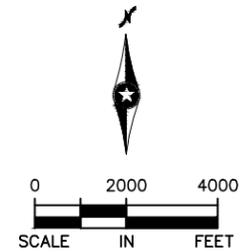
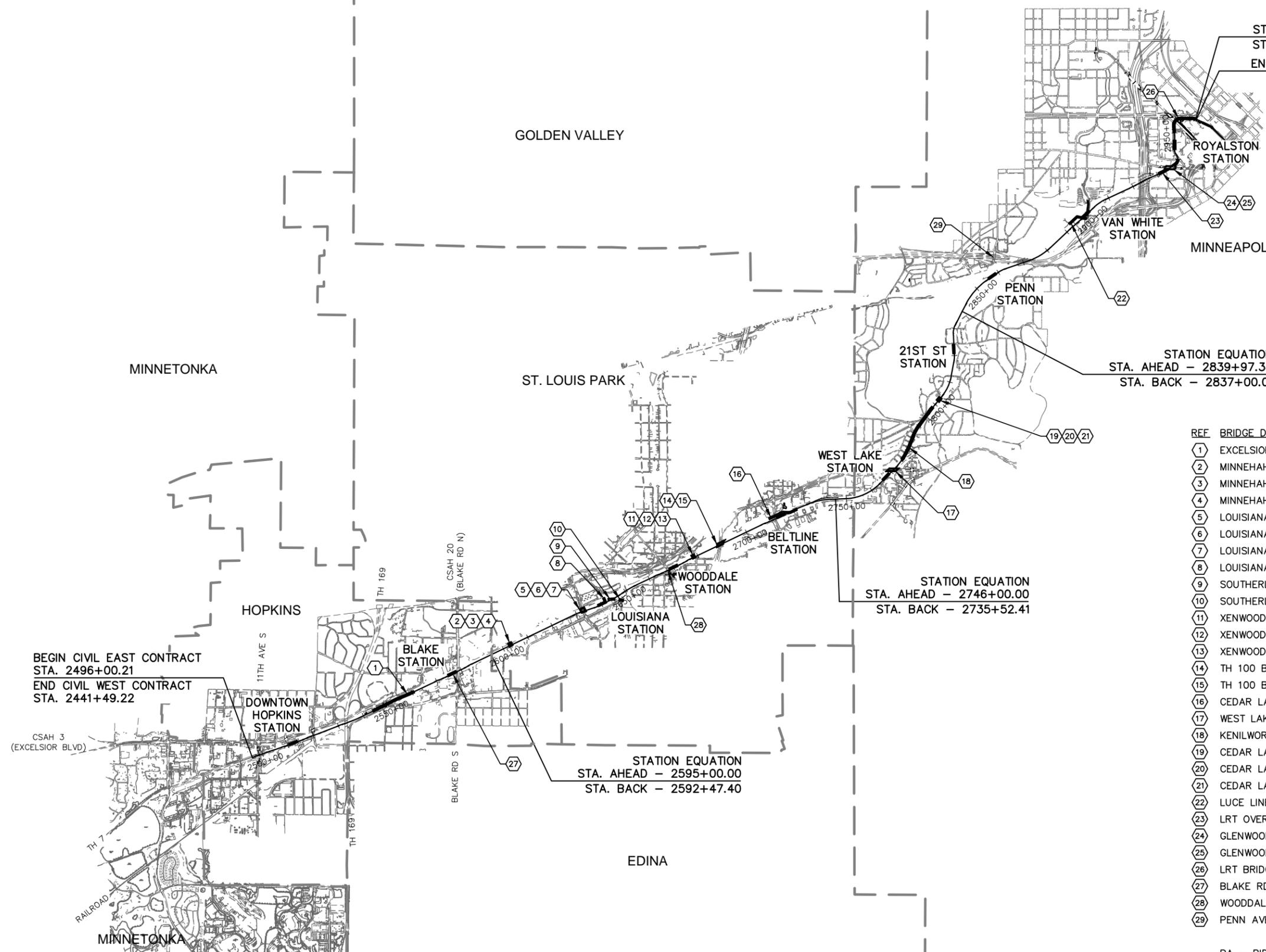


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REF	BRIDGE DESCRIPTION	BRIDGE NUMBER
1	EXCELSIOR BLVD BRIDGE	27C10
2	MINNEHAHA CREEK BRIDGE - FREIGHT	R0688
3	MINNEHAHA CREEK BRIDGE - TRAIL	R0687
4	MINNEHAHA CREEK BRIDGE - LRT	R0689
5	LOUISIANA AVE BRIDGE - FREIGHT	27C12
6	LOUISIANA AVE BRIDGE - TRAIL	27C11
7	LOUISIANA AVE BRIDGE - LRT	27C13
8	LOUISIANA STATION UNDERPASS	R0690
9	SOUTHERLY CONNECTOR BRIDGE OVER LRT	R0691
10	SOUTHERLY CONNECTOR BRIDGE OVER OXFORD ST	27C14
11	XENWOOD AVE - FREIGHT	XXXXX BA
12	XENWOOD AVE - TRAIL	XXXXX BA
13	XENWOOD AVE - LRT	XXXXX BA
14	TH 100 BRIDGE RELOCATION - FREIGHT	27W34
15	TH 100 BRIDGE - LRT	27303
16	CEDAR LAKE BRIDGE - TRAIL	R0692
17	WEST LAKE ST BRIDGE MODIFICATIONS	27037
18	KENILWORTH TUNNEL	27C15
19	CEDAR LAKE CHANNEL BRIDGE - FREIGHT	R0694
20	CEDAR LAKE CHANNEL BRIDGE - LRT	R0693
21	CEDAR LAKE CHANNEL BRIDGE - TRAIL	R06xx
22	LUCE LINE BRIDGE - TRAIL	R0696
23	LRT OVER BNSF BRIDGE	R0697
24	GLENWOOD AVE BRIDGE - WEST	27C16
25	GLENWOOD AVE BRIDGE - EAST	27C17
26	LRT BRIDGE OVER 5TH AVE & 7TH ST	27C18
27	BLAKE RD PEDESTRIAN UNDERPASS	27J60 BA
28	WOODDALE TRAIL UNDERPASS	27J61 BA
29	PENN AVE BRIDGE MODIFICATIONS	27758 BA

BA - BID ALTERNATE

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CIVIL EAST - VOLUME 7
GENERAL KEY MAP

DISCIPLINE: **GENERAL** SHEET NAME: **E0-GEN-KEY - 001**

SHEET
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TRACK LINETYPES

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

CIVIL LINETYPES

	ROADWAY CL
	TRACK CL (LRT)
	TRACK CL (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

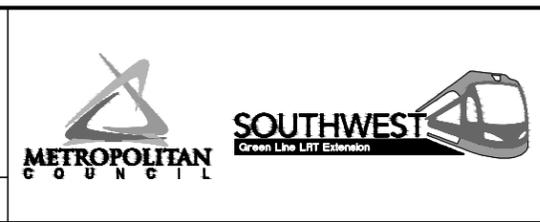
1. THE HORIZONTAL DATUM OF THIS MAP IS BASED ON THE HENNEPIN COUNTY COORDINATE SYSTEM WHICH IS RELATED TO THE MINNESOTA STATE PLANE COORDINATE SYSTEM NAD 83 (2007) ADJUSTMENT SOUTH ZONE.
2. THE PLANIMETRIC FEATURES SHOWN ON THIS MAP ARE AS PREPARED BY AERO-METRIC, INC. FROM AERIAL DATA AND IMAGERY COLLECTED IN APRIL 2012, AS SUPPLEMENTED BY FIELD SURVEYS COMPLETED BY MFRA, INC.
3. 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.
4. 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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**CIVIL EAST - VOLUME 7
GENERAL
LEGEND AND ABBREVIATIONS
SHEET 1**

DISCIPLINE: GENERAL SHEET NAME: E0-GEN-NTS - 001

**SHEET
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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
E _a	ACTUAL SUPERELEVATION (INCHES)
EB	EAST BOUND
EL or ELEV	ELEVATION
EP	END POINT
ESMT	EASEMENT
E _u	UNBALANCED SUPERELEVATION (INCHES)
EVCE	ENDING VERTICAL CURVE ELEVATION
EVCS	ENDING VERTICAL CURVE STATION
EX	EXISTING
HCRRA	HENNEPIN COUNTY REGIONAL RAILROAD AUTHORITY
LH	LEFT HAND
LN	LANE
LRT	LIGHT RAIL TRANSIT
L _c	CURVE LENGTH (FEET)
L _s	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 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

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**CIVIL EAST - VOLUME 7
GENERAL
LEGEND AND ABBREVIATIONS
SHEET 2**

DISCIPLINE: **GENERAL** SHEET NAME: **E0-GEN-NTS - 002**

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GENERAL NOTES

1. REFER TO ROADWAY AND TRACK PLANS FOR GEOMETRICS, DIMENSIONS, PAVEMENT SECTIONS, DETAILS, STRIPING AND OTHER SITE FEATURES.
2. PERFORM ALL UTILITY WORK IN ACCORDANCE WITH STATE AND CITY REQUIREMENTS.
3. **TESTING AND INSPECTIONS:** 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.
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).
5. COORDINATE BUILDING UTILITY CONNECTION WITH THE PROPERTY OWNER PRIOR TO CONSTRUCTION. VERIFY SEWER SERVICE LOCATIONS AND ELEVATIONS PRIOR TO CONSTRUCTION.
6. SUPPORT ALL IN-PLACE UTILITIES DURING EXCAVATION AND CONSTRUCTION OF THE PROPOSED UTILITY. INCIDENTAL TO PROPOSED UTILITY WORK.
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.
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.
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.
10. CONTRACTOR MUST RESTORE OR REPAIR DAMAGED UTILITIES TO CONDITION EQUAL TO OR BETTER THAN PRE-CONSTRUCTION CONDITION AND AS REQUIRED BY OWNER.
11. COORDINATE AND SEQUENCE WATER MAIN AND SEWER CONSTRUCTION WITH OTHER PROPOSED CONSTRUCTION.
12. COORDINATE WITH COUNCIL AUTHORIZED REPRESENTATIVE (CAR) AND UTILITY OWNER FOR OPERATION OF VALVES AND HYDRANTS.
13. MECHANICAL THRUST RESTRAINT SHALL BE USED FOR ALL WATER MAIN PIPE RESTRAINT. ADDITIONALLY, INSTALL CONCRETE THRUST BLOCKING AS SPECIFIED AND DETAILED.
14. PIPE, CASING AND FITTING QUANTITIES AND SIZES SHOWN ARE BASED ON AS-BUILT INFORMATION AND MAY REQUIRE FIELD ADJUSTMENTS.
15. ADJUST HYDRANT LOCATIONS AS NECESSARY TO ACCOMMODATE FIELD CONDITIONS. COORDINATE WITH CAR.
16. SEE CORROSION CONTROL PLANS FOR CATHODIC PROTECTION MEASURES.
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.
18. ALL PIPE JOINTS WITHIN CASING SHALL BE RESTRAINED WITH MECHANICAL RESTRAINT AT EACH JOINT.
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.
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.
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.
22. ALL WATER MAINS TO BE INSTALLED ACCORDING TO CITY STANDARD SPECIFICATIONS, THE PROJECT MANUAL AND PLANS.
23. ALL EXISTING WATER SERVICES NOT BEING REUSED MUST BE REMOVED IN THEIR ENTIRETY PER CITY STANDARD SPECIFICATIONS.
24. PROVIDE MINIMUM COVER FOR WATER MAIN AS REQUIRED BY CITY STANDARD SPECIFICATIONS UNLESS NOTED OTHERWISE.
25. VERIFY LOCATION AND ELEVATION OF EXISTING AND PROPOSED UTILITIES PRIOR TO WORK.
26. PROTECT AND SUPPORT UNDERGROUND FACILITIES DURING CONSTRUCTION OPERATIONS.
27. EXCAVATION, BACKFILLING AND COMPACTING REQUIRED FOR REMOVAL OF ITEMS INDICATED TO BE REMOVED SHALL BE CLASSED AS INCIDENTAL TO THE REMOVAL WORK.
28. REMOVAL OF ANY EXISTING CONCRETE THRUST BLOCKING AND EXISTING MECHANICAL RESTRAINTS SHALL BE CLASSED AS INCIDENTAL TO REMOVE WATER MAIN WORK.
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.
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.
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.
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.
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.
34. DRAINAGE SHOWN IN THIS VOLUME IS FOR INFORMATION ONLY. SEE VOLUME 8 - DRAINAGE FOR DRAINAGE DESIGN.
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.
36. FURNISH & INSTALL MECHANICAL THRUST RESTRAINT FOR ALL JOINTS IN WATER SERVICE LEADS GREATER THAN 2" IN DIAMETER.
37. INSULATE WATER MAIN AND SANITARY SEWER WHERE INDICATED AND ADDITIONALLY AS REQUIRED BY THE PROJECT MANUAL.
38. ALL WATER MAIN CROSSING PROPOSED LRT AND FREIGHT TRACK SHALL BE CASED.
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.
40. CONTRACTOR SHALL COORDINATE AND SCHEDULE ALL WATER MAIN WORK WITH THE CAR AND THE CITY.
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.
42. WATER MAIN APPURTENANCES, STATIONS, AND OFFSETS FOR MAIN LINE WATER MAIN ARE INDICATED ON WATER MAIN PROFILES.
43. NEW CASTINGS, FRAMES, LIDS, GRATES, AND ADJUSTING MANHOLE RINGS SHALL BE FURNISHED & 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.
44. ALL WATER MAIN FITTINGS SHALL BE DUCTILE IRON.
45. ALL TREES NOT INDICATED FOR REMOVAL ARE TO REMAIN AND SHALL BE PROTECTED DURING CONSTRUCTION ACTIVITIES. SEE LANDSCAPE DETAILS FOR TREE PROTECTION REQUIREMENTS.
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.
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.
48. ALL BENDS AND FITTINGS SHALL BE INSTALLED WITH MECHANICAL RESTRAINT AT THE BEND OR FITTING.
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.
50. SYMBOLS USED TO DENOTE STRUCTURES ARE NOT TO SCALE AND DO NOT DEPICT ACTUAL SIZE. REMOVE STRUCTURES IDENTIFIED FOR REMOVAL IN THEIR ENTIRETY.

