL	 		 		<b>CIVIL WEST - VOLUME 7</b> <b>UTILITIES</b> <b>SAN SEWER AT FLYING CLOUD DR 2 OF 2</b> <b>PROFILES</b>		<b>SHEET</b>  <b>28</b>  <b>OF</b>  <b>60</b>
						<b>60% SUBMISSION - 9/28/15</b>		<b>DISCIPLINE:</b> <b>UTILITIES</b>		<b>SHEET NAME:</b> <b>W2-UTL-PLN - 002</b>		



Sep. 21 2015 11:01 am V:\3400\_ADC\CAD\00\_WEST\PLANSHEETS\UTILITIES\W2-UTL-PLN.dwg By: V-Youngbjr



- NOTES:
- \* SEE SHEET W0-UTL-NTS-002 FOR UTILITY LEGEND.
  - \* (XX) = SANITARY AND WATER PLAN CONSTRUCTION NOTE. REFER TO SHEET W0-UTL-NTS-002 FOR NOTES.

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL



60% SUBMISSION - 9/28/15

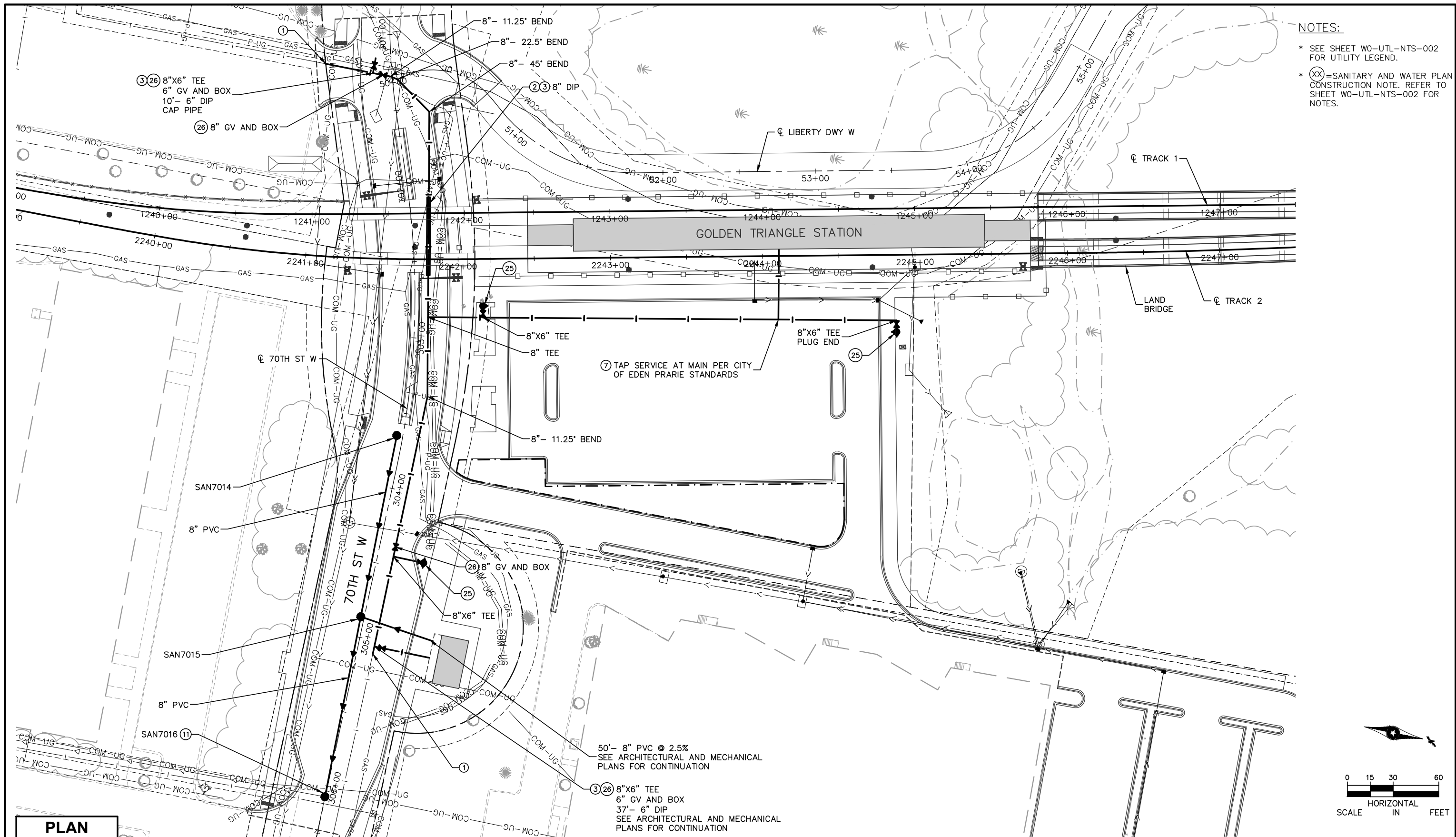
CIVIL WEST - VOLUME 7  
UTILITIES  
GOLDEN TRIANGLE STATION 1 OF 3  
REMOVALS

DISCIPLINE:  
UTILITIES

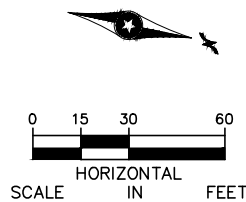
SHEET NAME:  
W2-UTL-PLN - 003

SHEET  
29  
OF  
60

Sep. 21 2015 11:02 am V:\3400\_ADC\CAD\00\_WEST\PLANSHEETS\UTILITIES\W2-UTL-PLN.dwg By: V-YoungBJR



- NOTES:
- \* SEE SHEET W0-UTL-NTS-002 FOR UTILITY LEGEND.
  - \* (XX) = SANITARY AND WATER PLAN CONSTRUCTION NOTE. REFER TO SHEET W0-UTL-NTS-002 FOR NOTES.



NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL



60% SUBMISSION - 9/28/15

**AECOM**

**pce**

**METROPOLITAN**  
C O U N C I L

**SOUTHWEST**  
Green Line LRT Extension

**CIVIL WEST - VOLUME 7**

**UTILITIES**

**GOLDEN TRIANGLE STATION 2 OF 3**

**PLAN**

DISCIPLINE: UTILITIES

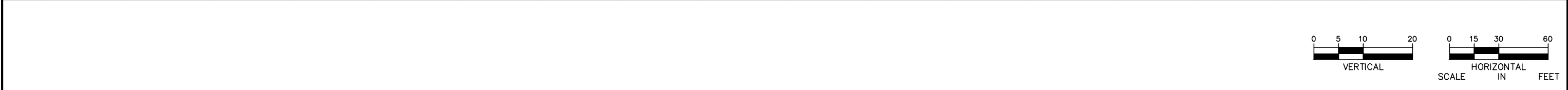
SHEET NAME: W2-UTL-PLN - 004





**SHEET**

**30**

**OF**

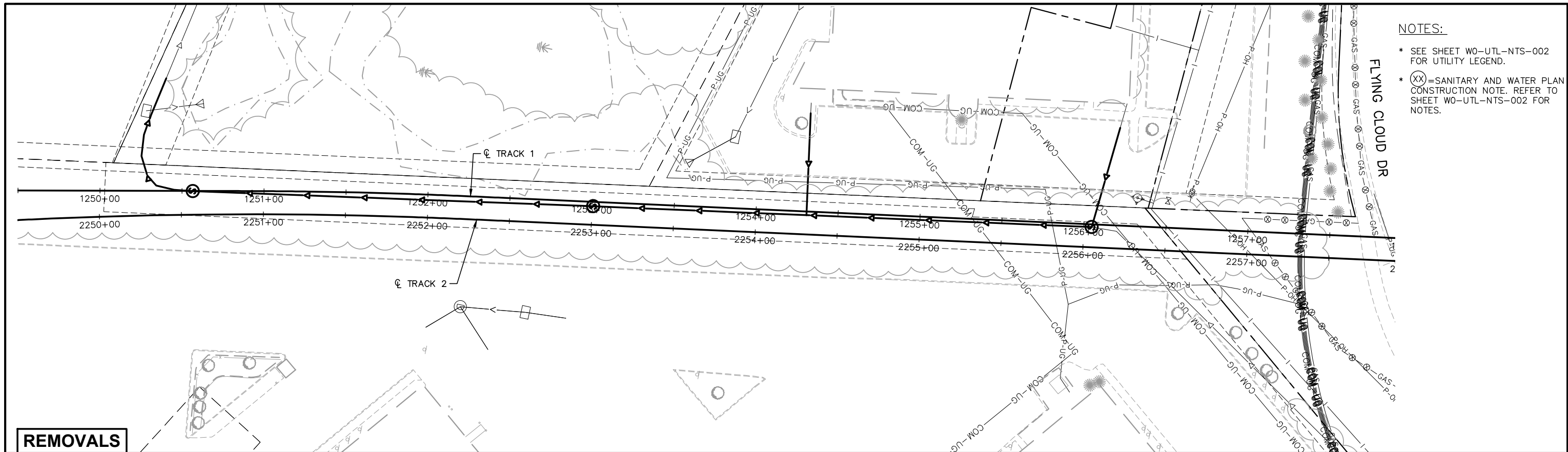
**60**

[illegible]

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL	   	<b>CIVIL WEST - VOLUME 7</b> <b>UTILITIES</b> <b>GOLDEN TRIANGLE STATION 3 OF 3</b> <b>PROFILES</b>		<b>SHEET</b> <b>31</b> <b>OF</b> <b>60</b>
							DISCIPLINE:	SHEET NAME:	
							UTILITIES	W2-UTL-PLN - 005	

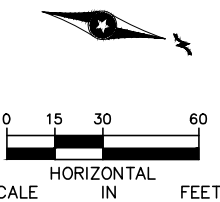
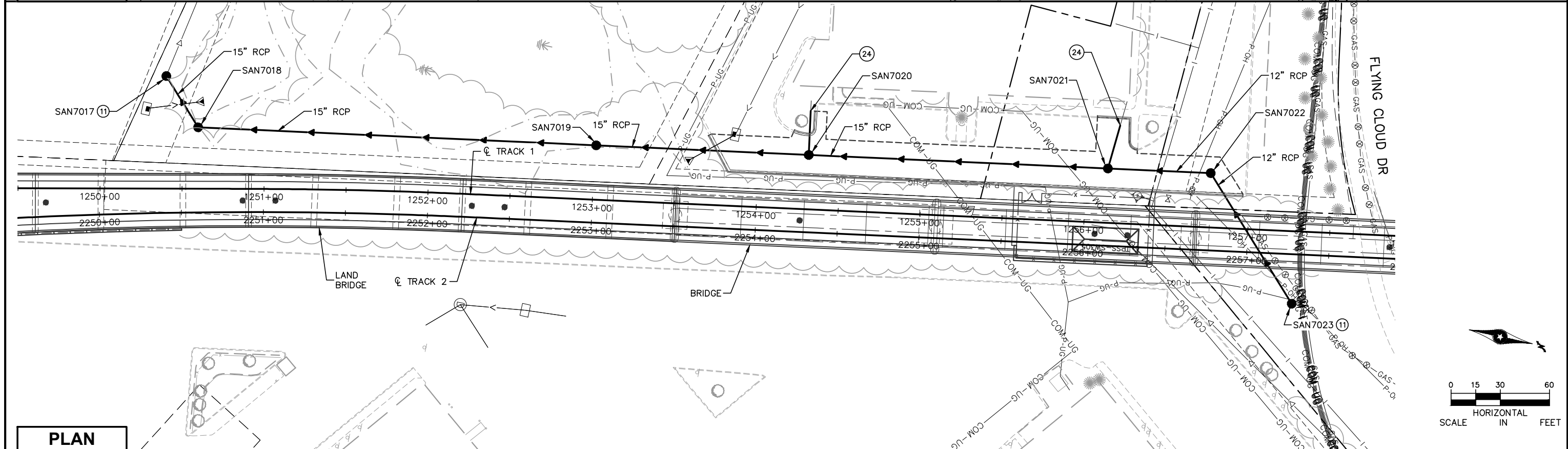


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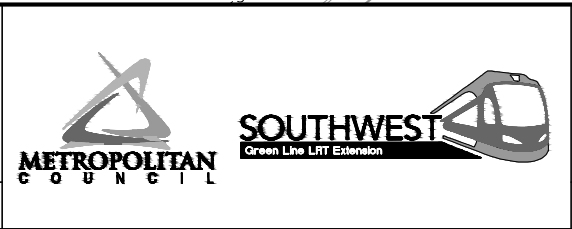


NOTES:

- \* SEE SHEET W0-UTL-NTS-002 FOR UTILITY LEGEND.
- \* (XX) = SANITARY AND WATER PLAN CONSTRUCTION NOTE. REFER TO SHEET W0-UTL-NTS-002 FOR NOTES.







NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

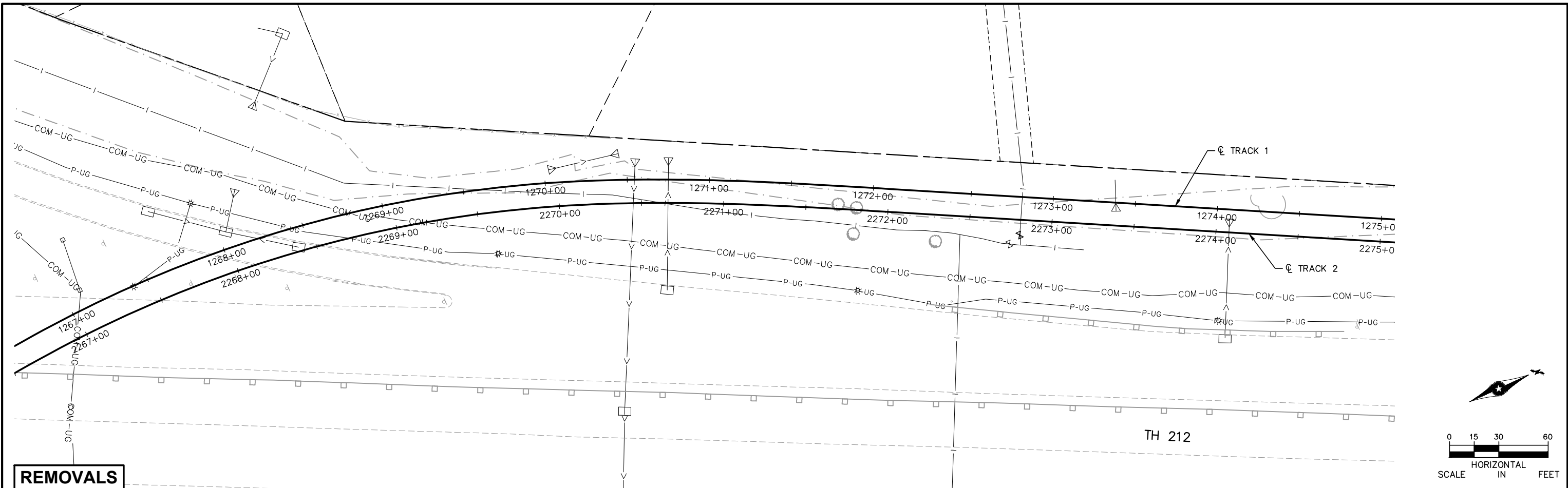


CIVIL WEST - VOLUME 7 UTILITIES WHITEBOARD 1 OF 2 REMOVALS AND PLAN		SHEET 32 OF 60
DISCIPLINE: UTILITIES	SHEET NAME: W2-UTL-PLN - 006	

[illegible]

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL	   	<b>CIVIL WEST - VOLUME 7</b> <b>UTILITIES</b> <b>WHITEBOARD 2 OF 2</b> <b>PROFILES</b>		<b>33</b>  <b>OF</b>  <b>60</b>
							DISCIPLINE:	SHEET NAME:	
							UTILITIES	W2-UTL-PLN - 007	

Sep. 21 2015 11:04 am V:\3400\_ADC\CAD\CAD\00\_WEST\PLANSHEETS\UTILITIES\W2-UTL-PLN.dwg By: V-YoungBJR



NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL





60% SUBMISSION - 9/28/15



CIVIL WEST - VOLUME 7  
UTILITIES  
TH 212  
REMOVALS

DISCIPLINE: UTILITIES

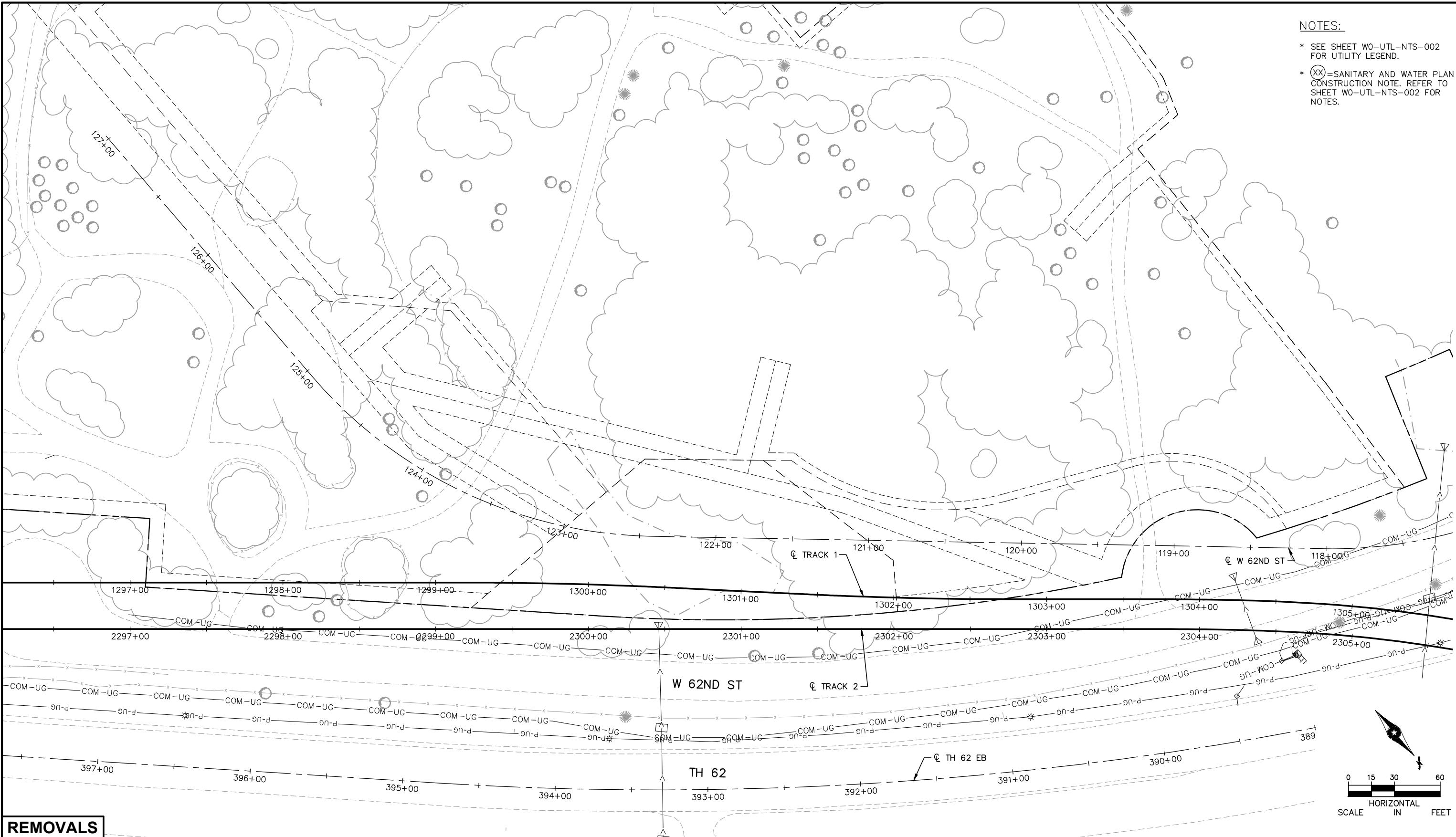
SHEET NAME: W2-UTL-PLN - 008

SHEET 34 OF 60

Sep. 21 2015 11:04 am V:\3400\_ADC\CAD\CAD\00\_WEST\PLANSHEETS\UTILITIES\W2-UTL-PLN.dwg By: V-YoungJR

NOTES:

- \* SEE SHEET W0-UTL-NTS-002 FOR UTILITY LEGEND.
- \* (XX)=SANITARY AND WATER PLAN CONSTRUCTION NOTE. REFER TO SHEET W0-UTL-NTS-002 FOR NOTES.



REMOVALS

NO.	DATE	BY	CHECK/DESIGN	REVISION / SUBMITTAL





60% SUBMISSION - 9/28/15

CIVIL WEST - VOLUME 7  
UTILITIES  
CITY WEST STATION 1 OF 3  
REMOVALS

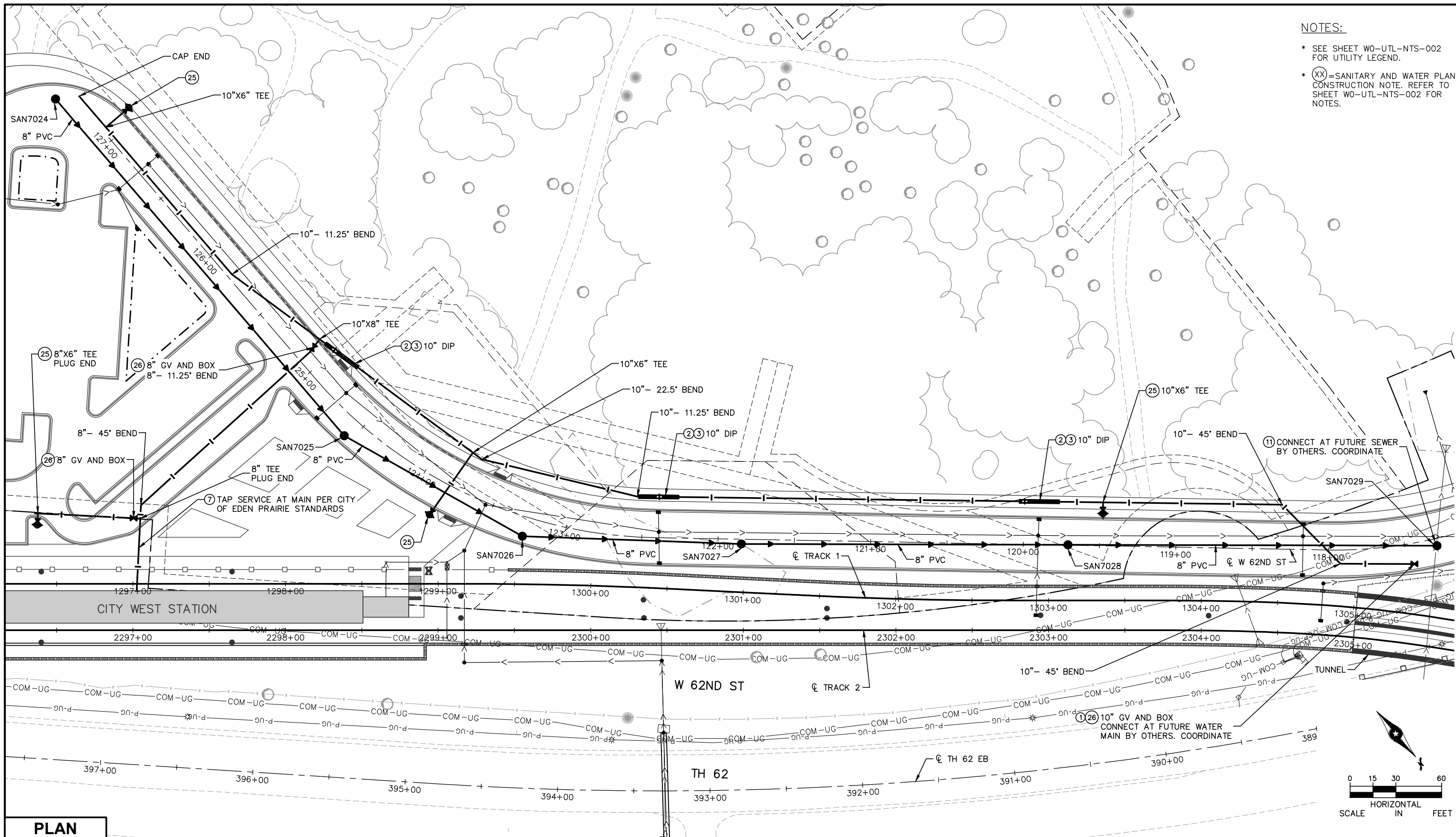
DISCIPLINE: UTILITIES

SHEET NAME: W2-UTL-PLN - 009

SHEET 35 OF 60



Sep. 21 2015 11:05 am V:\3400\_ADC\CAD\CAD\00\_WEST\PLANSHEETS\UTILITIES\W2-UTL-PLN.dwg By: V-YoungJR



NOTES:

- \* SEE SHEET W0-UTL-NTS-002 FOR UTILITY LEGEND.
- \* (XX)=SANITARY AND WATER PLAN CONSTRUCTION NOTE. REFER TO SHEET W0-UTL-NTS-002 FOR NOTES.