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL



60% SUBMITTAL - 09/28/15

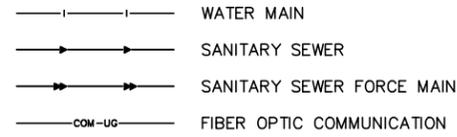
CIVIL EAST - VOLUME 7
UTILITIES
GENERAL NOTES

DISCIPLINE: UTILITIES SHEET NAME: E0-UTL-NTS - 001

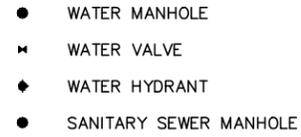
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LEGEND

PROPOSED UTILITY LINE TYPES



PROPOSED UTILITY SYMBOLS



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

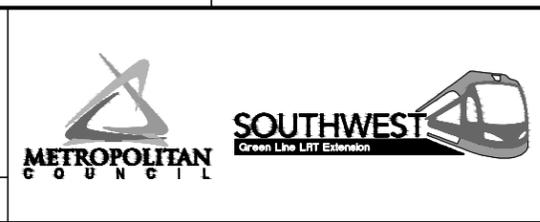
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UTILITY CONTACTS

UTILITY: ARVIG COMMUNICATIONS SYSTEMS CONTACT: PATRICK LYNCH PHONE: (320) 256-0271 MOBILE: (320) 492-8763 ADDRESS: 224 MAIN STREET EAST MELROSE, MINNESOTA 56352	UTILITY: CITY OF MINNEAPOLIS TRAFFIC CONTACT: ALLAN KLUGMAN PHONE: (612) 673-2743 MOBILE: (612) 655-6292 ADDRESS: 300 BORDER AVENUE NORTH MINNEAPOLIS, MN 55405	UTILITY: LEVEL 3 COMMUNICATIONS CONTACT: BRAD MORSETH PHONE: MOBILE: (612) 805-9479 ADDRESS: 715 N. 2ND ST. MINNEAPOLIS, MINNESOTA 55401	UTILITY: TDS TELECOM CONTACT: MICHAEL RITCHIE PHONE: (608) 664-4461 MOBILE: ADDRESS: 525 JUNCTION ROAD MADISON, WISCONSIN 53717	UTILITY: ZAYO FIBER SOLUTIONS CONTACT: MIKE DAHLE PHONE: (763) 545-9998 MOBILE: (952) 857-9383 ADDRESS: 5005 CHESHIRE PARKWAY NORTH SUITE ONE PLYMOUTH, MN 55441
UTILITY: AT & T CONTACT: JERRY STREETER PHONE: (612) 344-3327 MOBILE: (612) 248-8674 ADDRESS: 420 3RD AVE. S., 9TH FLOOR MINNEAPOLIS, MINNESOTA 55415	UTILITY: CITY OF MINNEAPOLIS WATER CONTACT: MARIE ASGIAN PHONE: (612) 673-5682 MOBILE: ADDRESS: ROOM MAIN, WATER - EAST YARD 935 5TH AVENUE SE MINNEAPOLIS, MN 55414	UTILITY: METROPOLITAN COUNCIL, ENVIRONMENTAL SERVICES CONTACT: ADAM GORDON PHONE: (651) 602-4508 MOBILE: ADDRESS: 3565 KENNEBEC DRIVE EAGAN, MINNESOTA 55122	UTILITY: TELECOM TRANSPORT MANAGEMENT, INC. CONTACT: DAVE SMITH PHONE: (612) 309-8422 MOBILE: ADDRESS: 6844 WASHINGTON AVE. EDEN PRAIRIE, MN 55344	
UTILITY: CENTERPOINT ENERGY CONTACT: DEAN NICHOLAS PHONE: (612) 321-5561 MOBILE: CONTACT: RYAN URICH PHONE: (612) 321-5054 MOBILE: ADDRESS: 700 WEST LINDEN AVENUE MINNEAPOLIS, MINNESOTA 55403	UTILITY: CITY OF ST. LOUIS PARK CONTACT: JACK SULLIVAN PHONE: (952) 924-2691 MOBILE: ADDRESS: ENGINEERING DEPARTMENT CITY HALL 5005 MINNETONKA BLVD ST. LOUIS PARK, MINNESOTA 55416	UTILITY: METRO TRANSIT CONTACT: BOJAN MISIC PHONE: (612) 373-3874 MOBILE: (619) 549-7620 ADDRESS: SOUTHWEST LRT PROJECT OFFICE PARK PLACE WEST 6465 WAYZATA BOULEVARD, SUITE 500 ST. LOUIS PARK, MN 55426	UTILITY: TW TELECOM, INCORPORATED CONTACT: BOB STRONG PHONE: (952) 351-2353 MOBILE: (612) 805-6827 ADDRESS: 5480 FELTL ROAD MINNETONKA, MINNESOTA 55343-7982	
UTILITY: CENTURYLINK CONTACT: BRANDON ELVERUM PHONE: (651) 250-3996 MOBILE: ADDRESS: 390 COMMERCE DRIVE, ROOM #104 WOODBURY, MINNSOTA 55125	UTILITY: COMCAST CABLE CONTACT: TOM NIEDZIELSKI PHONE: (651) 493-5407 MOBILE: (612) 490-7750 ADDRESS: 2621 FAIRVIEW AVE. NORTH ROSEVILLE, MINNESOTA 55113	UTILITY: MNDOT CONTACT: MIKE VOGEL PHONE: (612) 373-3911 MOBILE: ADDRESS: SOUTHWEST LRT PROJECT OFFICE PARK PLACE WEST 6465 WAYZATA BOULEVARD, SUITE 500 ST. LOUIS PARK, MN 55426	UTILITY: VERIZON COMMUNICATIONS CONTACT: STEPHEN BONCZKOWSKI PHONE: (630) 395-6161 MOBILE: (630) 327-6959 ADDRESS: 501 63RD ST. DOWNERS GROVE, ILLINOIS 60516	
UTILITY: CENTURYLINK CONTACT: KATHY HOGGARTH PHONE: (651) 312-5306 MOBILE: ADDRESS: 425 MONROE ST. ANOKA, MINNESOTA 55303	UTILITY: EDCO PRODUCTS CONTACT: RUSS CLARNO PHONE: (952) 945-2650 MOBILE: ADDRESS: 8700 EXCELSIOR BLVD. HOPKINS, MINNESOTA 55343	UTILITY: ROGERS COMMUNICATIONS CONTACT: RICHARD AUSTRIA PHONE: (647) 747-2976 MOBILE: (647) 241-6534 ADDRESS: EAST BUILDING 2ND FLOOR BRAMPTON, ONTARIO L6T 0C1	UTILITY: WINDSTREAM CONTACT: ERIC BECKER PHONE: MOBILE: (612) 790-4110 ADDRESS: 2996 CENTRE POINT DR. ROSEVILLE, MINNESOTA 55113	
UTILITY: CENTURYLINK - LITECORE/KMC CONTACT: KYLE TOSTENSON PHONE: (318) 417-2768 MOBILE: ADDRESS: 100 CENTURYLINK DRIVE MONROE, LA 71203	UTILITY: HENNEPIN COUNTY CONTACT: KRISTY MORTER PHONE: (612) 596-0384 MOBILE: ADDRESS: HENNEPIN COUNTY TRANSPORTATION DEPARTMENT, DESIGN DIVISION 1600 PRAIRIE DRIVE MEDINA, MN 55340	UTILITY: SPRINT COMMUNICATIONS COMPANY, LP CONTACT: DAN HILLIARD PHONE: (651) 772-6714 MOBILE: (612) 414-2089 ADDRESS: 849 EARL STREET ST. PAUL, MINNESOTA 55106	UTILITY: XCEL ENERGY - TRANSMISSION CONTACT: BRUCE ZEMKE PHONE: (612) 330-7815 MOBILE: (651) 214-2620 ADDRESS: 414 NICOLLET MALL, (MP 8) MINNEAPOLIS, MINNESOTA 55401	
UTILITY: CITY OF HOPKINS CONTACT: NATE STANLEY PHONE: (952) 548-6356 MOBILE: (952) 292-6872 ADDRESS: 1010 1ST ST. S. HOPKINS, MINNESOTA 55343	UTILITY: HERC CONTACT: ANDREW LEITH PHONE: (612) 348-8993 MOBILE: ADDRESS: HENNEPIN COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES SOLID WASTE & ENERGY DIVISION 701 FOURTH AVENUE SOUTH, SUITE 700 MINNEAPOLIS, MN 55415-1842	UTILITY: ST. LOUIS PARK PUBLIC SCHOOLS - ISD #283 CONTACT: TOM MARBLE PHONE: (952) 928-6152 MOBILE: ADDRESS: ST. LOUIS PARK PUBLIC SCHOOLS - ISD #283 6425 WEST 33RD STREET ST. LOUIS PARK, MINNESOTA 55426	UTILITY: XCEL ENERGY - DISTRIBUTION CONTACT: ALAN URBAN PHONE: (952) 829-4538 MOBILE: ADDRESS: 5309 WEST 70TH STREET EDINA, MINNESOTA 55439	
UTILITY: CITY OF MINNEAPOLIS SEWER CONTACT: KELLY MORIARITY PHONE: (612) 673-3617 MOBILE: ADDRESS: CITY OF LAKES BUILDING 309 2ND AVENUE SOUTH - ROOM 330 MINNEAPOLIS, MN 55401-2268	UTILITY: HOPKINS PUBLIC SCHOOLS CONTACT: JOHN WETTER PHONE: (952) 988-5373 MOBILE: ADDRESS: EDUCATIONAL TECHNOLOGY, MEDIA & INFORMATION SERVICES HOPKINS DISTRICT 270 1001 HIGHWAY 7 HOPKINS, MINNESOTA 55305	UTILITY: SUPER-VALU CONTACT: JEFF BELTRAND PHONE: (952) 238-3256 MOBILE: (612) 812-4363 ADDRESS: 300 2ND AVE. S. HOPKINS, MINNESOTA 55343	UTILITY: XO COMMUNICATIONS CONTACT: ED PARKER PHONE: (602) 324-6488 MOBILE: ADDRESS: 3930 E. WATKINS SUITE 200 PHOENIX, ARIZONA 85034	

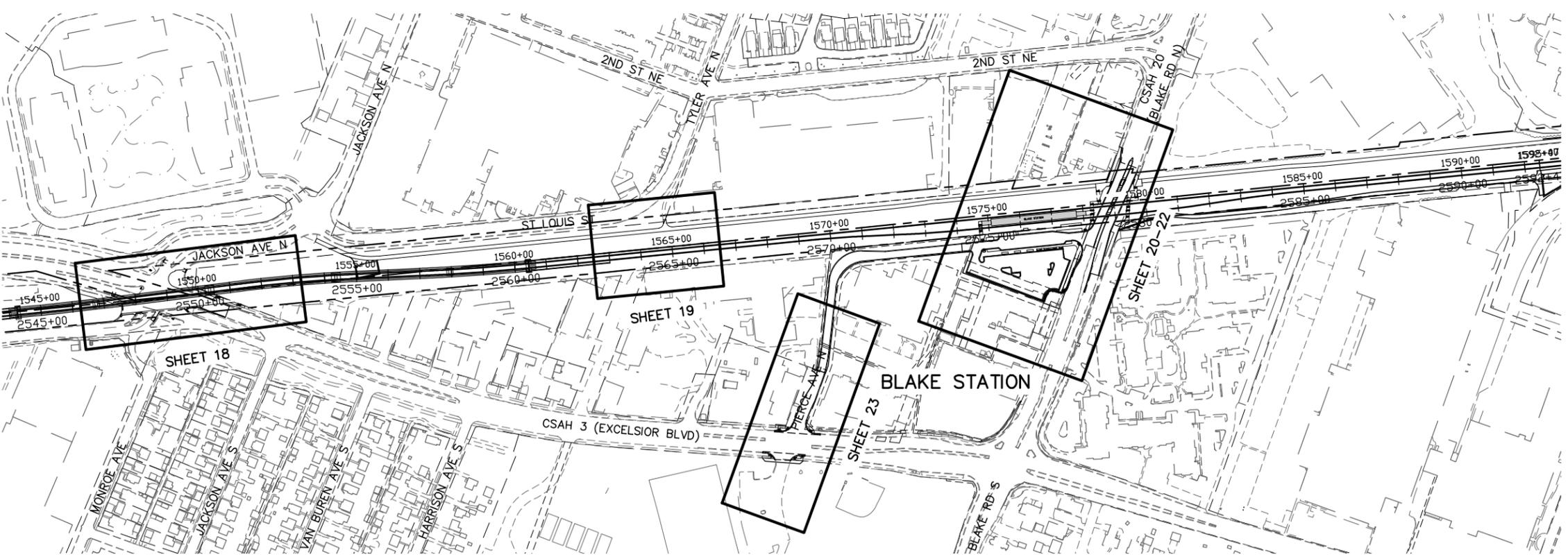
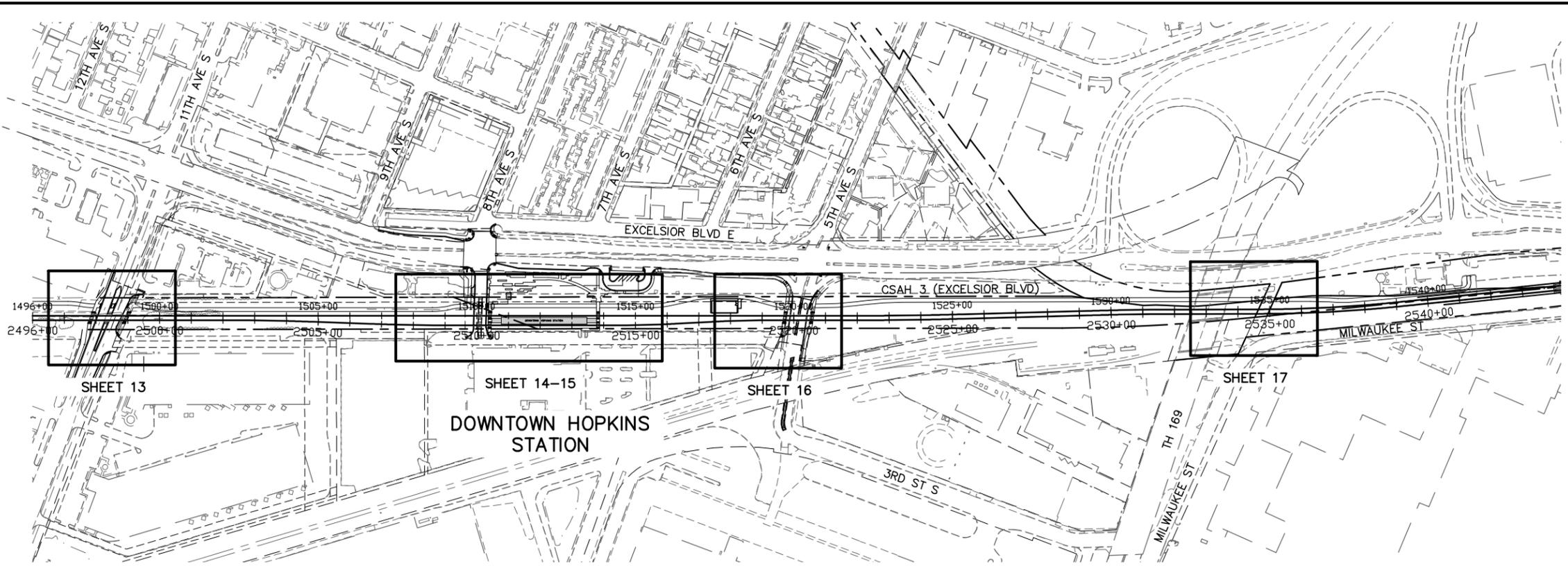
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**CIVIL EAST - VOLUME 7
UTILITIES
UTILITY CONTACTS**

DISCIPLINE: UTILITIES SHEET NAME: E0-UTL-CNT - 001



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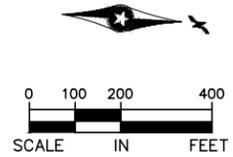
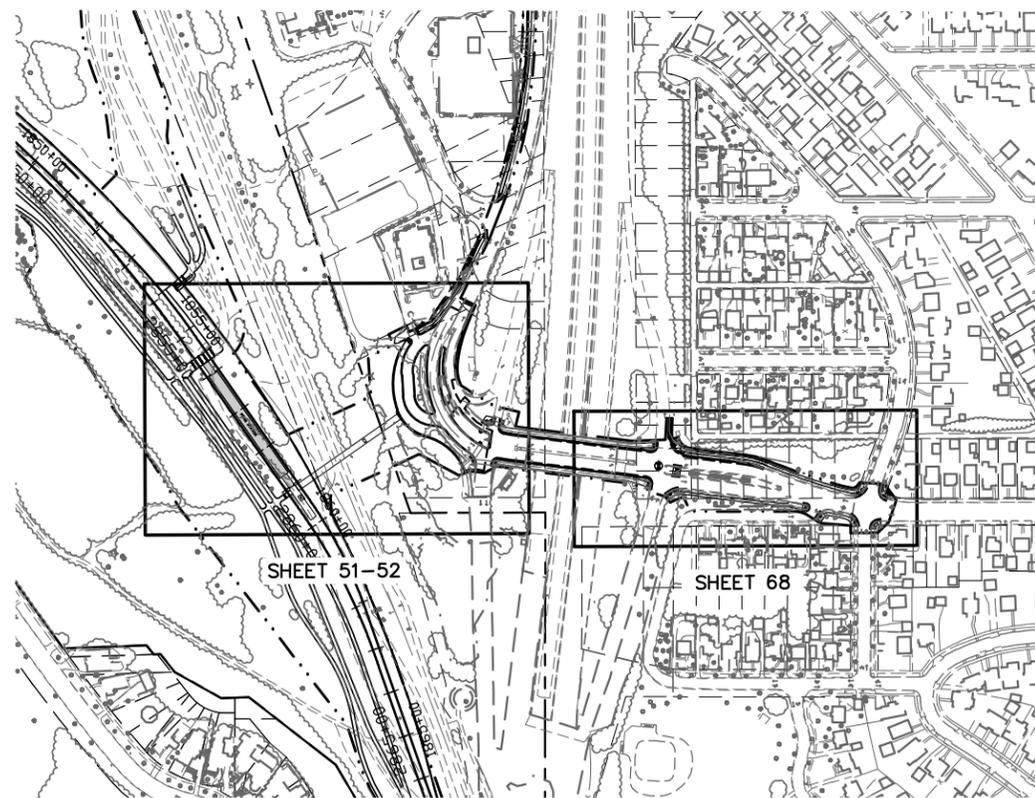
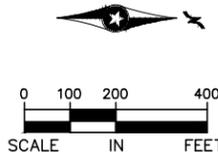
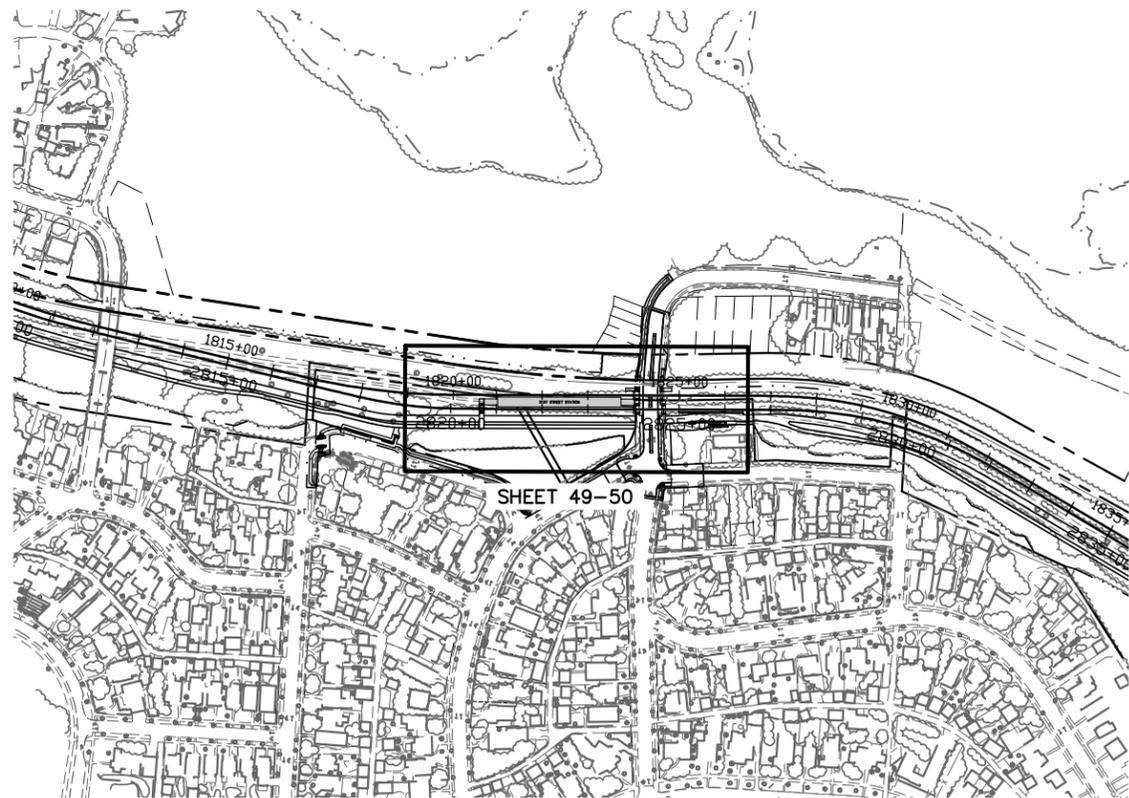
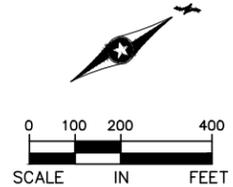
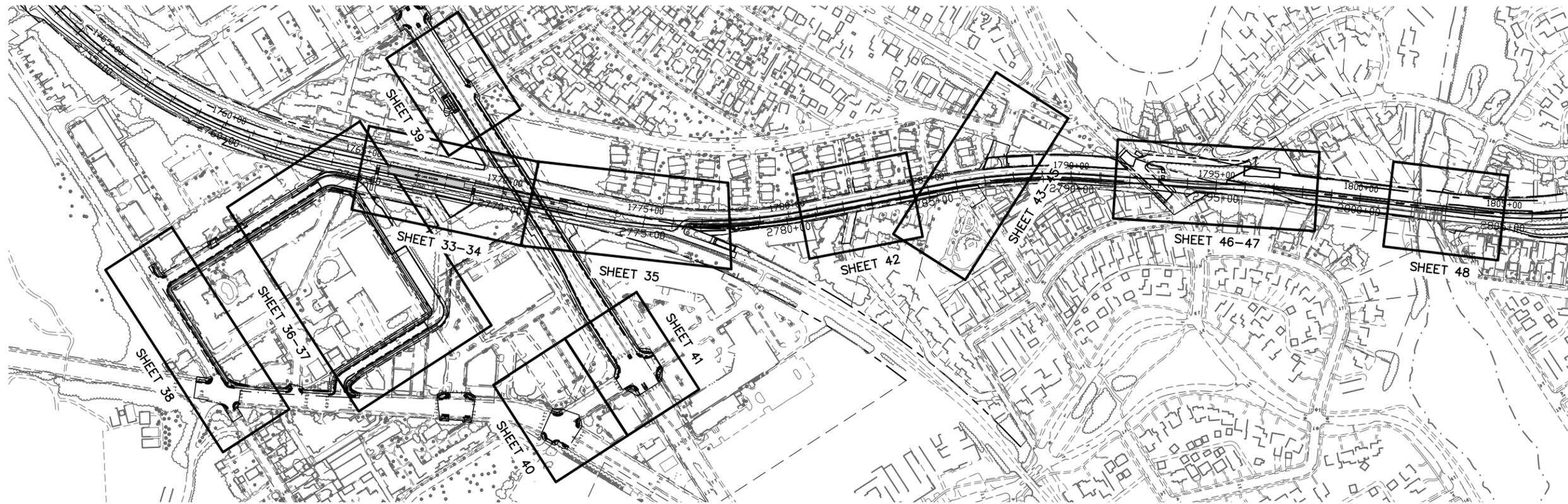
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CIVIL EAST - VOLUME 7		SHEET 9 OF 73
UTILITIES		
UTILITY PLAN SHEET LAYOUT SHEET 1		
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CIVIL EAST - VOLUME 7

UTILITIES

UTILITY PLAN SHEET LAYOUT

SHEET 3

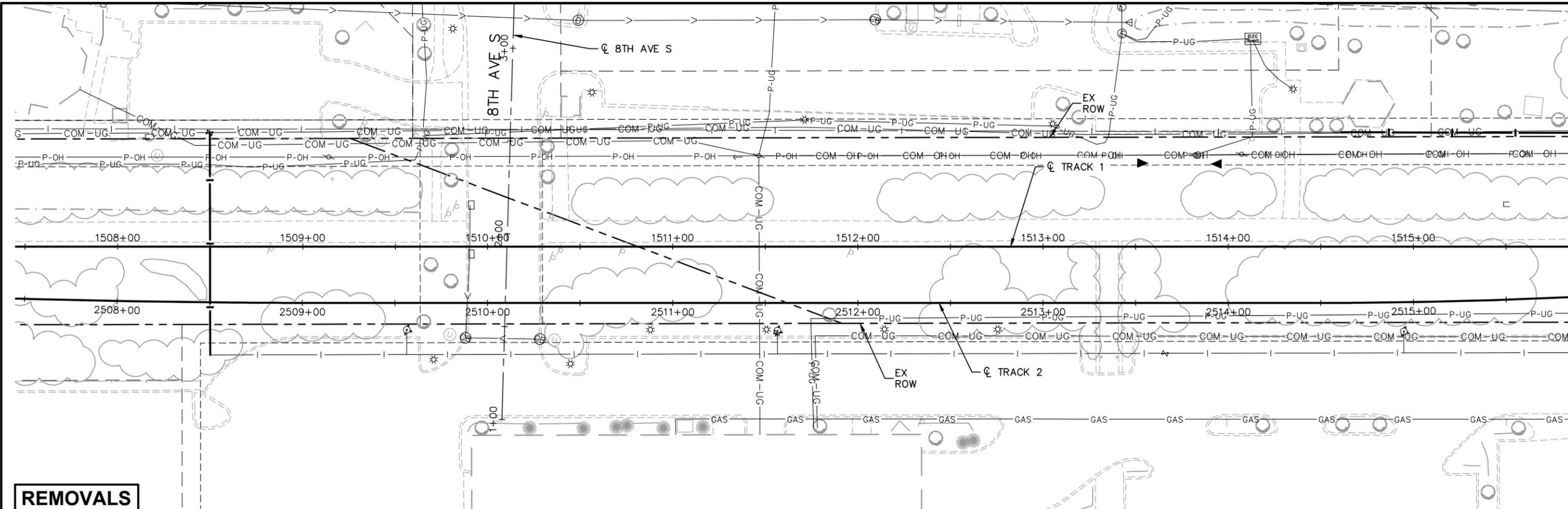
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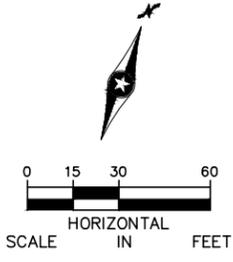
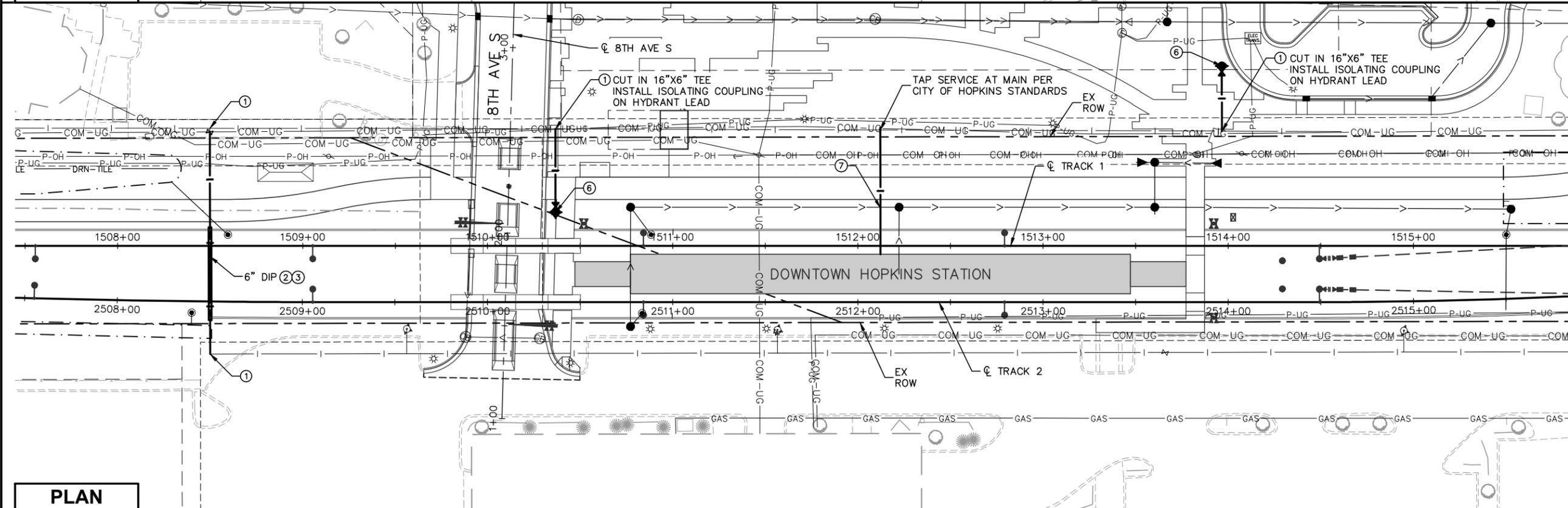
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NOTES:

- * SEE SHEET E0-UTL-NTS-002 FOR UTILITY LEGEND.
- * (XX) = SANITARY AND WATER PLAN CONSTRUCTION NOTE. REFER TO SHEET E0-UTL-NTS-002 FOR NOTES.