PLAN

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

AECOM

pce



SOUTHWEST  
Green Line LRT Extension



60% SUBMISSION - 9/28/15

CIVIL WEST - VOLUME 7  
UTILITIES  
CITY WEST STATION 2 OF 3  
PLAN





DISCIPLINE: UTILITIES

SHEET NAME: W2-UTL-PLN - 010

SHEET  
36  
OF  
60



[illegible]

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL	 		 		<b>CIVIL WEST - VOLUME 7</b> <b>UTILITIES</b> <b>CITY WEST STATION 3 OF 3</b> <b>PROFILES</b>		<b>SHEET</b> <b>37</b> <b>OF</b> <b>60</b>
						<b>60% SUBMISSION - 9/28/15</b>				DISCIPLINE: <b>UTILITIES</b>	SHEET NAME: <b>W2-UTL-PLN - 011</b>	

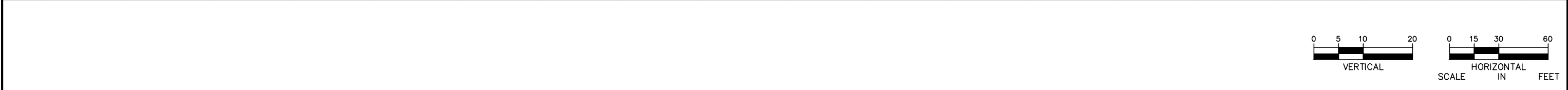
[illegible]





DISCIPLINE:	SHEET NAME:
<b>UTILITIES</b>	<b>W2-UTL-PLN - 012</b>

**SHEET**  
**38**  
**OF**  
**60**

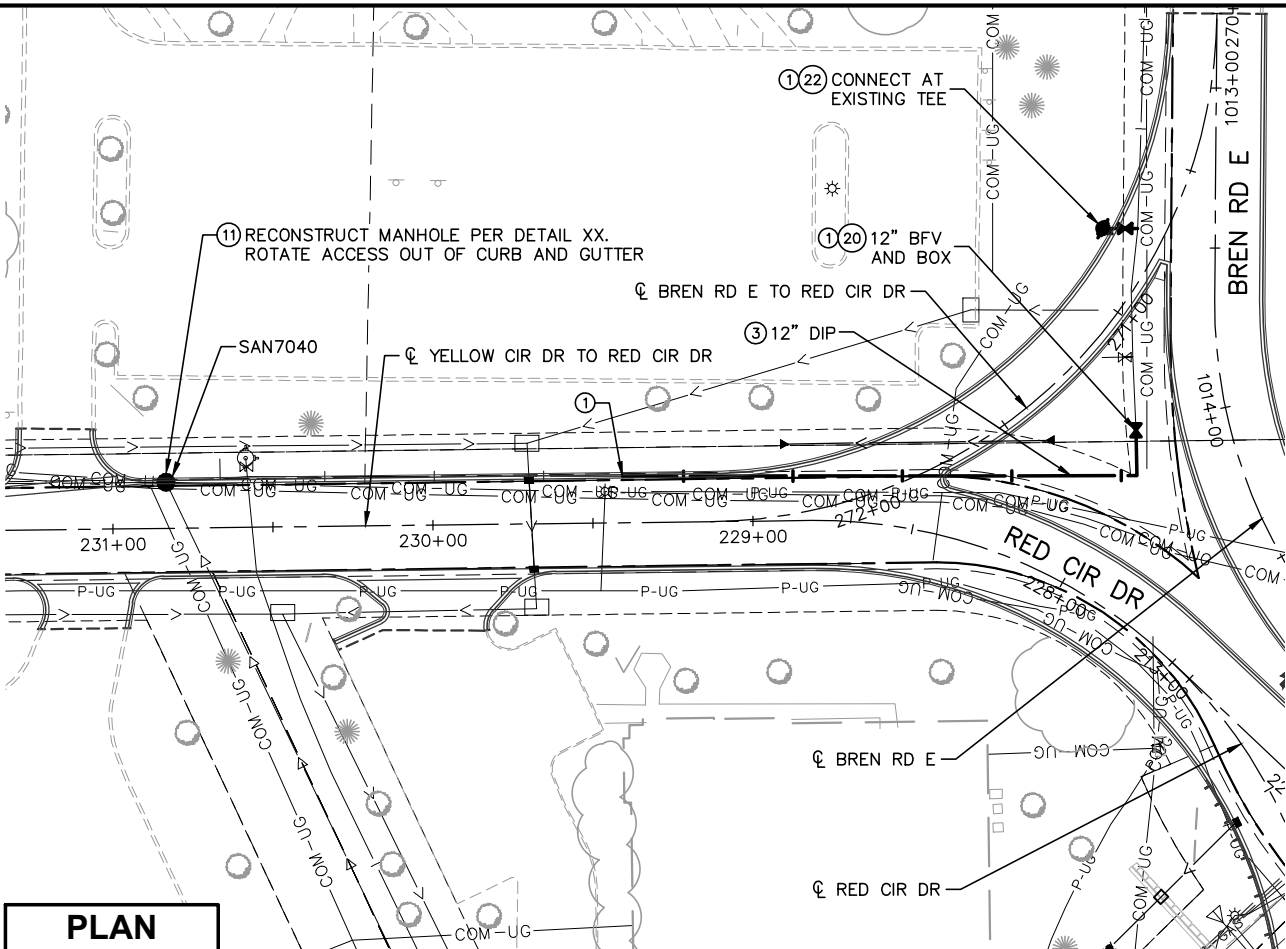
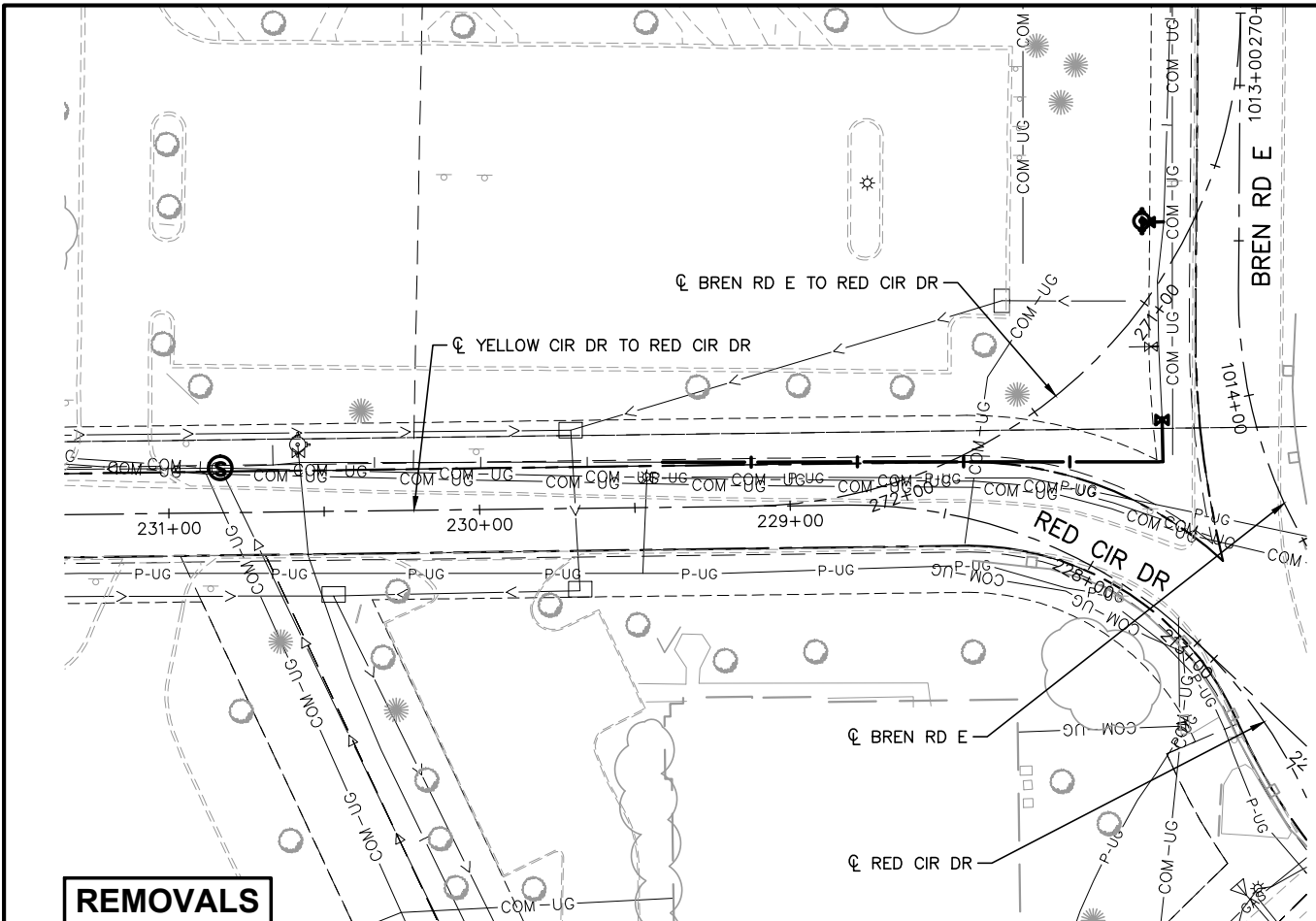
## SOUTHWEST

**60% SUBMISSION - 9/28/15**

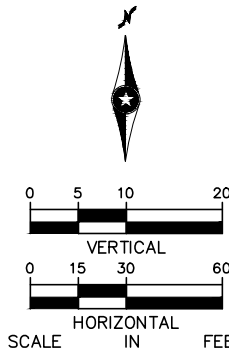
[illegible]

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL	 		 		<b>CIVIL WEST - VOLUME 7</b> <b>UTILITIES</b> <b>RED CIR DR / YELLOW CIR DR 2 OF 2</b> <b>PROFILES</b>		<b>SHEET</b> <b>39</b> <b>OF</b> <b>60</b>
						<b>60% SUBMISSION - 9/28/15</b>				DISCIPLINE: <b>UTILITIES</b>	SHEET NAME: <b>W2-UTL-PLN - 013</b>	

Sep. 21 2015 11:07 am V:\3400\_ADC\CAD\CAD\00\_WEST\PLANSHEETS\UTILITIES\W2-UTL-PLN.dwg By: V-YoungbJR



- NOTES:
- \* SEE SHEET W0-UTL-NTS-002 FOR UTILITY LEGEND.
  - \* (XX) = SANITARY AND WATER PLAN CONSTRUCTION NOTE. REFER TO SHEET W0-UTL-NTS-002 FOR NOTES.



NO.	DATE	BY	CHECK/DESIGN	REVISION / SUBMITTAL

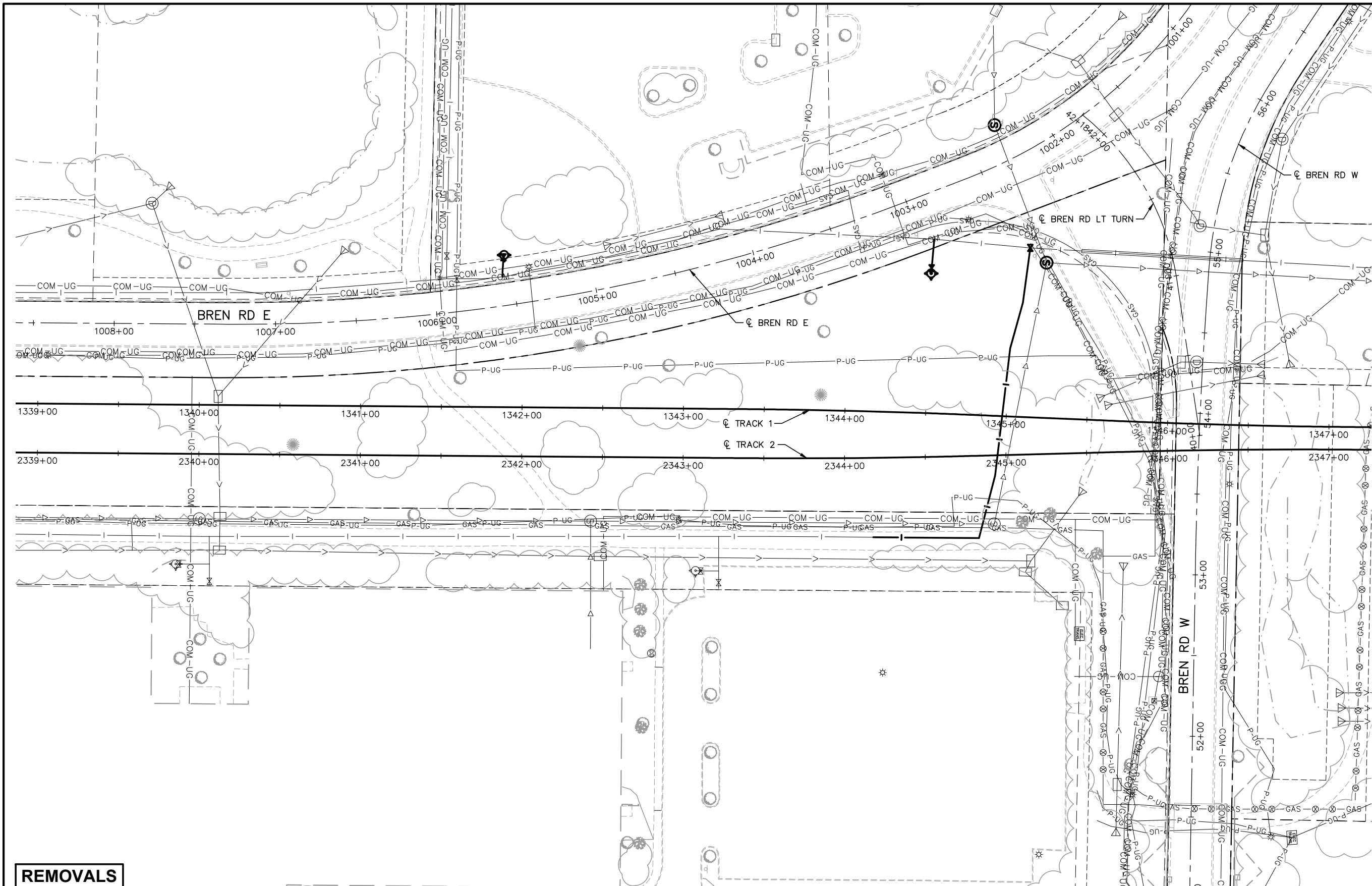


CIVIL WEST - VOLUME 7 UTILITIES RED CIR DR / BREN RD REMOVALS, PLAN, AND PROFILES	
DISCIPLINE: UTILITIES	SHEET NAME: W2-UTL-PLN - 014

SHEET
40
OF
60

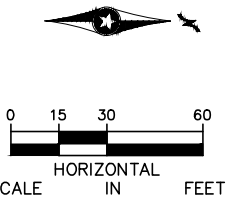


Sep. 21 2015 11:19 am v:\3400\_ADC\CAD\CAD\00\_WEST\PLANSHEETS\UTILITIES\W3-UTL-PLN.dwg By: V-Youngbjr



NOTES:

- \* SEE SHEET W0-UTL-NTS-002 FOR UTILITY LEGEND.
- \* (XX) = SANITARY AND WATER PLAN CONSTRUCTION NOTE. REFER TO SHEET W0-UTL-NTS-002 FOR NOTES.



REMOVALS

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

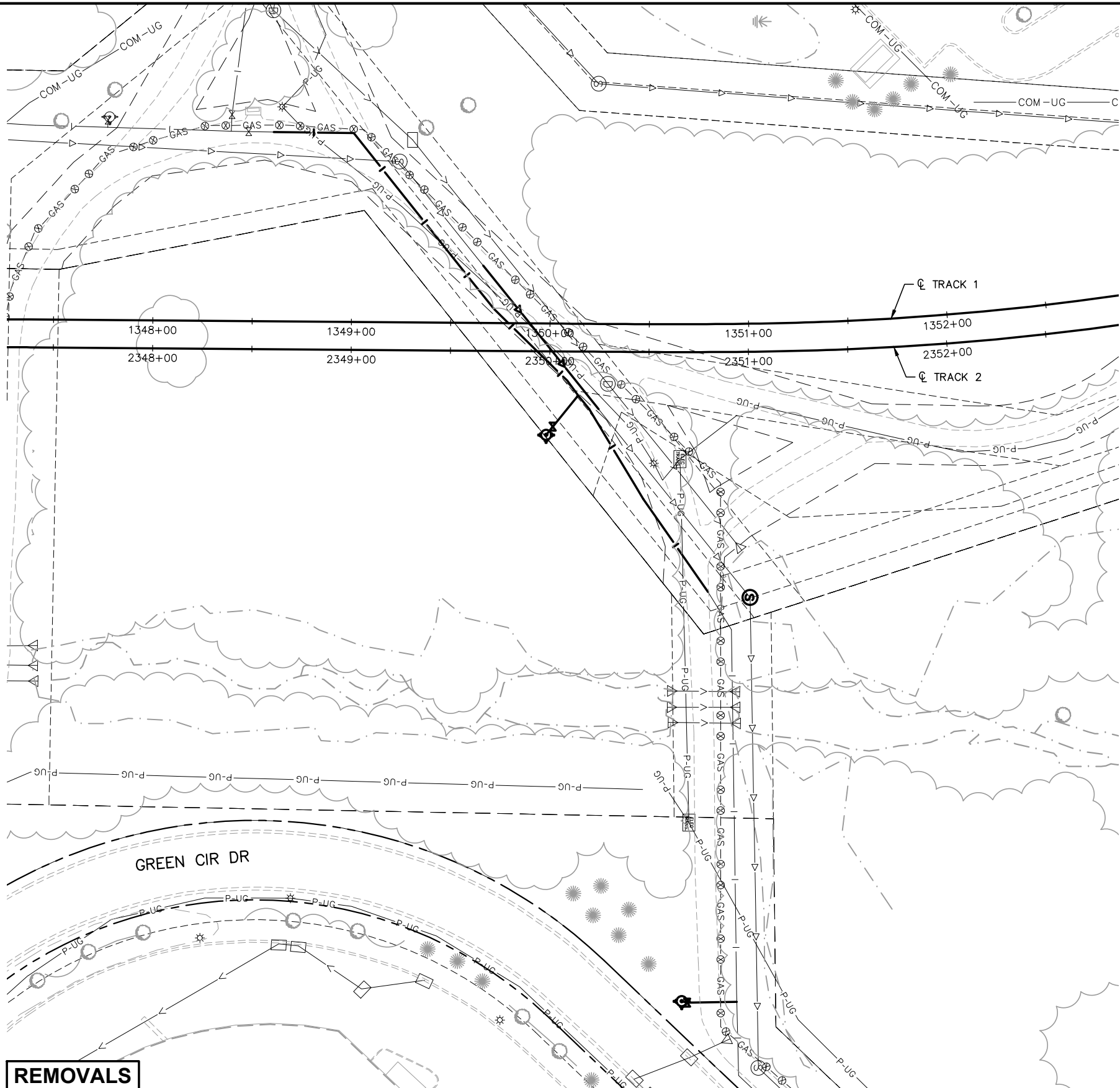
60% SUBMISSION - 9/28/15

CIVIL WEST - VOLUME 7  
UTILITIES  
OPUS STATION 1 OF 6  
REMOVALS

DISCIPLINE: UTILITIES  
SHEET NAME: W3-UTL-PLN - 001

SHEET 41 OF 60

Sep. 21 2015 11:20 am V:\3400\_ADC\CAD\00\_WEST\PLANSHEETS\UTILITIES\W3-UTL-PLN.dwg By: V-YoungbJR



NOTES:

- \* SEE SHEET W0-UTL-NTS-002 FOR UTILITY LEGEND.
- \* (XX)=SANITARY AND WATER PLAN CONSTRUCTION NOTE. REFER TO SHEET W0-UTL-NTS-002 FOR NOTES.

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL



**AECOM**

**pce**

**60% SUBMISSION - 9/28/15**

**METROPOLITAN**  
C O U N C I L

**SOUTHWEST**  
Green Line LRT Extension

**CIVIL WEST - VOLUME 7**

**UTILITIES**

**OPUS STATION 2 OF 6**

**REMOVALS**

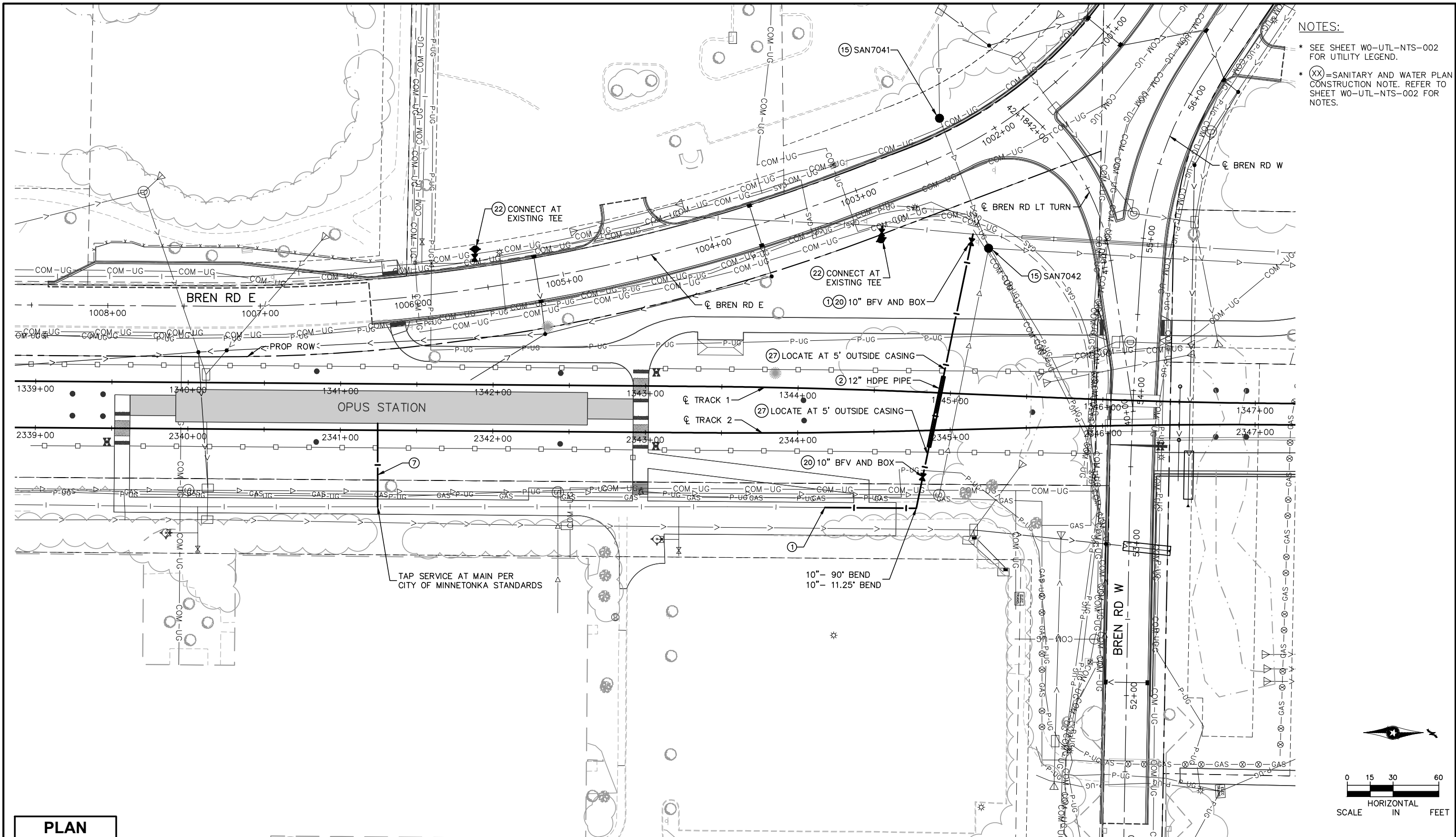
DISCIPLINE: **UTILITIES**

SHEET NAME: **W3-UTL-PLN - 002**

SHEET
42
OF
60



Sep. 21 2015 11:21 am V:\3400\_ADC\CAD\CAD\00\_WEST\PLANSHEETS\UTILITIES\W3-UTL-PLN.dwg By: V-Youngbjr



- NOTES:
- \* SEE SHEET W0-UTL-NTS-002 FOR UTILITY LEGEND.
  - \* (XX) = SANITARY AND WATER PLAN CONSTRUCTION NOTE. REFER TO SHEET W0-UTL-NTS-002 FOR NOTES.