REMOVALS



PLAN

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CIVIL EAST - VOLUME 7

UTILITIES

HOPKINS STATION 1 OF 2

REMOVALS AND PLAN

DISCIPLINE: UTILITIES

SHEET NAME: E1-UTL-PLN - 002

SHEET

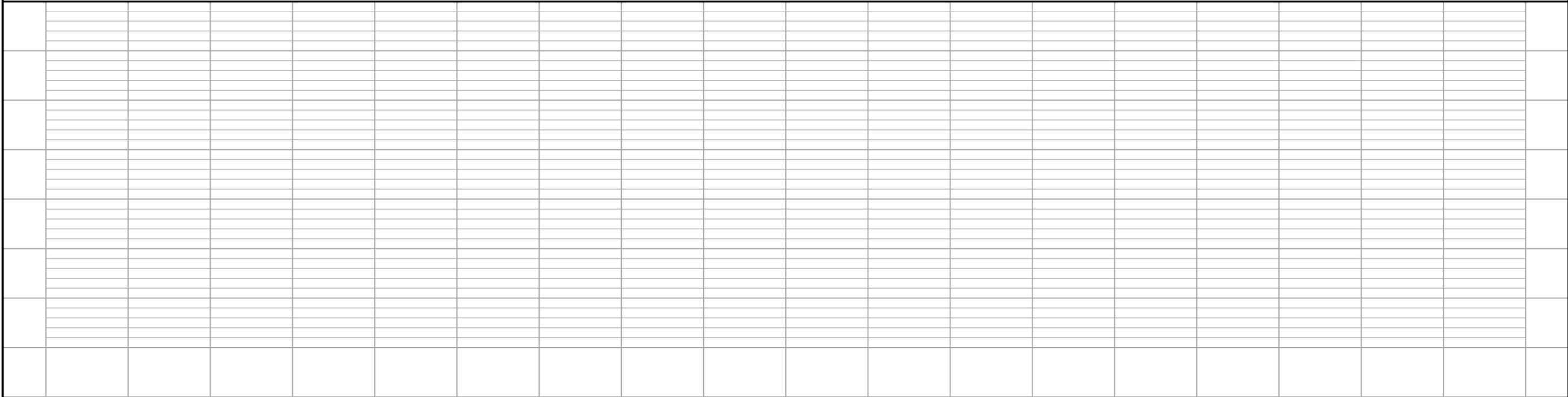
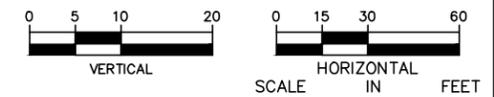
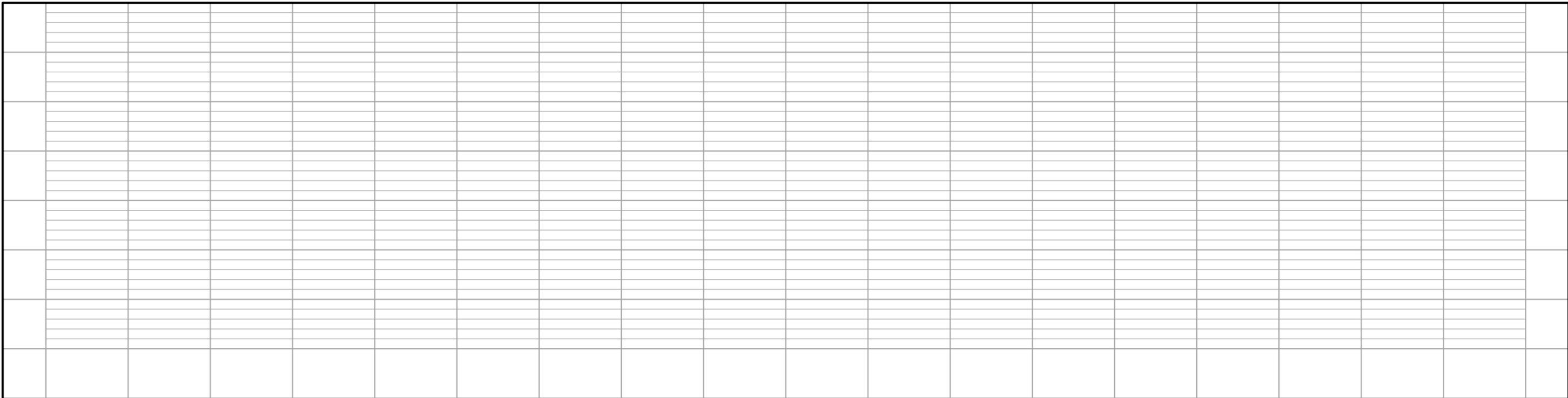
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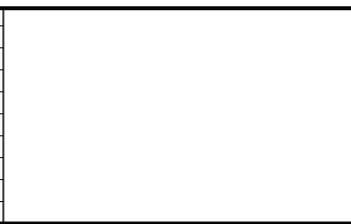
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METROPOLITAN COUNCIL

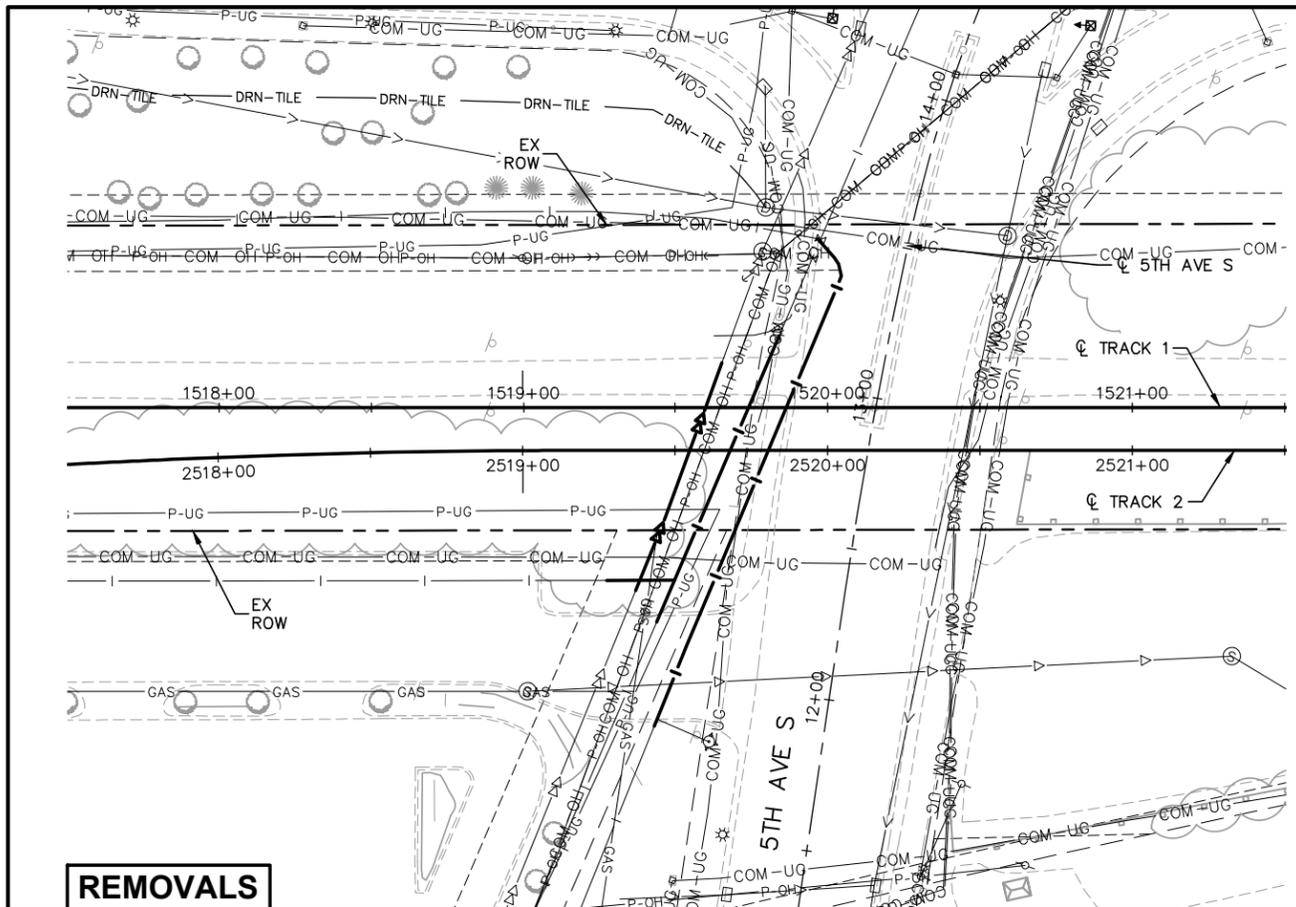
SOUTHWEST
Green Line LRT Extension

CIVIL EAST - VOLUME 7
UTILITIES
HOPKINS STATION 2 OF 2
PROFILES

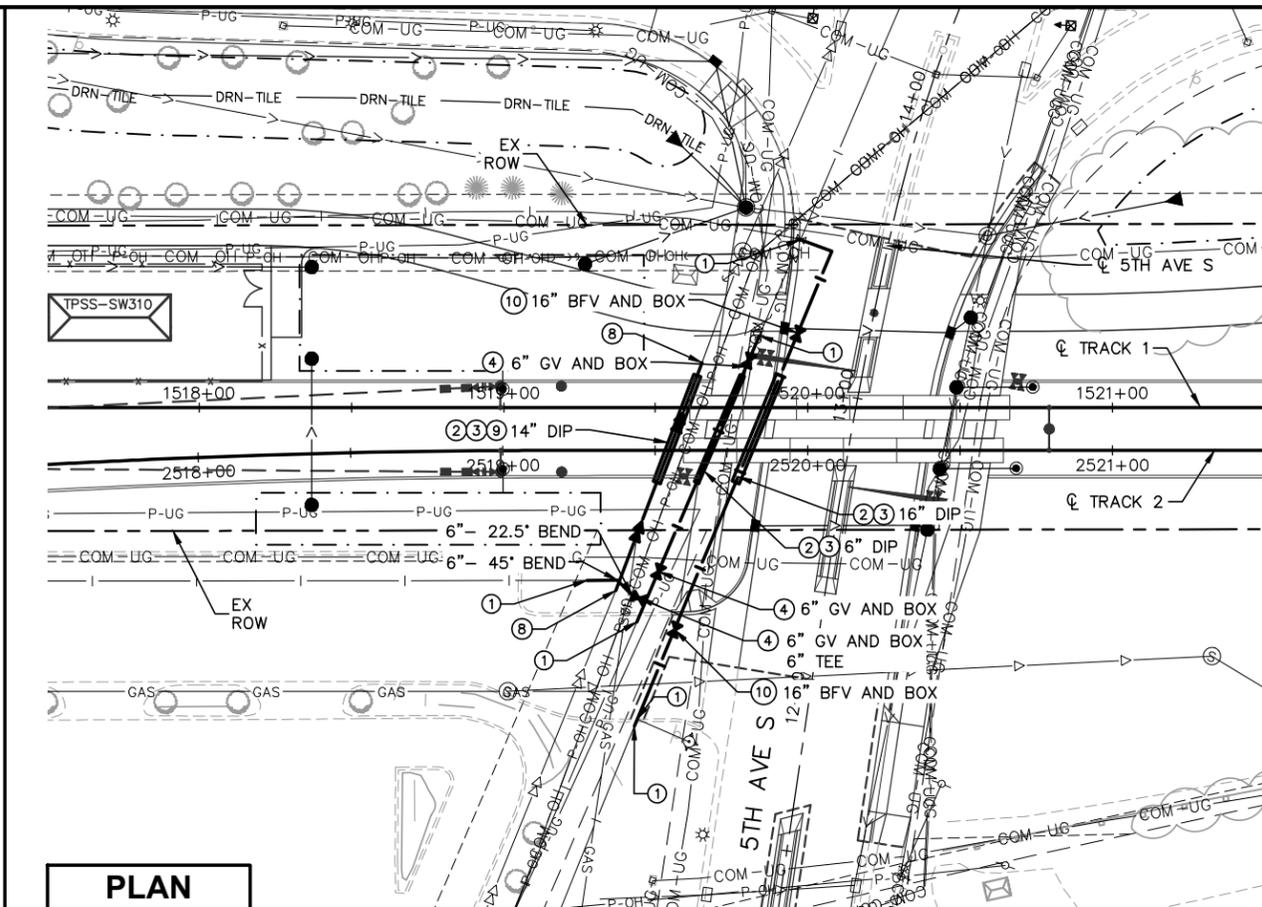
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SHEET 15 OF 73

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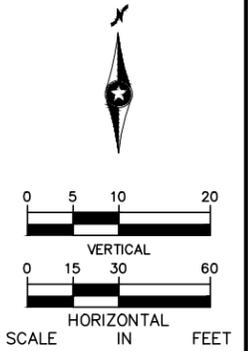
REMOVALS



PLAN

NOTES:

- * SEE SHEET E0-UTL-NTS-002 FOR UTILITY LEGEND.
- * (XX) = SANITARY AND WATER PLAN CONSTRUCTION NOTE. REFER TO SHEET E0-UTL-NTS-002 FOR NOTES.