PLAN					
NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL



**AECOM**

**pce**

**60% SUBMISSION - 9/28/15**

**METROPOLITAN**

Green Line LRT Extension

**SOUTHWEST**

Green Line LRT Extension

**CIVIL WEST - VOLUME 7**

**UTILITIES**

**OPUS STATION 3 OF 6**

**PLAN**

DISCIPLINE: UTILITIES

SHEET NAME: W3-UTL-PLN - 003

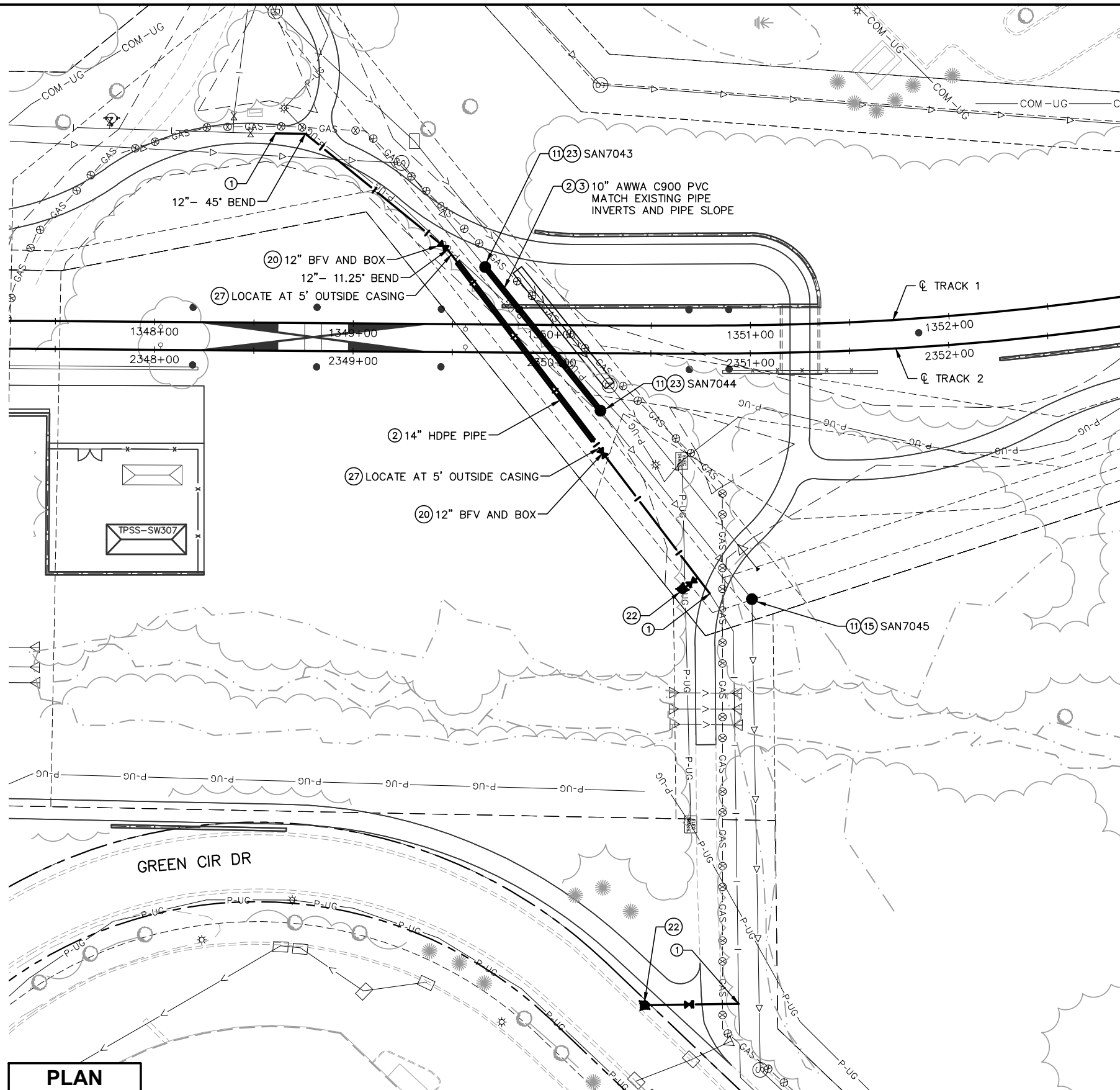
**SHEET**

**43**

**OF**

**60**

Sep. 21 2015 11:22 am V:\3400\_ADC\CAD\00\_WEST\PLANSHEETS\UTILITIES\W3-UTL-PLN.dwg By: V-YoungbJR



NOTES:

- \* SEE SHEET W0-UTL-NTS-002 FOR UTILITY LEGEND.
- \* (XX) = SANITARY AND WATER PLAN CONSTRUCTION NOTE. REFER TO SHEET W0-UTL-NTS-002 FOR NOTES.

PLAN

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

AECOM

pce

METROPOLITAN  
C O U N C I L

SOUTHWEST  
Green Line LRT Extension



CIVIL WEST - VOLUME 7  
UTILITIES  
OPUS STATION 4 OF 6  
PLAN

DISCIPLINE:

UTILITIES

SHEET NAME:

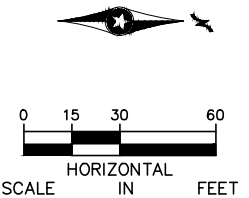
W3-UTL-PLN - 004

SHEET

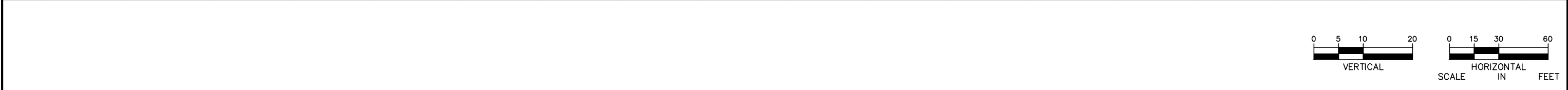
44

OF

60







60% SUBMISSION - 9/28/15

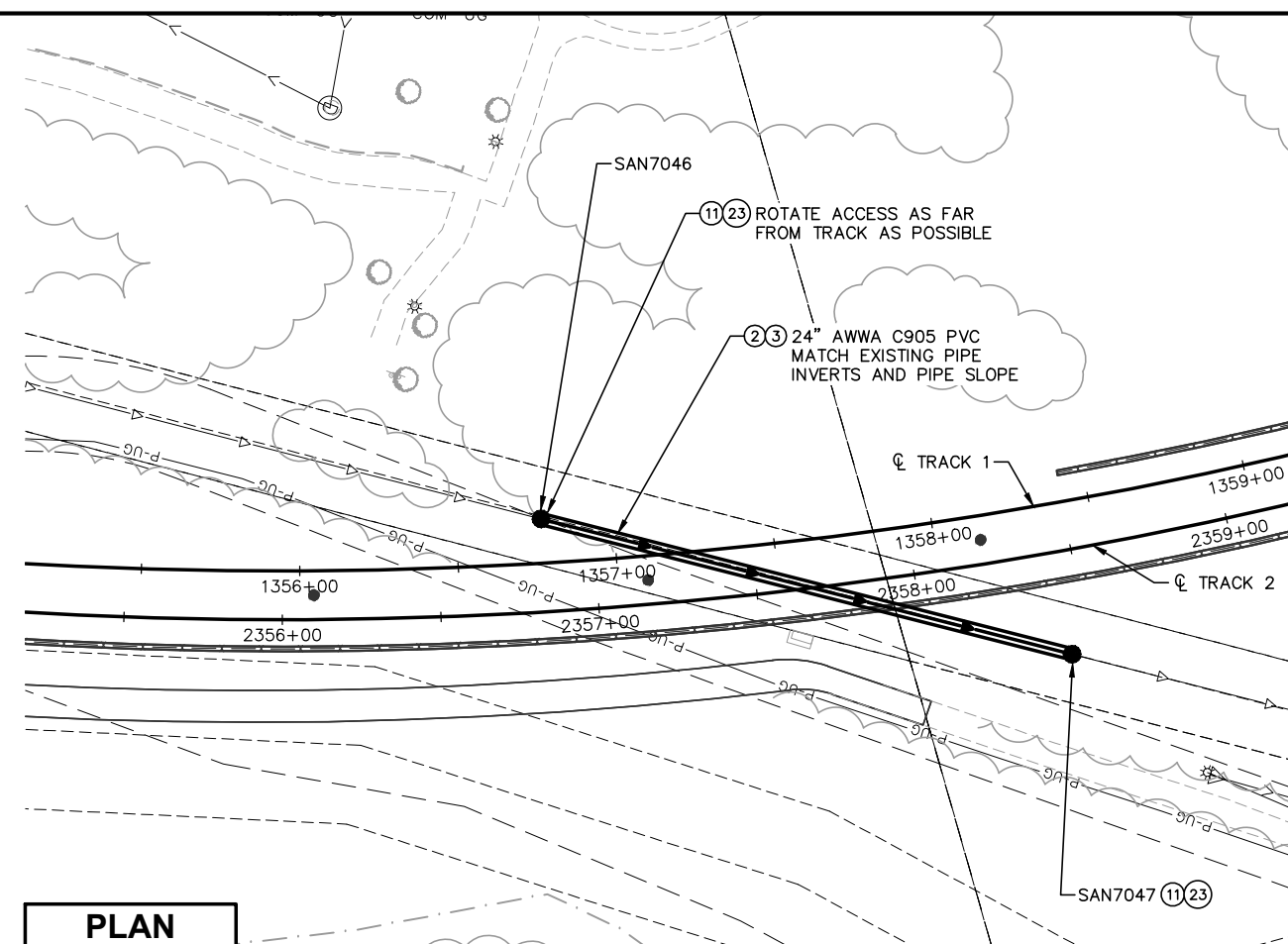
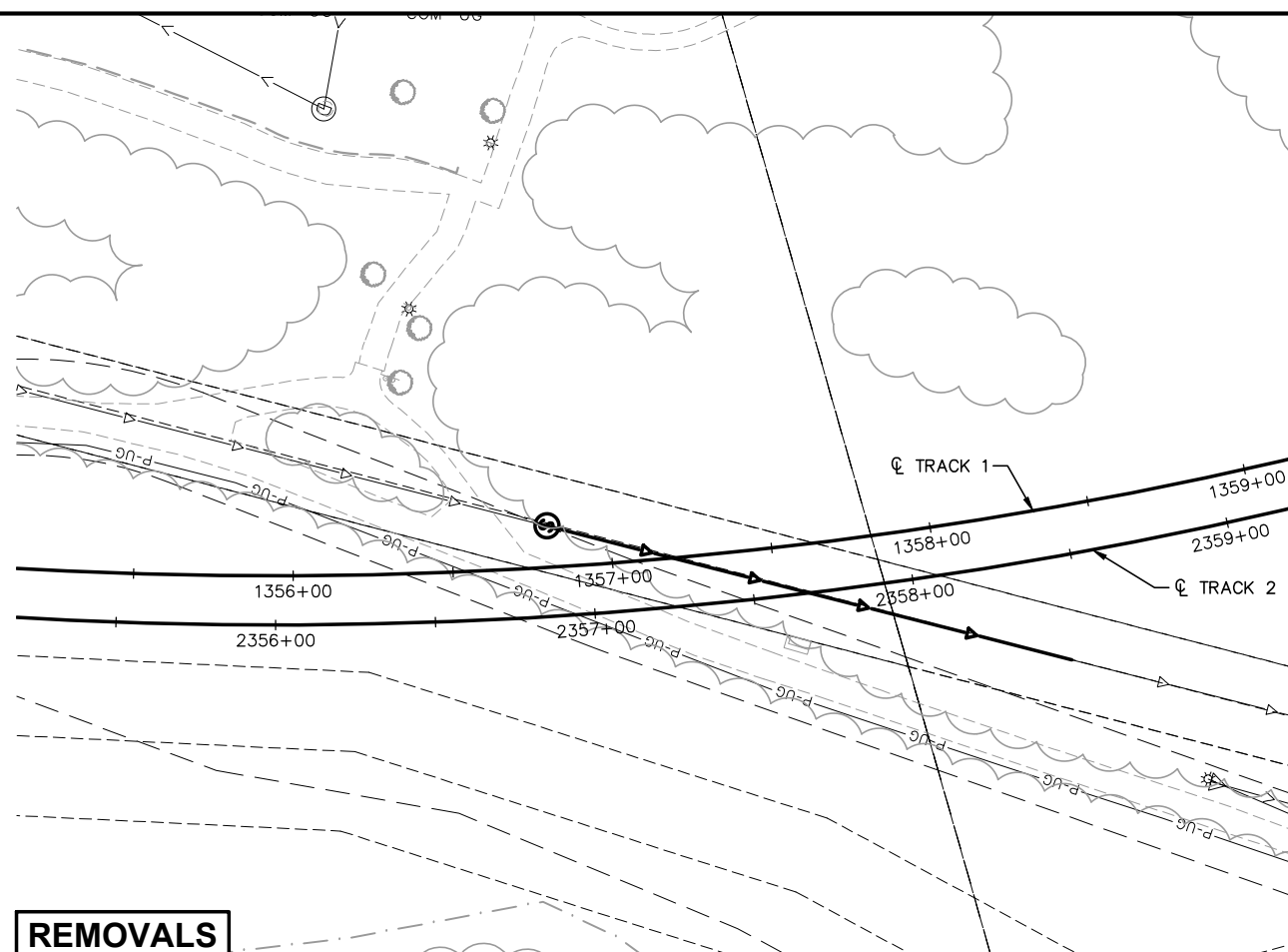
[illegible]

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL	<div><div><div><div><div></div><div>AECOM</div></div><div><div></div><div>pce</div></div></div></div><div>60% SUBMISSION - 9/28/15</div></div> <div><div><div><div></div><div>METROPOLITAN</div><div>COUNCIL</div></div><div><div><div></div><div>SOUTHWEST</div><div>Green Line LRT Extension</div></div><div><div></div><div></div></div></div></div></div> <div><div>CIVIL WEST - VOLUME 7</div><div>UTILITIES</div><div>OPUS STATION 5 OF 6</div><div>PROFILES</div></div> <div><div>DISCIPLINE:UTILITIES</div><div>SHEET NAME:W3-UTL-PLN - 005</div></div> <div>SHEET 45 OF 60</div>						

[illegible]

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL	 		 		<b>CIVIL WEST - VOLUME 7</b> <b>UTILITIES</b> <b>OPUS STATION 6 OF 6</b> <b>PROFILES</b>		<b>SHEET</b>  <b>46</b>  <b>OF</b>  <b>60</b>
						<b>60% SUBMISSION - 9/28/15</b>				DISCIPLINE: <b>UTILITIES</b>	SHEET NAME: <b>W3-UTL-PLN - 006</b>	

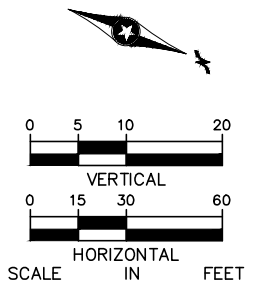




NOTES:

\* SEE SHEET WO-UTL-NTS-002  
FOR UTILITY LEGEND.