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METROPOLITAN COUNCIL

SOUTHWEST
Green Line LRT Extension

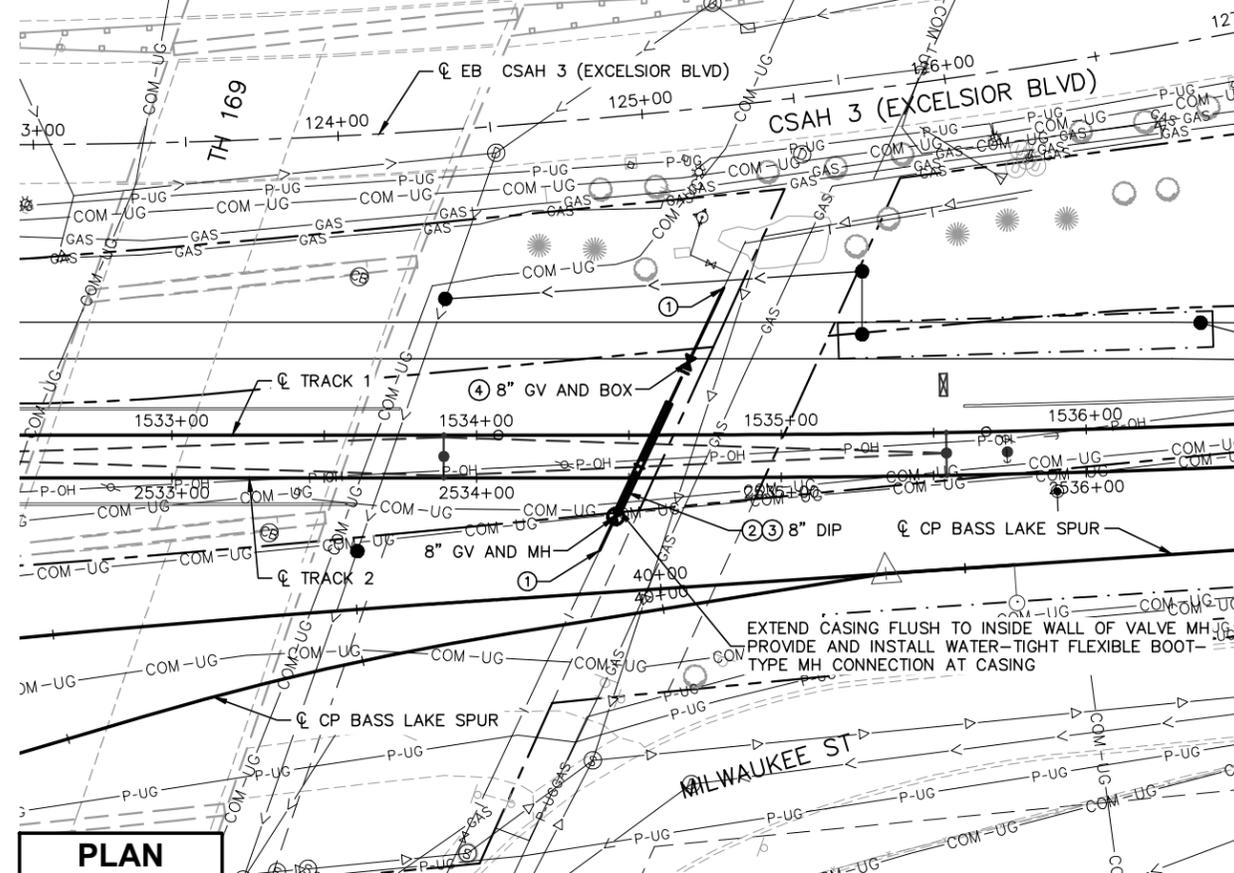
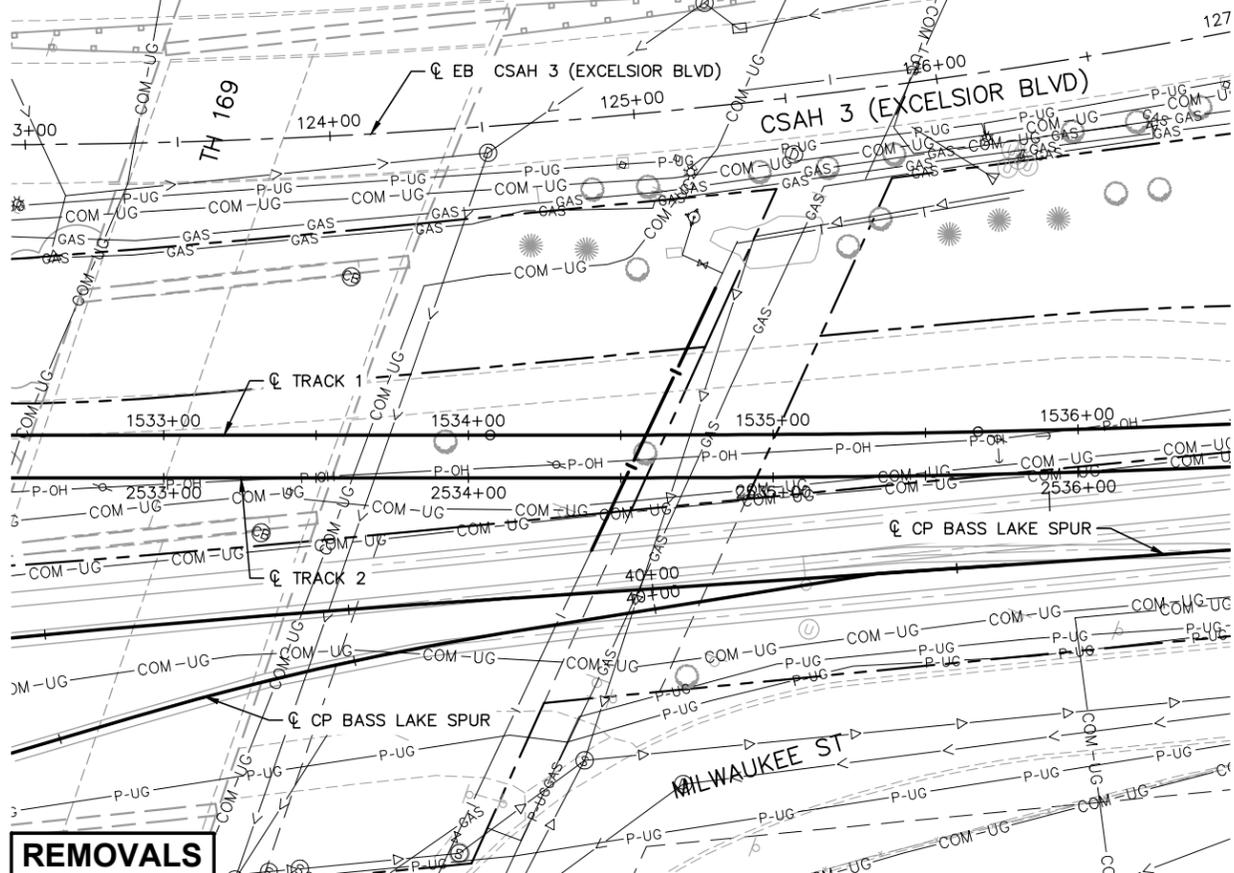
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METROPOLITAN COUNCIL

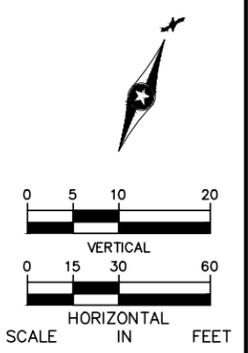
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Green Line LRT Extension

CIVIL EAST - VOLUME 7		SHEET	
UTILITIES			16
REMOVALS, PLAN, AND PROFILES			
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127 NOTES:
 * SEE SHEET E0-UTL-NTS-002 FOR UTILITY LEGEND.
 * (XX) = SANITARY AND WATER PLAN CONSTRUCTION NOTE. REFER TO SHEET E0-UTL-NTS-002 FOR NOTES.



REMOVALS

PLAN

NO.	DATE	BY	CHECK DESIGN	REVISION / SUBMITTAL



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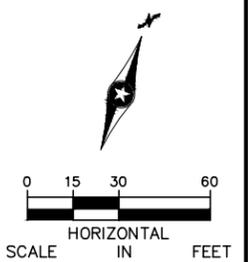
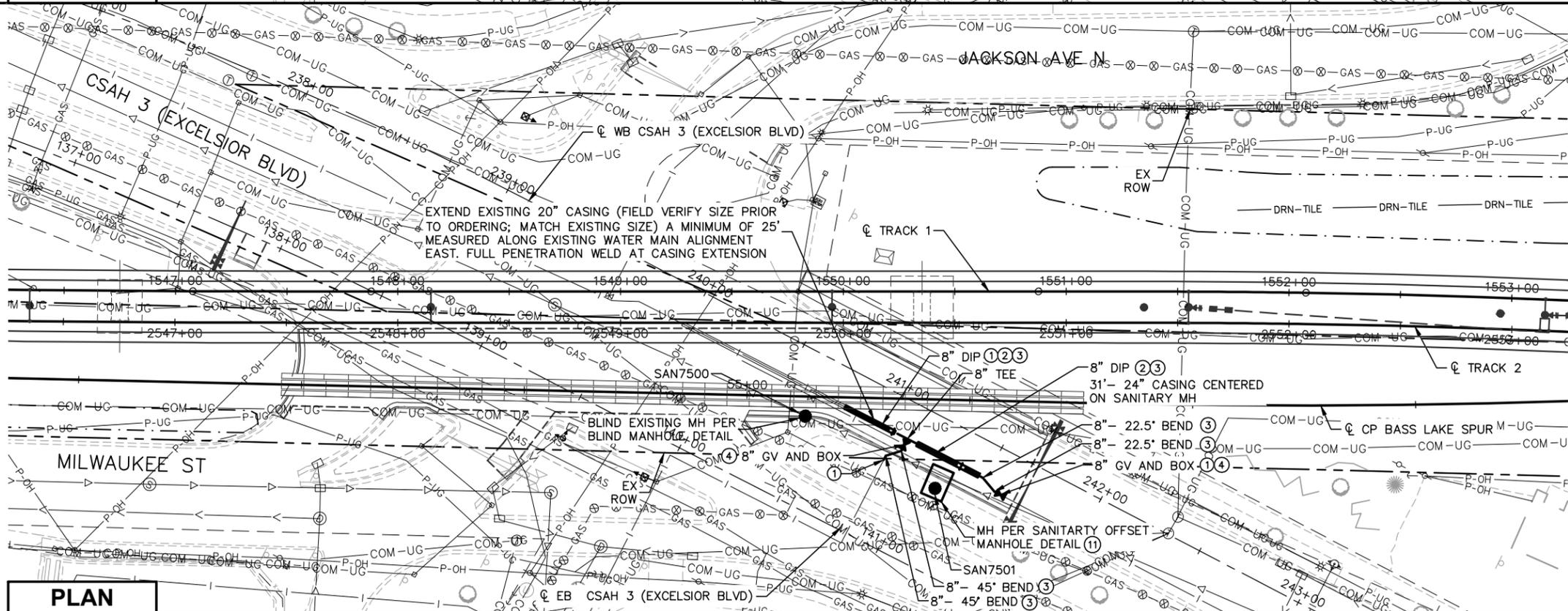
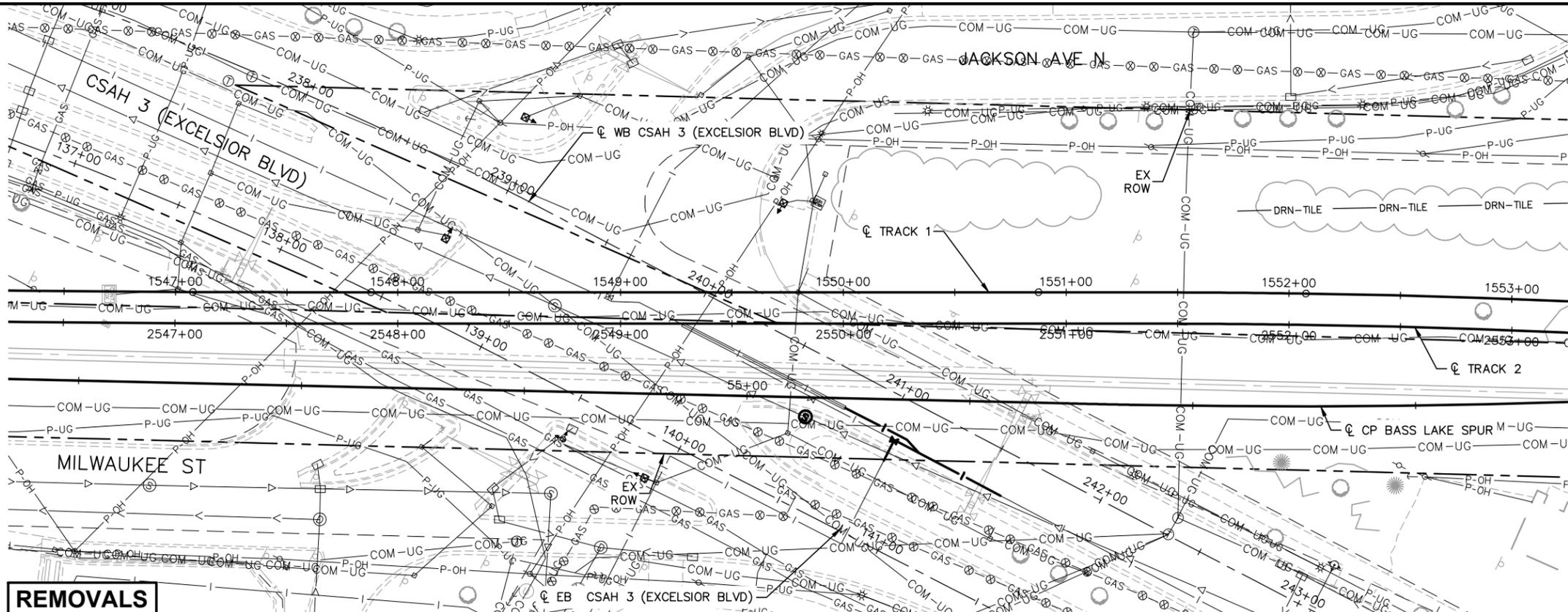
**CIVIL EAST - VOLUME 7
 UTILITIES
 TH 169
 REMOVALS, PLAN, AND PROFILES**

DISCIPLINE: UTILITIES SHEET NAME: E1-UTL-PLN - 005

**SHEET
 17
 OF
 73**

NOTES:

- * SEE SHEET E0-UTL-NTS-002 FOR UTILITY LEGEND.
- * (XX) = SANITARY AND WATER PLAN CONSTRUCTION NOTE. REFER TO SHEET E0-UTL-NTS-002 FOR NOTES.