\* (XX) = SANITARY AND WATER PLAN CONSTRUCTION NOTE. REFER TO SHEET W0-UTL-NTS-002 FOR NOTES.

[illegible]**AECOM**

**METROPOLITAN**  
COUNCIL

## SOUTHWEST

**CIVIL WEST - VOLUME 7  
UTILITIES  
SANITARY SEWER AT TRACK 2 STA 2357+67  
REMOVALS, PLAN, AND PROFILES**

DISCIPLINE:

## UTILITIES

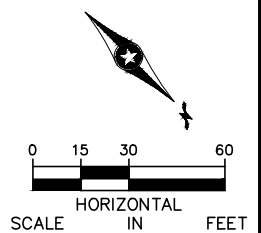
SHEET NAME:
-------------

W3-UTL-PLN - 007

**SHEET**  
**47**  
**OF**  
**60**

\* SEE SHEET W0-UTL-NTS-002 FOR UTILITY LEGEND.

\* (XX)=SANITARY AND WATER PLAN CONSTRUCTION NOTE. REFER TO SHEET W0-UTL-NTS-002 FOR NOTES.

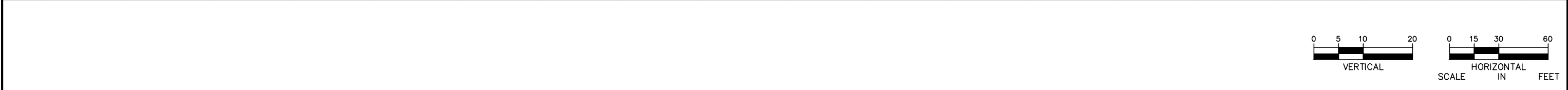
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**METROPOLITAN**  
COUNCIL

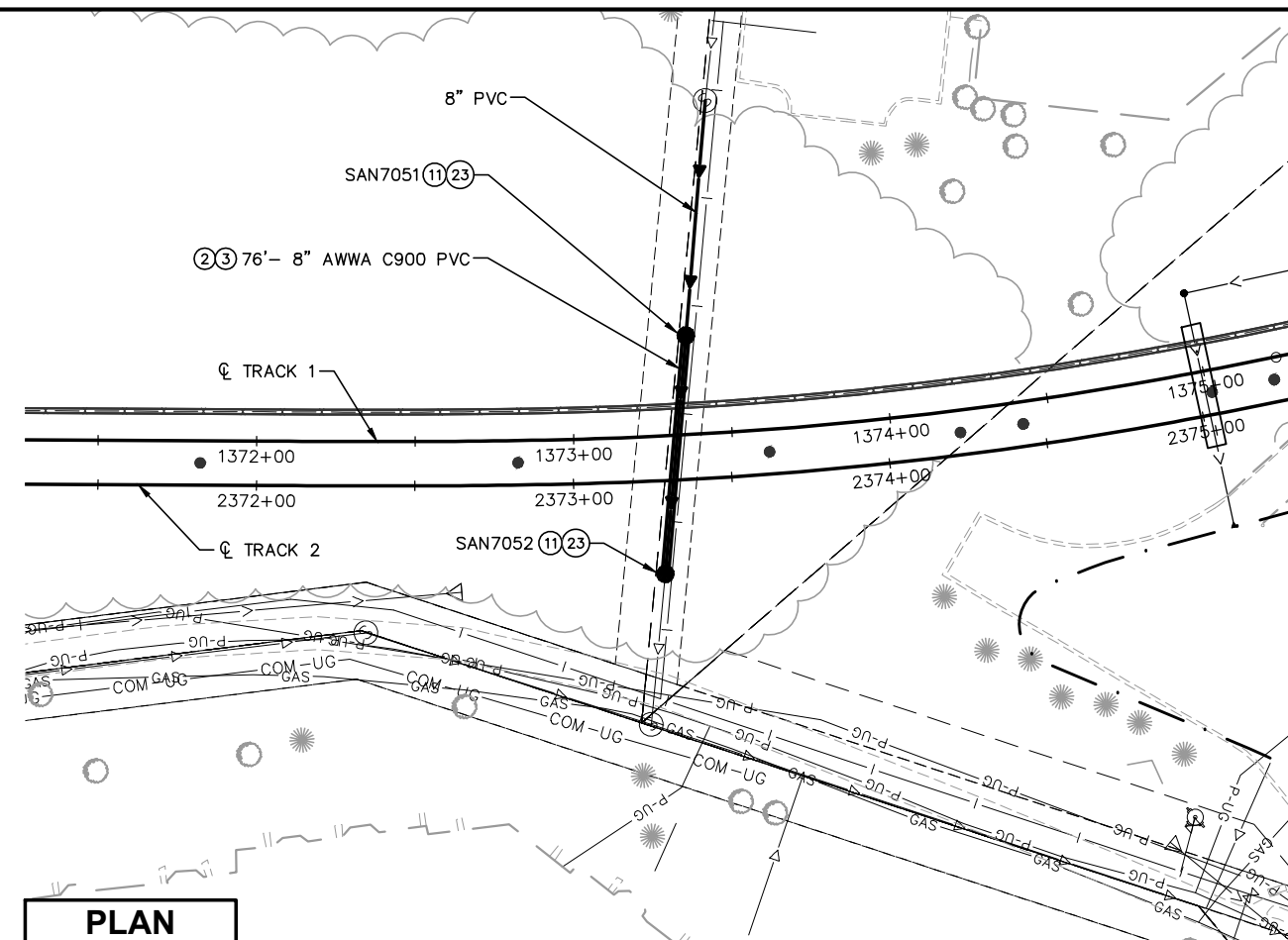
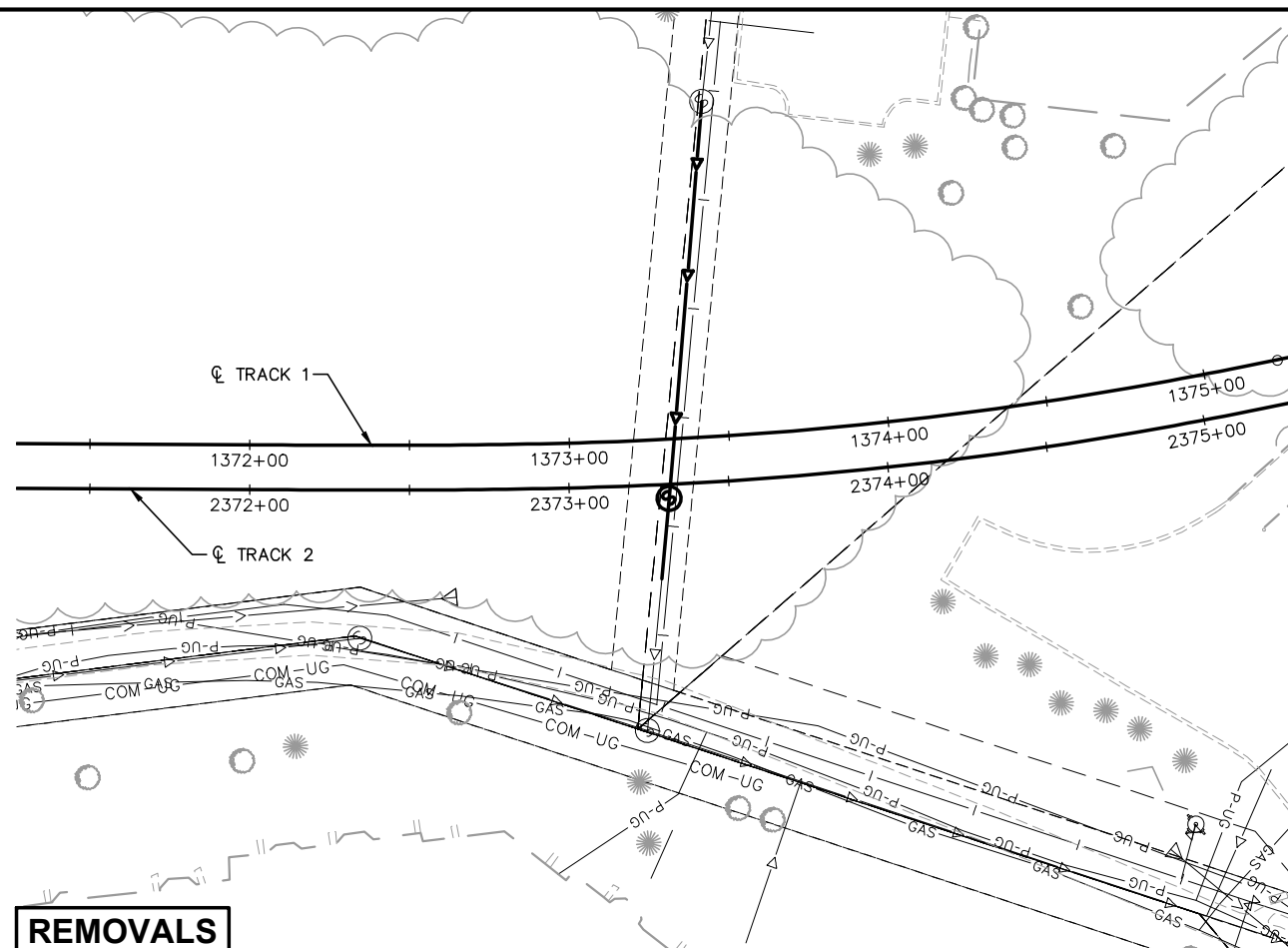


DISCIPLINE:	UTILITIES
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**SHEET**  
**48**  
**OF**  
**60**

[illegible]

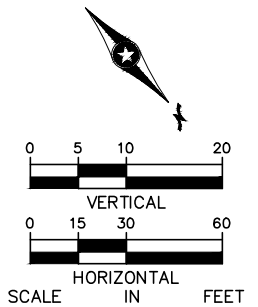
NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL	   	<b>CIVIL WEST - VOLUME 7</b> <b>UTILITIES</b> <b>OPUS HILL 2 OF 2</b> <b>PROFILES</b>		<b>SHEET</b> <b>49</b> <b>OF</b> <b>60</b>
							DISCIPLINE:	SHEET NAME:	
							UTILITIES	W3-UTL-PLN - 009	



NOTES:

\* SEE SHEET W0-UTL-NTS-002  
FOR UTILITY LEGEND.

\* (XX) = SANITARY AND WATER PLAN  
CONSTRUCTION NOTE. REFER TO  
SHEET W0-UTL-NTS-002 FOR  
NOTES.

[illegible]**AECOM**

**METROPOLITAN**  
COUNCIL



**SOUTHWEST**  
Green Line LRT Extension

**CIVIL WEST - VOLUME 7  
UTILITIES  
SANITARY SEWER AT TRACK 2 STA 2373+31  
REMOVALS, PLAN, AND PROFILES**

DISCIPLINE: **UTILITIES**

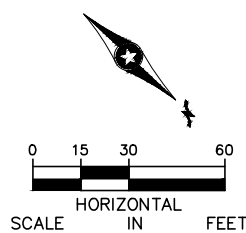
SHEET NAME:	W3-UTL-PLN - 010
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**SHEET**  
**50**  
**OF**  
**60**



\* SEE SHEET W0-UTL-NTS-002 FOR UTILITY LEGEND.

\* (XX)=SANITARY AND WATER PLAN CONSTRUCTION NOTE. REFER TO SHEET W0-UTL-NTS-002 FOR NOTES.

[illegible][illegible]**AECOM**

**METROPOLITAN**  
COUNCIL

## SOUTHWEST



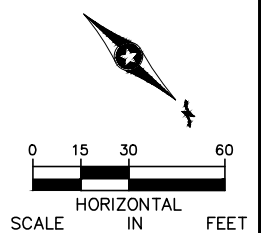
**CIVIL WEST - VOLUME 7  
UTILITIES  
FELTL RD / SMETANA RD 1 OF 3  
REMOVALS**

DISCIPLINE: **UTILITIES**

SHEET NAME:	W3-UTL-PLN - 011
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SHEET  
51  
OF  
60

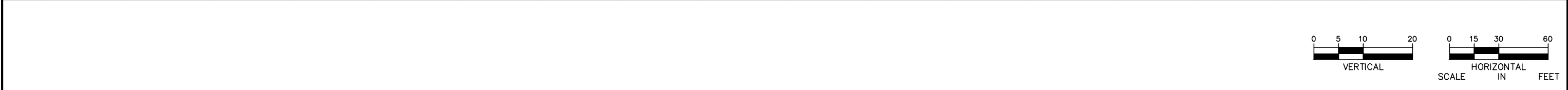
- \* SEE SHEET W0-UTL-NTS-002 FOR UTILITY LEGEND.
- \* (XX)=SANITARY AND WATER PLAN CONSTRUCTION NOTE. REFER TO SHEET W0-UTL-NTS-002 FOR NOTES.





[illegible]

**SOUTHWEST**  
Green Line LRT Extension

SHEET NAME:	W3-UTL-PLN - 012
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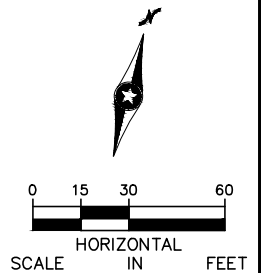
HEET  
52  
OF  
60

[illegible]

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL	   	<b>CIVIL WEST - VOLUME 7</b> <b>UTILITIES</b> <b>FELTL RD / SMETANA RD 3 OF 3</b> <b>PROFILES</b>		<b>SHEET</b> <b>53</b> <b>OF</b> <b>60</b>
							DISCIPLINE:	SHEET NAME:	
							UTILITIES	W3-UTL-PLN - 013	



- \* SEE SHEET W0-UTL-NTS-002 FOR UTILITY LEGEND.
- \* (XX)=SANITARY AND WATER PLAN CONSTRUCTION NOTE. REFER TO SHEET W0-UTL-NTS-002 FOR NOTES.

[illegible]

**METROPOLITAN**  
COUNCIL

**CIVIL WEST - VOLUME 7  
UTILITIES  
K-TEL DR TO 5TH ST S 1 OF 2  
REMOVALS AND PLAN**

DISCIPLINE: **UTILITIES**

SHEET NAME:	W3-UTL-PLN - 014
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HEET  
54  
OF  
60

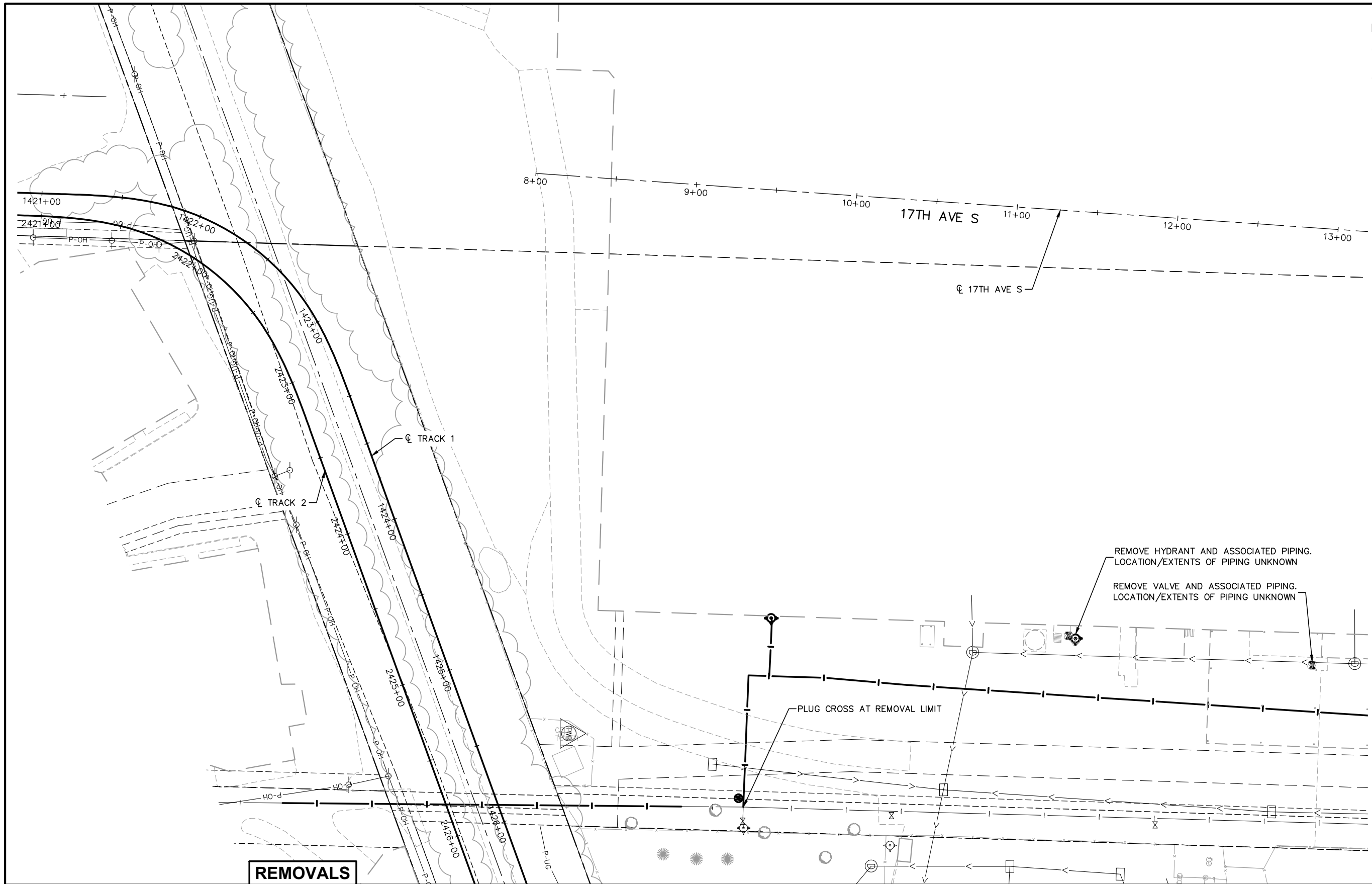
[illegible]

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL	<div><div>AECOM</div><div>pce</div></div>		<div><div><div><div></div><div>METROPOLITAN COUNCIL</div></div><div><div>SOUTHWEST</div><div>Green Line LRT Extension</div></div><div><div></div><div></div></div></div></div>		CIVIL WEST - VOLUME 7 UTILITIES K-TEL DR TO 5TH ST S 2 OF 2 PROFILES		SHEET 55 OF 60
						60% SUBMISSION - 9/28/15		DISCIPLINE: UTILITIES		SHEET NAME: W3-UTL-PLN - 015		

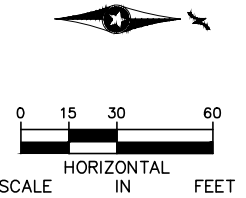
Sep. 21 2015 11:31 am V:\3400\_ADC\CAD\00\_WEST\PLANSHEETS\UTILITIES\W3-UTL-PLN.dwg By: V-Youngbjr

NOTES:

- \* SEE SHEET W0-UTL-NTS-002 FOR UTILITY LEGEND.
- \* (XX)=SANITARY AND WATER PLAN CONSTRUCTION NOTE. REFER TO SHEET W0-UTL-NTS-002 FOR NOTES.





REMOVALS



NO.	DATE	BY	CHECK/DESIGN	REVISION / SUBMITTAL



60% SUBMISSION - 9/28/15



CIVIL WEST - VOLUME 7  
UTILITIES  
SHADY OAK STATION 1 OF 5  
REMOVALS

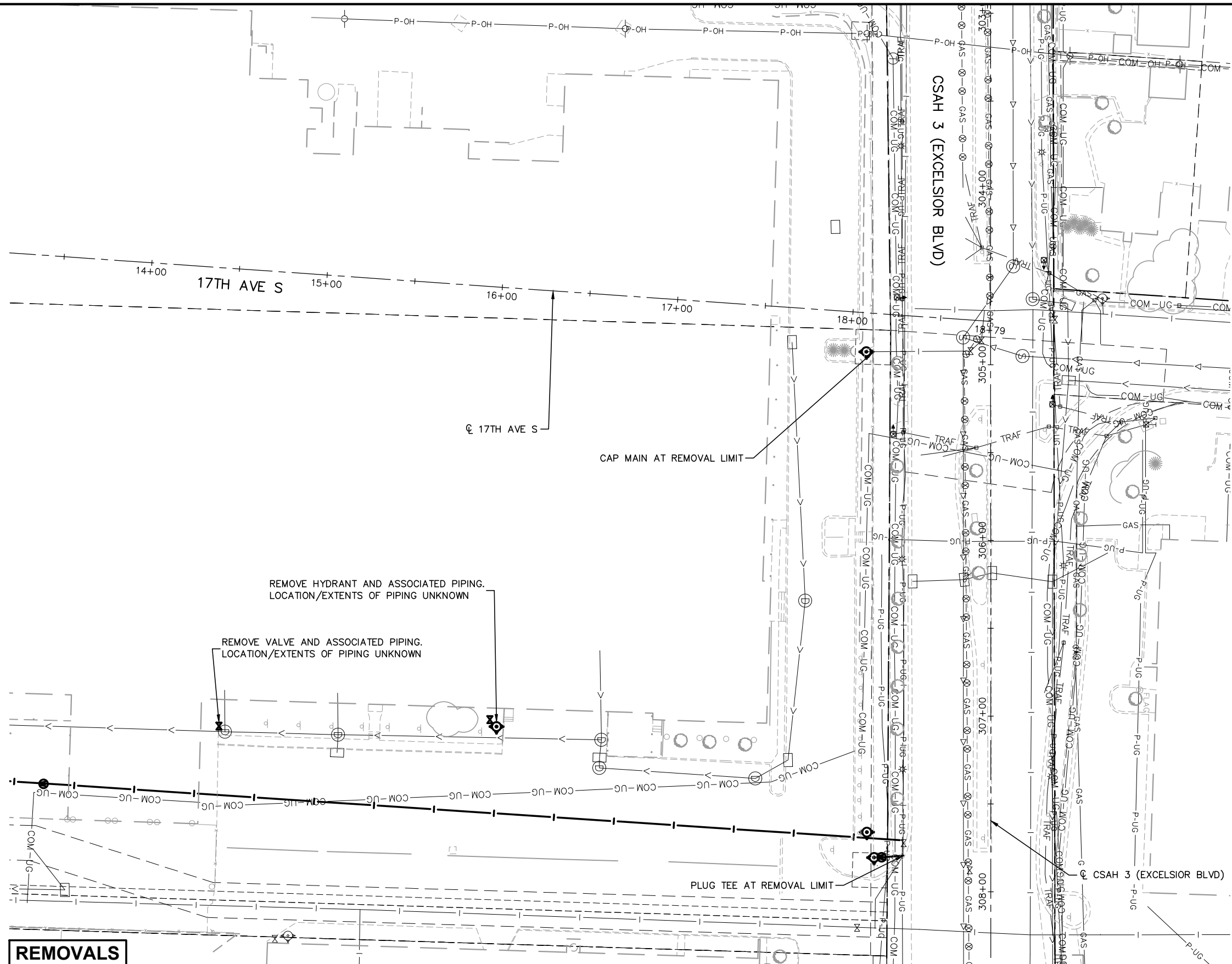
DISCIPLINE: UTILITIES

SHEET NAME: W3-UTL-PLN - 016

SHEET 56 OF 60



Sep. 21 2015 11:31 am V:\3400\_ADC\CAD\00\_WEST\PLANSHEETS\UTILITIES\W3-UTL-PLN.dwg By: V-Youngbjr



NOTES:

- \* SEE SHEET W0-UTL-NTS-002 FOR UTILITY LEGEND.
- \* (XX) = SANITARY AND WATER PLAN CONSTRUCTION NOTE. REFER TO SHEET W0-UTL-NTS-002 FOR NOTES.