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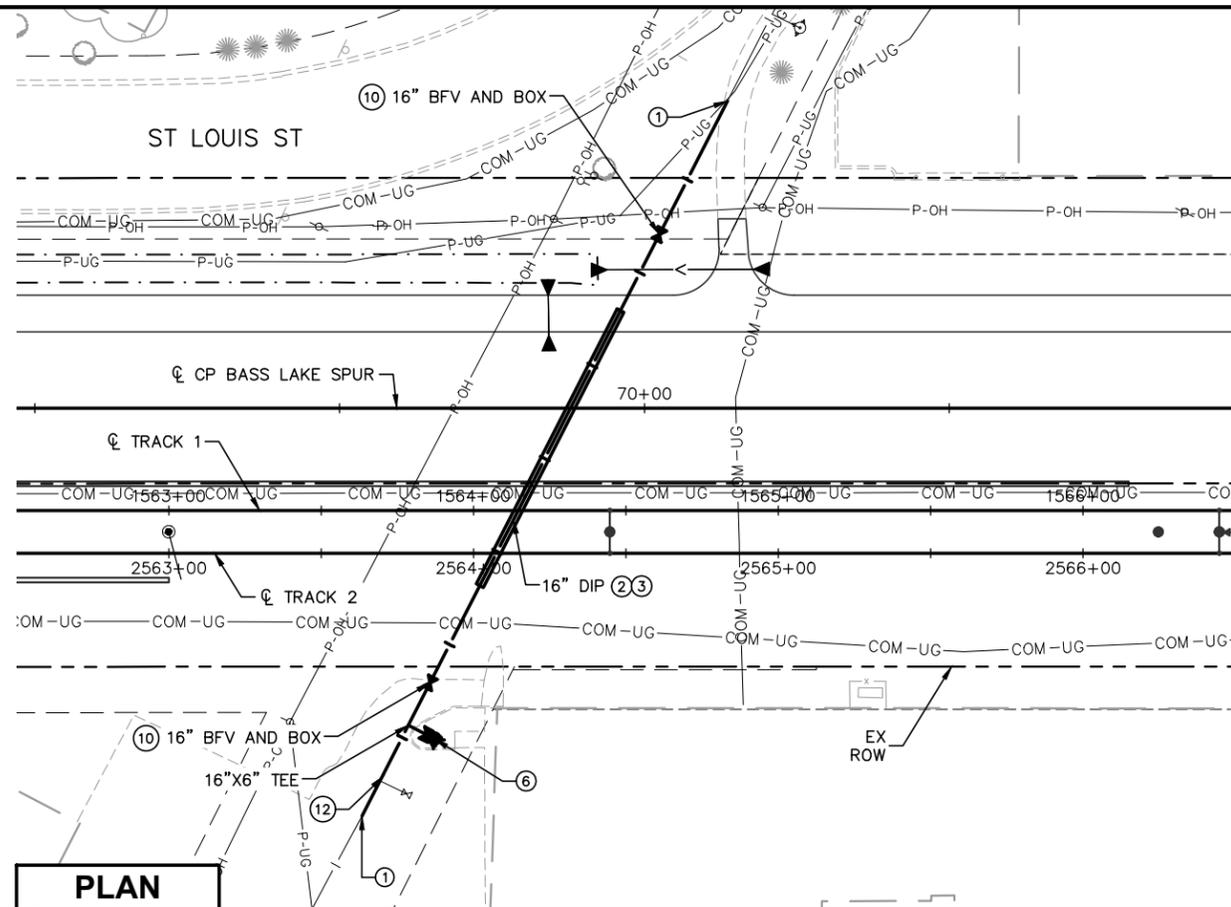
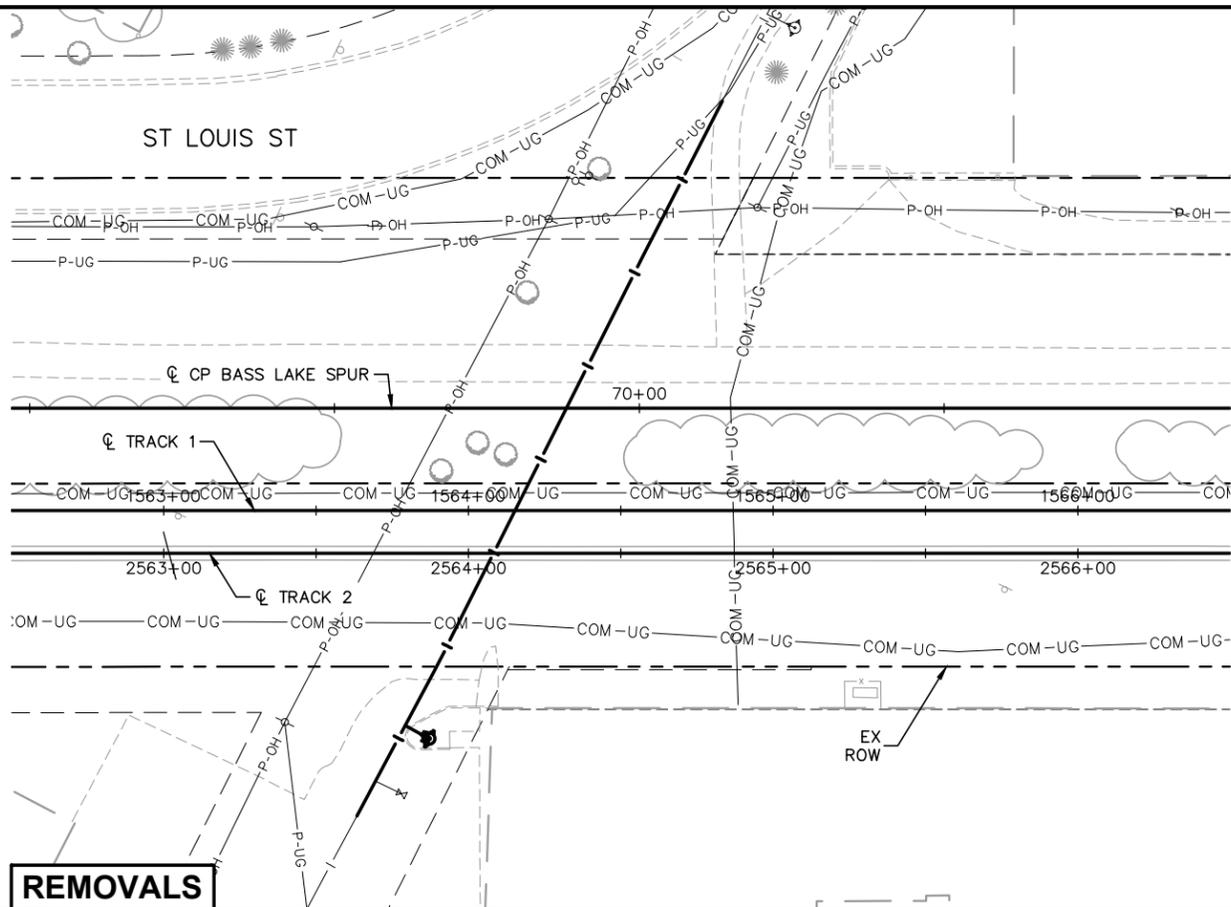
**CIVIL EAST - VOLUME 7
UTILITIES
EXCELSIOR BLVD
REMOVALS AND PLAN**

DISCIPLINE: UTILITIES

SHEET NAME: E1-UTL-PLN - 006

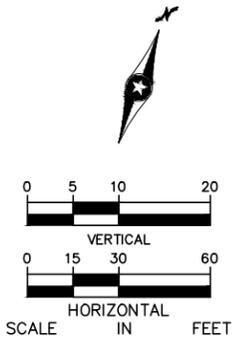
SHEET
18
OF
73

Sep. 21 2015 10:36 am v:\3400_ADC\CAD\00_EAST\PLANSHEETS\UTILITIES\E1-UTL-PLN.dwg By: MakiEM



NOTES:

- * SEE SHEET E0-UTL-NTS-002 FOR UTILITY LEGEND.
- * (XX) = SANITARY AND WATER PLAN CONSTRUCTION NOTE. REFER TO SHEET E0-UTL-NTS-002 FOR NOTES.



REMOVALS

PLAN

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL



60% SUBMITTAL - 09/28/15

**CIVIL EAST - VOLUME 7
UTILITIES
TYLER ST
REMOVALS, PLAN, AND PROFILES**

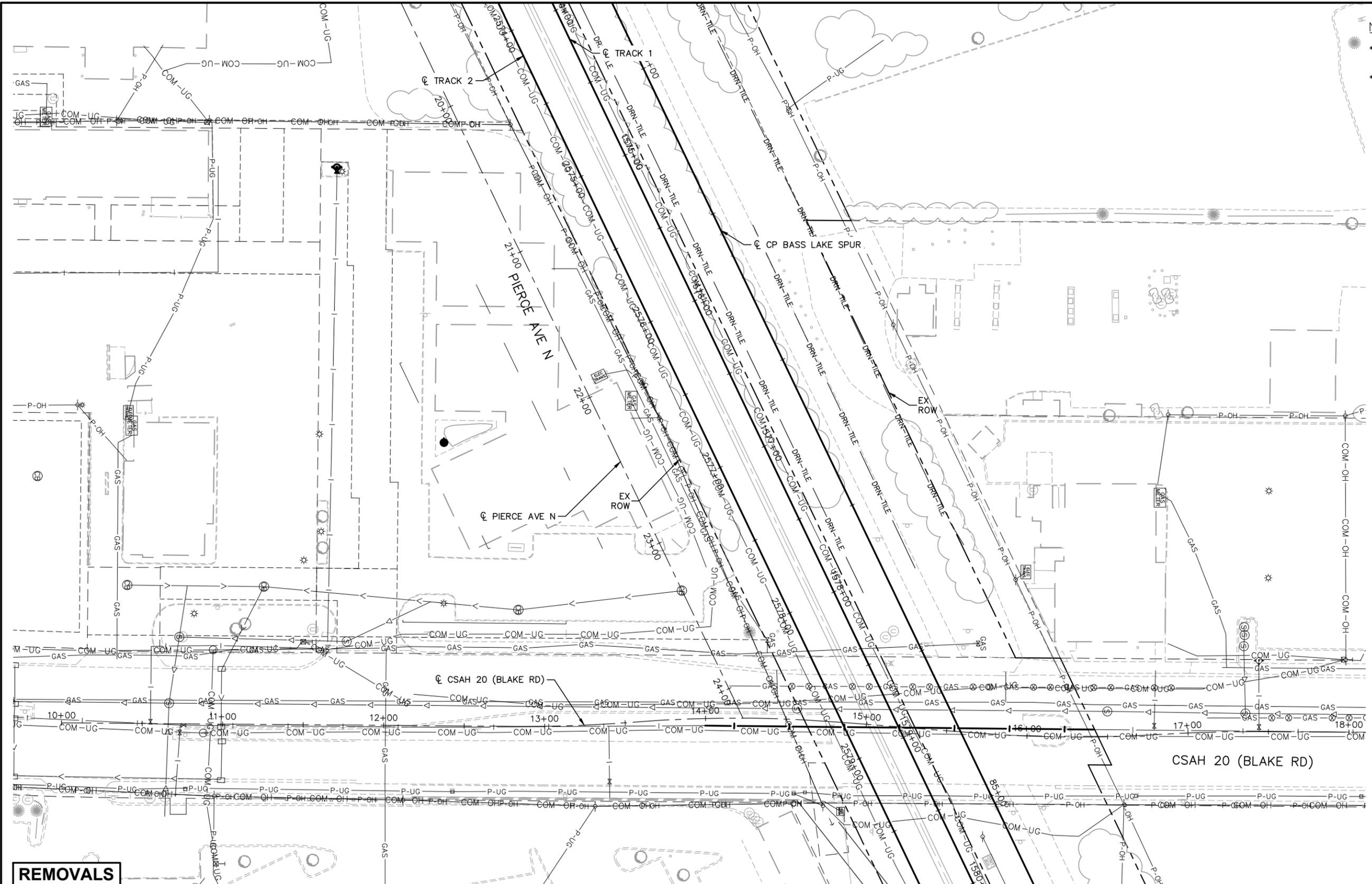
DISCIPLINE: UTILITIES

SHEET NAME: E1-UTL-PLN - 007

**SHEET
19
OF
73**

NOTES:

- * SEE SHEET E0-UTL-NTS-002 FOR UTILITY LEGEND.
- * (XX) = SANITARY AND WATER PLAN CONSTRUCTION NOTE. REFER TO SHEET E0-UTL-NTS-002 FOR NOTES.



REMOVALS

NO.	DATE	BY	CHECK DESIGN REVISION / SUBMITTAL



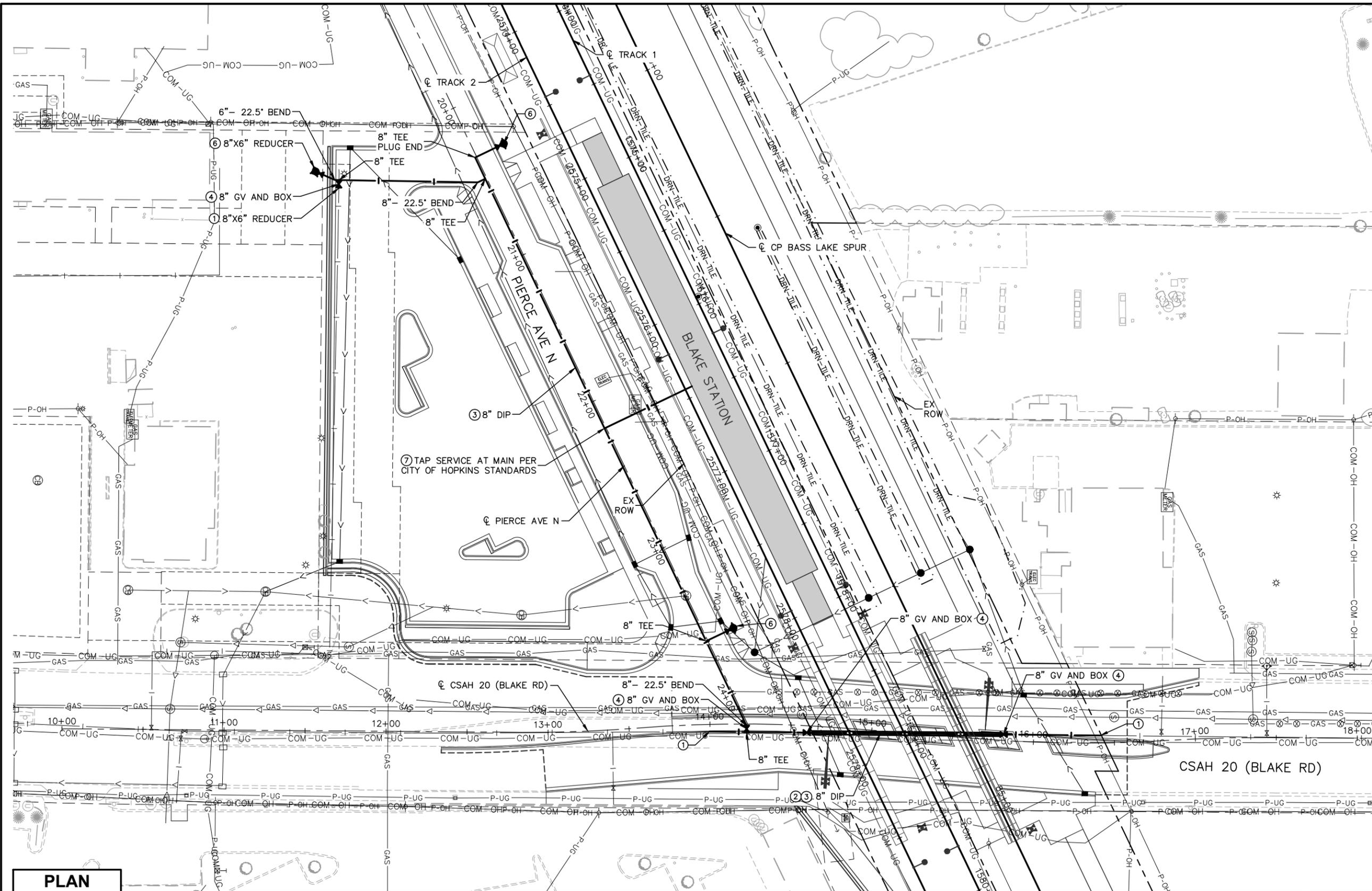
60% SUBMITTAL - 09/28/15

**CIVIL EAST - VOLUME 7
UTILITIES
BLAKE STATION 1 OF 3
REMOVALS**

DISCIPLINE: UTILITIES SHEET NAME: E1-UTL-PLN - 008

SHEET
20
OF
73

Sep. 21 2015 10:39 am v:\3400_ADC\CAD\00_EAST\PLANSHEETS\UTILITIES\E1-UTL-PLN.dwg By: MakiEM



- NOTES:**
- * SEE SHEET E0-UTL-NTS-002 FOR UTILITY LEGEND.
 - * (XX) = SANITARY AND WATER PLAN CONSTRUCTION NOTE. REFER TO SHEET E0-UTL-NTS-002 FOR NOTES.

PLAN

NO.	DATE	BY	CHECK DESIGN	REVISION / SUBMITTAL

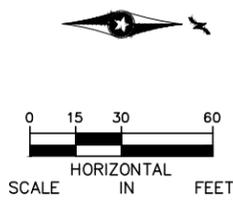


60% SUBMITTAL - 09/28/15

**CIVIL EAST - VOLUME 7
UTILITIES
BLAKE STATION 2 OF 3
PLAN**

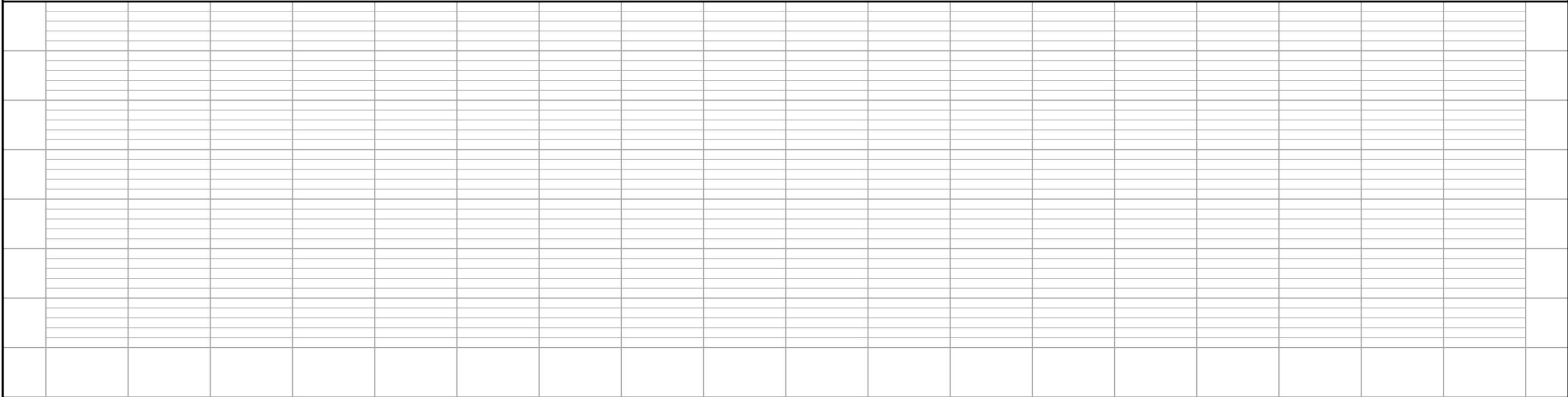
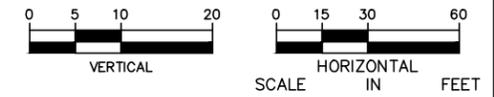
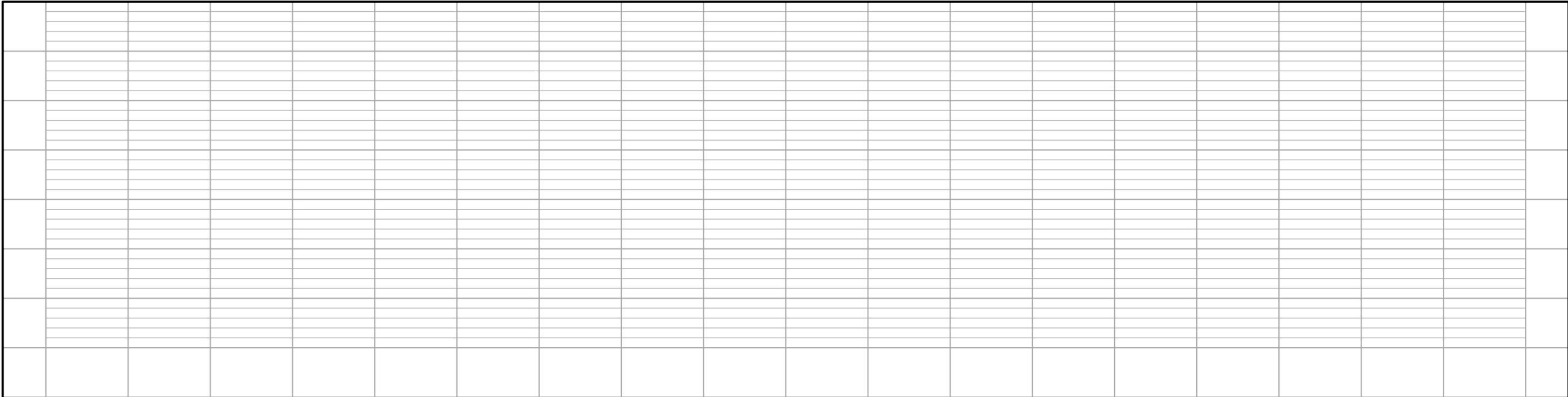
DISCIPLINE: UTILITIES

SHEET NAME: E1-UTL-PLN - 009



SHEET
21
OF
73

Sep. 21 2015 10:39 am V:\3400_ADC\CAD\00_EAST\PLANSHEETS\UTILITIES\E1-UTL-PLN.dwg By: MakiEM



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60% SUBMITTAL - 09/28/15

METROPOLITAN COUNCIL

SOUTHWEST
Green Line LRT Extension

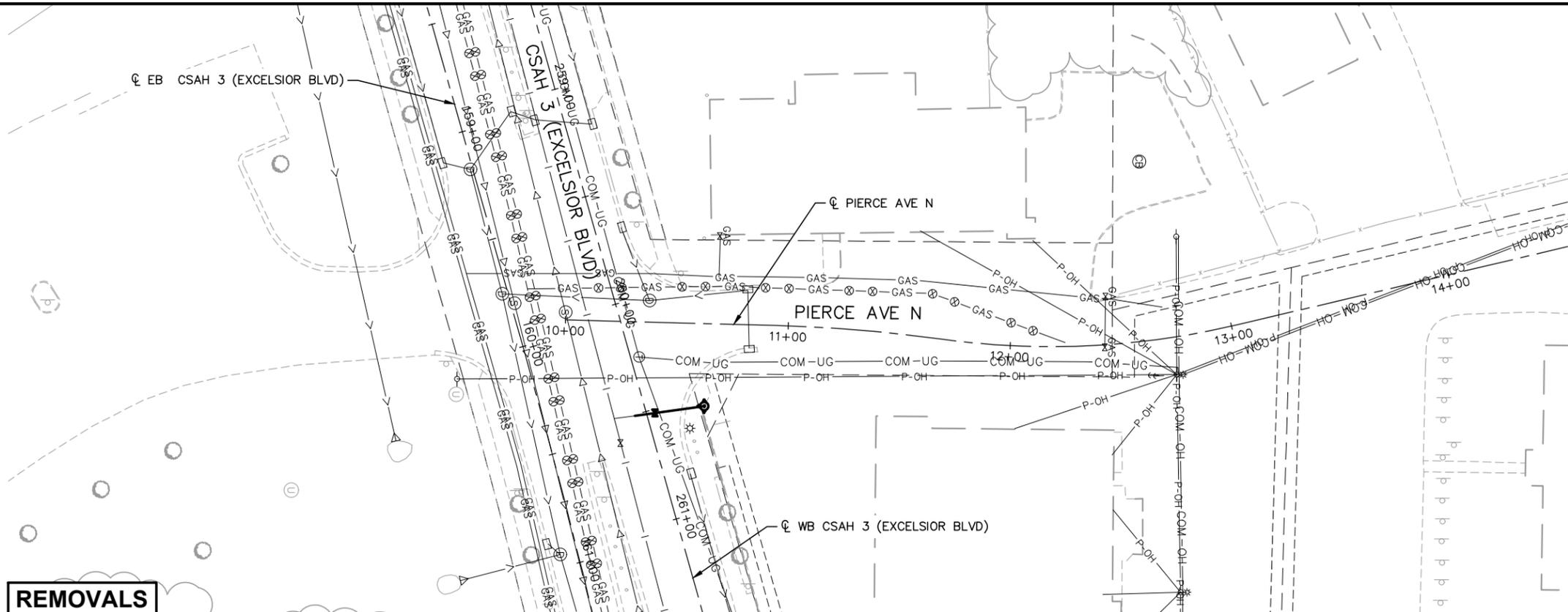
CIVIL EAST - VOLUME 7
UTILITIES
BLAKE STATION 3 OF 3
PROFILES

DISCIPLINE: UTILITIES SHEET NAME: E1-UTL-PLN - 010

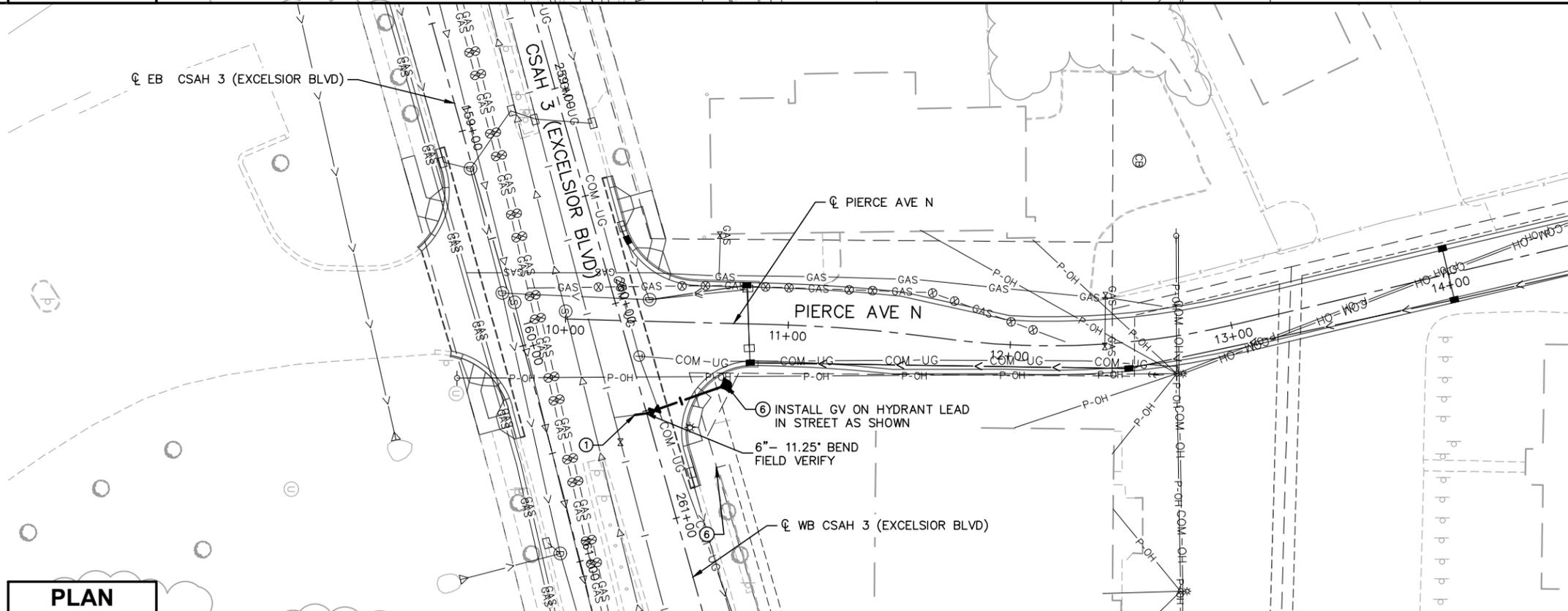
SHEET 22 OF 73

NOTES:

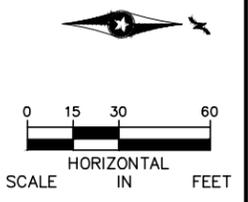
- * SEE SHEET E0-UTL-NTS-002 FOR UTILITY LEGEND.
- * (XX) = SANITARY AND WATER PLAN CONSTRUCTION NOTE. REFER TO SHEET E0-UTL-NTS-002 FOR NOTES.