REMOVALS

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

AECOM

pce



SOUTHWEST  
Green Line LRT Extension



CIVIL WEST - VOLUME 7  
UTILITIES  
SHADY OAK STATION 2 OF 5  
REMOVALS

DISCIPLINE:

UTILITIES

SHEET NAME:

W3-UTL-PLN - 017

SHEET

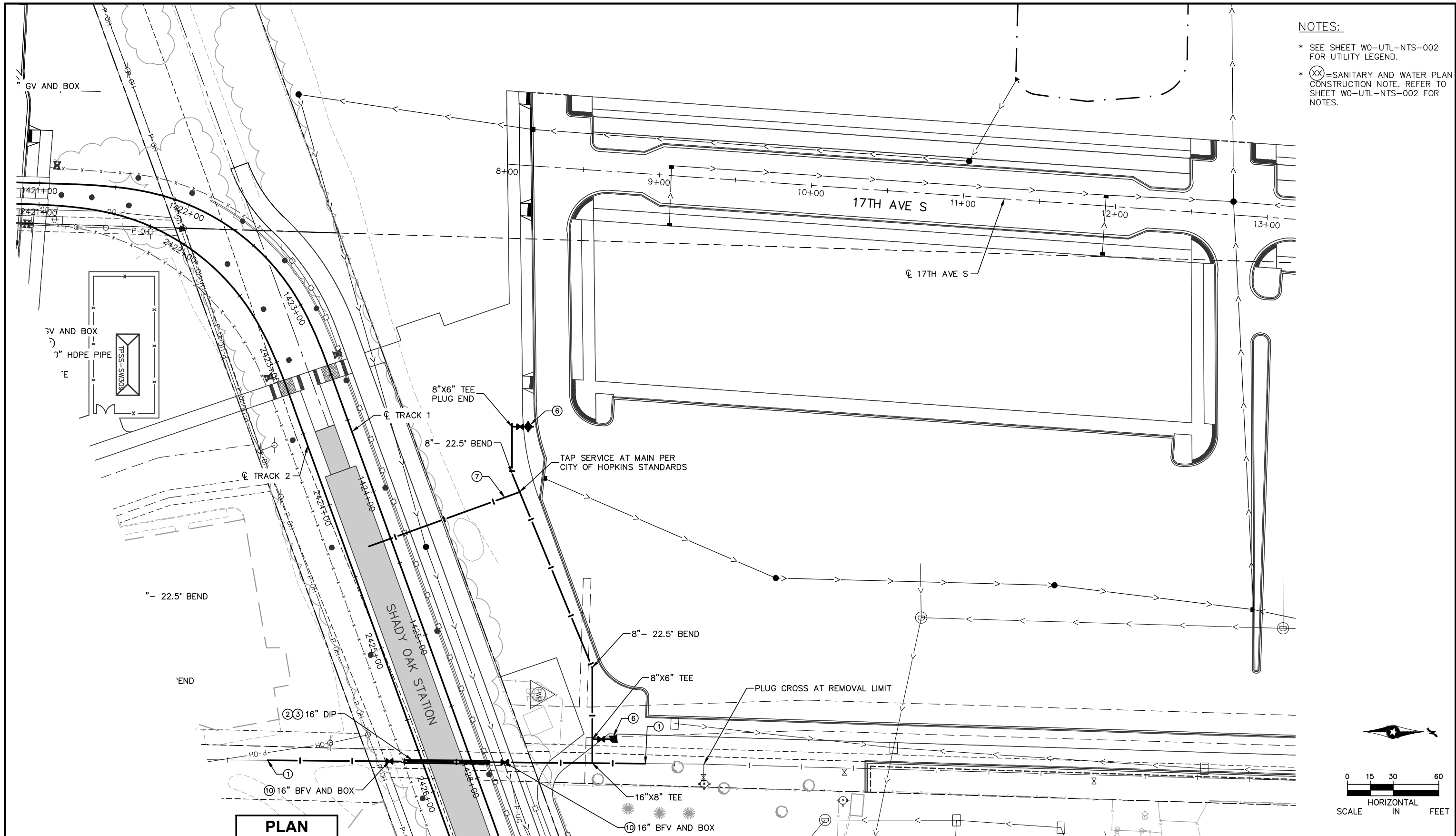
57

OF

60

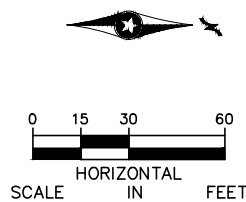
60% SUBMISSION - 9/28/15

Sep. 21 2015 11:32 am V:\3400\_ADC\CAD\00\_WEST\PLANSHEETS\UTILITIES\W3-UTL-PLN.dwg By: V-YoungbJR



NOTES:

- \* SEE SHEET W0-UTL-NTS-002 FOR UTILITY LEGEND.
- \* (XX)=SANITARY AND WATER PLAN CONSTRUCTION NOTE. REFER TO SHEET W0-UTL-NTS-002 FOR NOTES.



NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

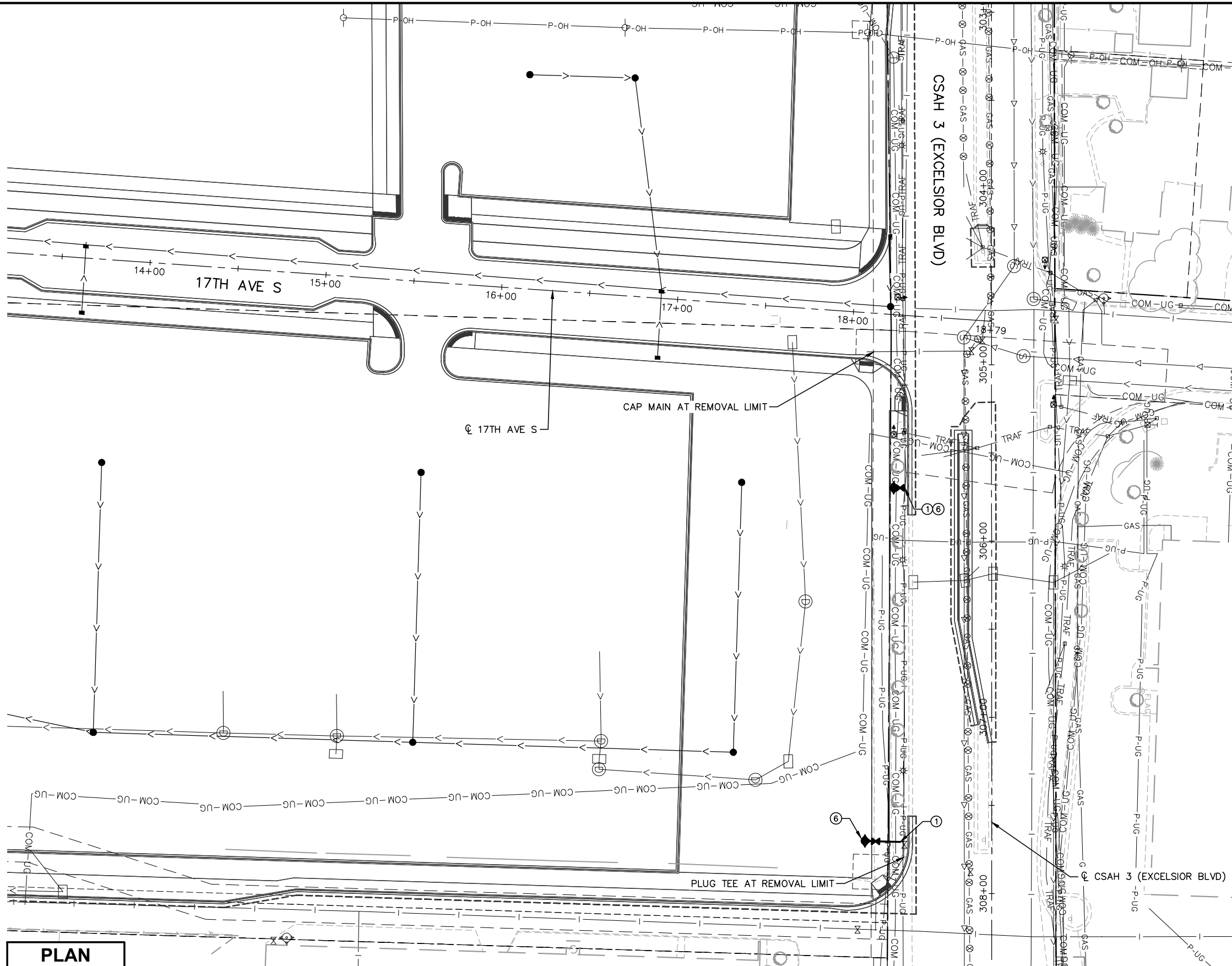


60% SUBMISSION - 9/28/15

CIVIL WEST - VOLUME 7 UTILITIES SHADY OAK STATION 3 OF 5 PLAN	
DISCIPLINE: UTILITIES	SHEET NAME: W3-UTL-PLN - 018

SHEET
58
OF
60

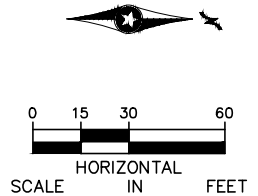
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PLAN

NOTES:

- \* SEE SHEET W0-UTL-NTS-002 FOR UTILITY LEGEND.
- \* (XX) = SANITARY AND WATER PLAN CONSTRUCTION NOTE. REFER TO SHEET W0-UTL-NTS-002 FOR NOTES.



NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL





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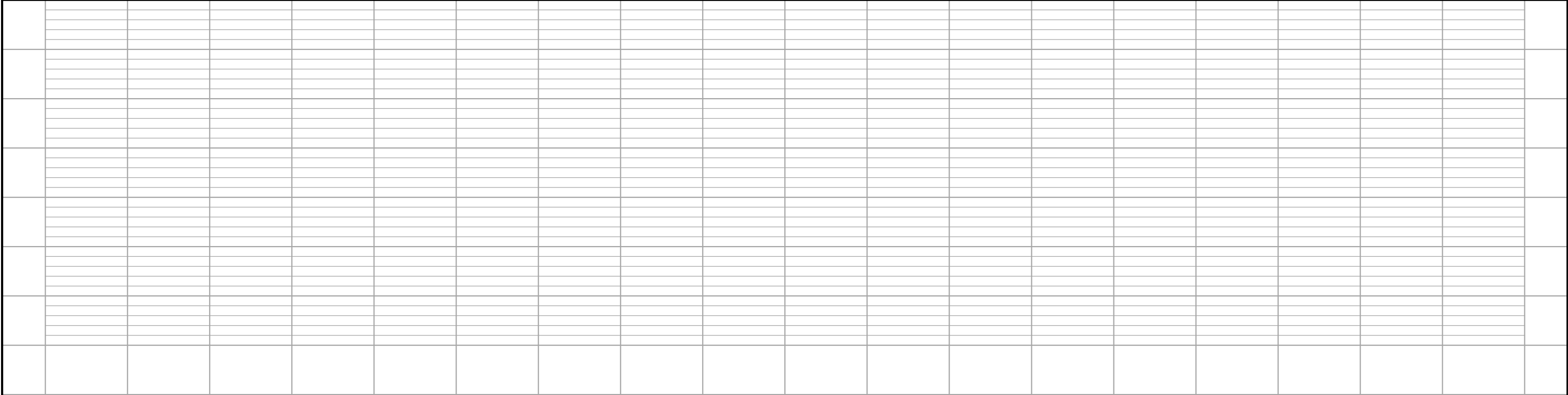
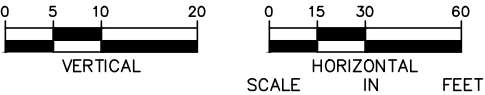
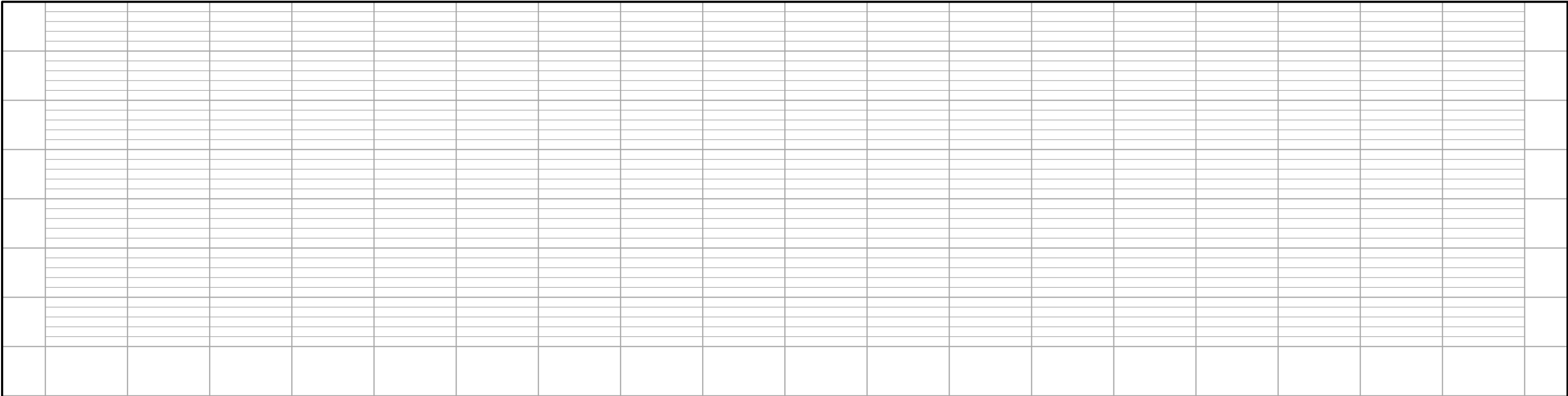
CIVIL WEST - VOLUME 7  
UTILITIES  
SHADY OAK STATION 4 OF 5  
PLAN

DISCIPLINE: UTILITIES

SHEET NAME: W3-UTL-PLN - 019



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CIVIL WEST - VOLUME 7  
UTILITIES  
SHADY OAK STATION 5 OF 5  
PROFILES

DISCIPLINE: UTILITIES

SHEET NAME: W3-UTL-PLN - 020

SHEET

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OF

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