REMOVALS



PLAN



Sep. 21 2015 10:43 am V:\3400_ADC\CAD\00_EAST\PLANSHEETS\UTILITIES\E1-UTL-PLN.dwg By: MakiEM

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CIVIL EAST - VOLUME 7

UTILITIES

EXCELSIOR BLVD / PIERCE AVE

REMOVALS AND PLAN

DISCIPLINE: UTILITIES

SHEET NAME: E1-UTL-PLN - 011

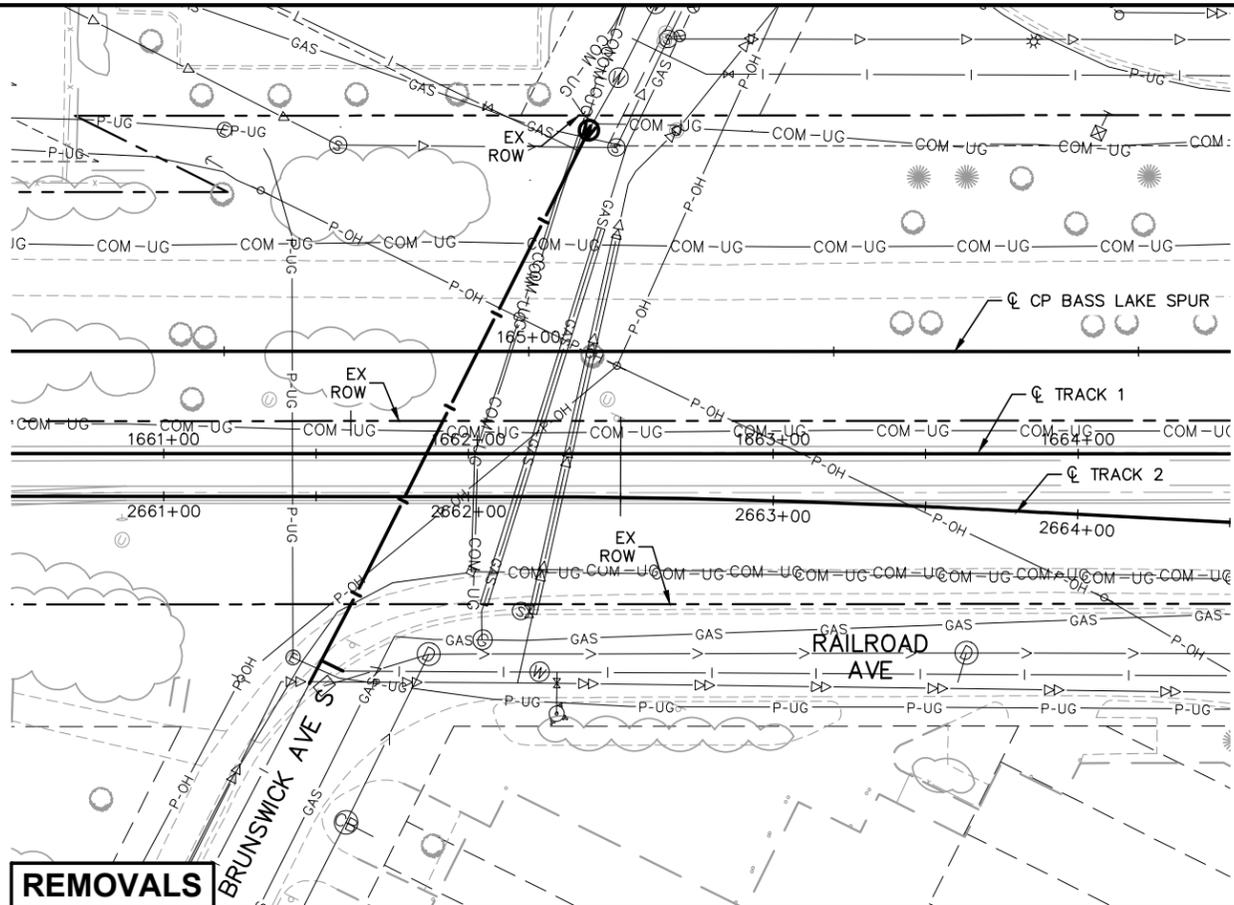
SHEET

23

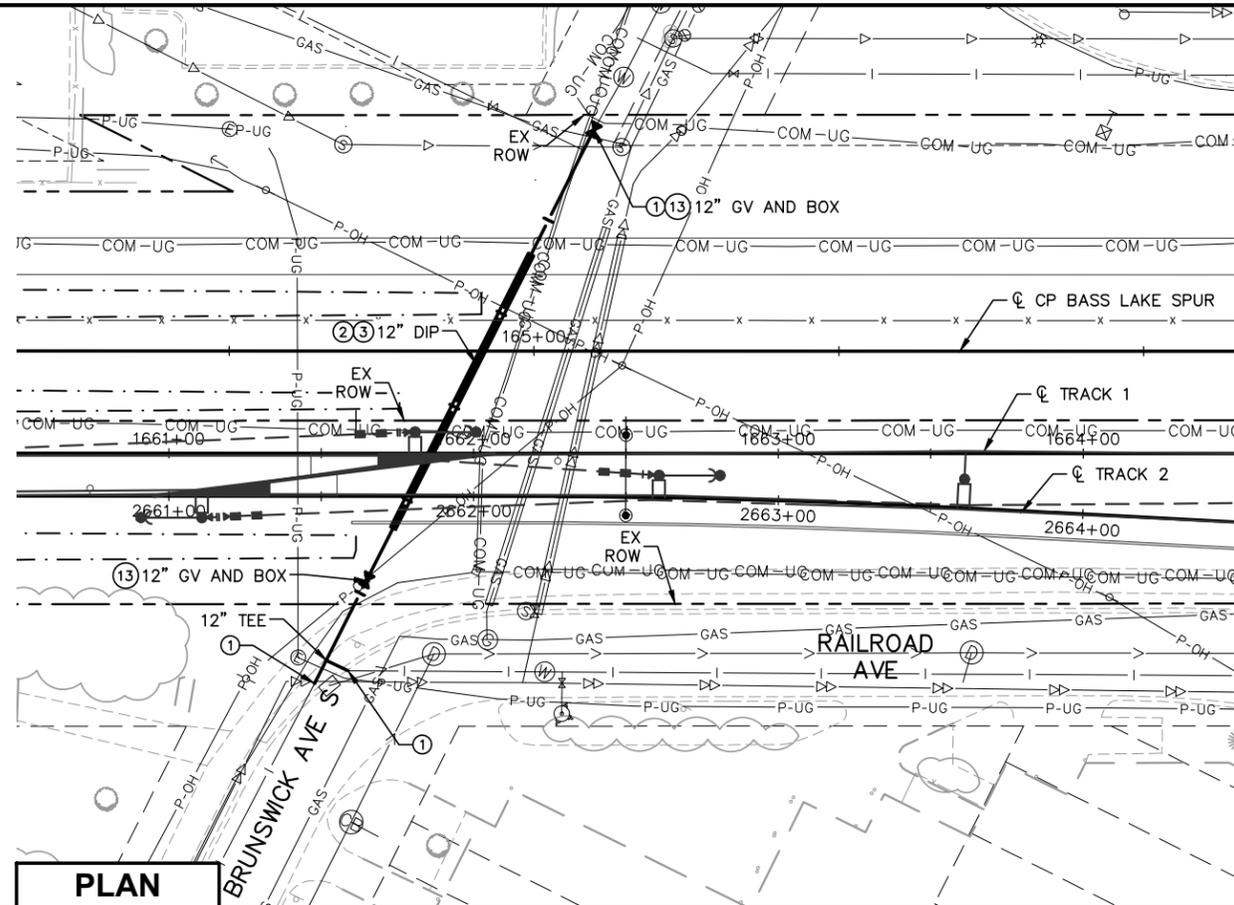
OF

73

Sep. 21 2015 11:01 am v:\3400_ADC\CAD\00_EAST\PLANSHEETS\UTILITIES\E2-UTL-PLN.dwg By: MakiEM



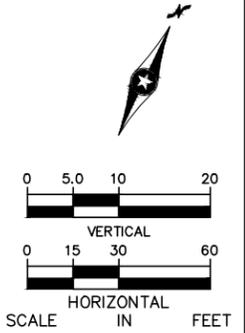
REMOVALS



PLAN

NOTES:

- * SEE SHEET E0-UTL-NTS-002 FOR UTILITY LEGEND.
- * (XX) = SANITARY AND WATER PLAN CONSTRUCTION NOTE. REFER TO SHEET E0-UTL-NTS-002 FOR NOTES.



NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL



60% SUBMITTAL - 09/28/15

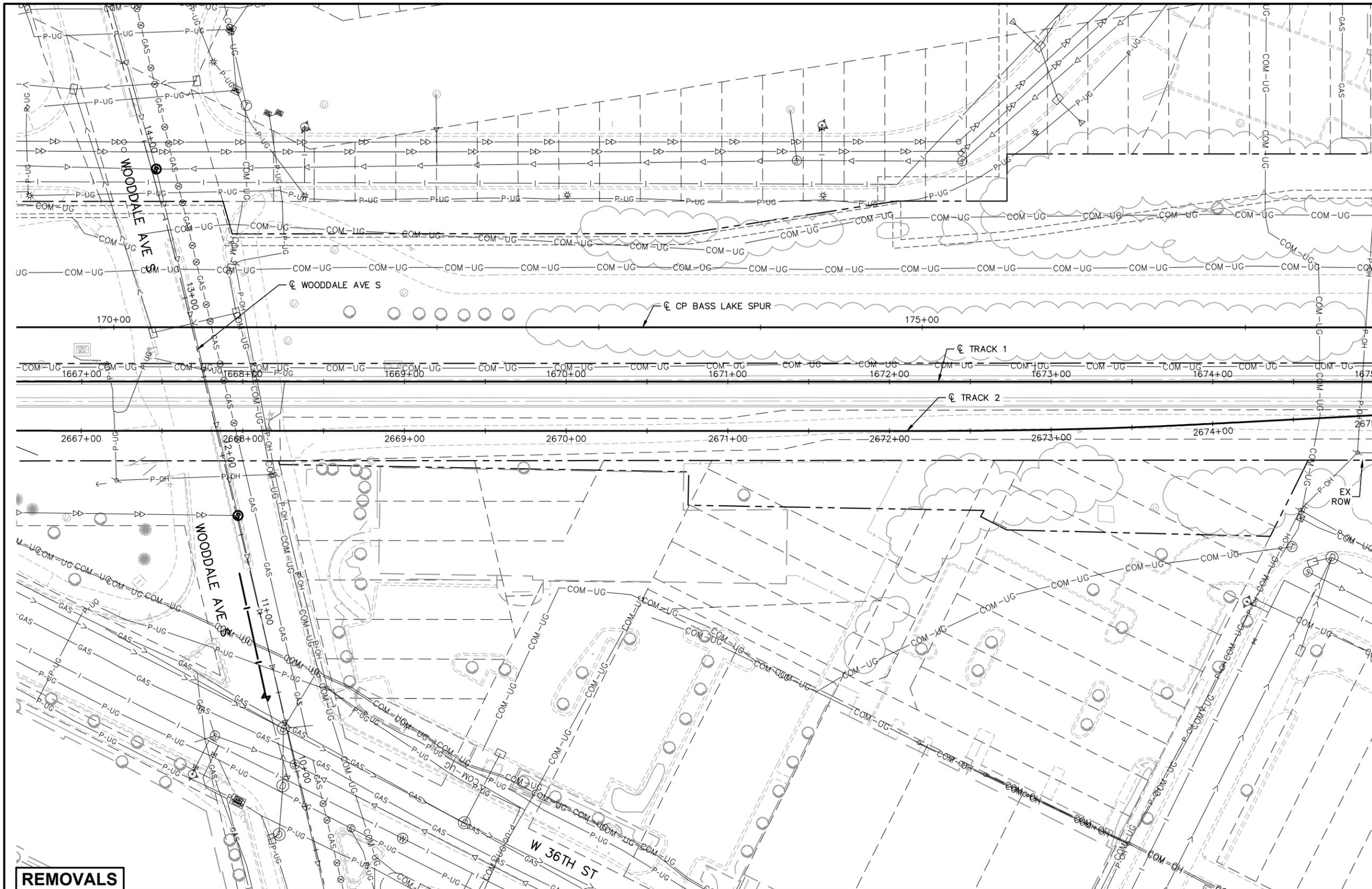
**CIVIL EAST - VOLUME 7
UTILITIES
BRUNSWICK AVE S
REMOVALS, PLAN, AND PROFILES**

DISCIPLINE: UTILITIES

SHEET NAME: E2-UTL-PLN - 003

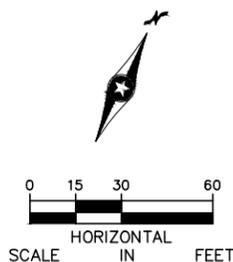
**SHEET
26
OF
73**

Sep. 21 2015 11:02 am V:\3400_ADC\CAD\CAD\00_EAST\PLANSHEETS\UTILITIES\E2-UTL-PLN.dwg By: MakiEM



NOTES:

- * SEE SHEET E0-UTL-NTS-002 FOR UTILITY LEGEND.
- * (XX) = SANITARY AND WATER PLAN CONSTRUCTION NOTE. REFER TO SHEET E0-UTL-NTS-002 FOR NOTES.



REMOVALS

NO.	DATE	BY	CHECK DESIGN	REVISION / SUBMITTAL



60% SUBMITTAL - 09/28/15

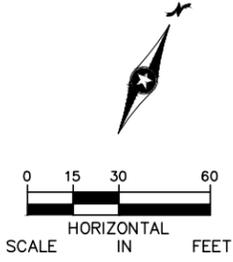
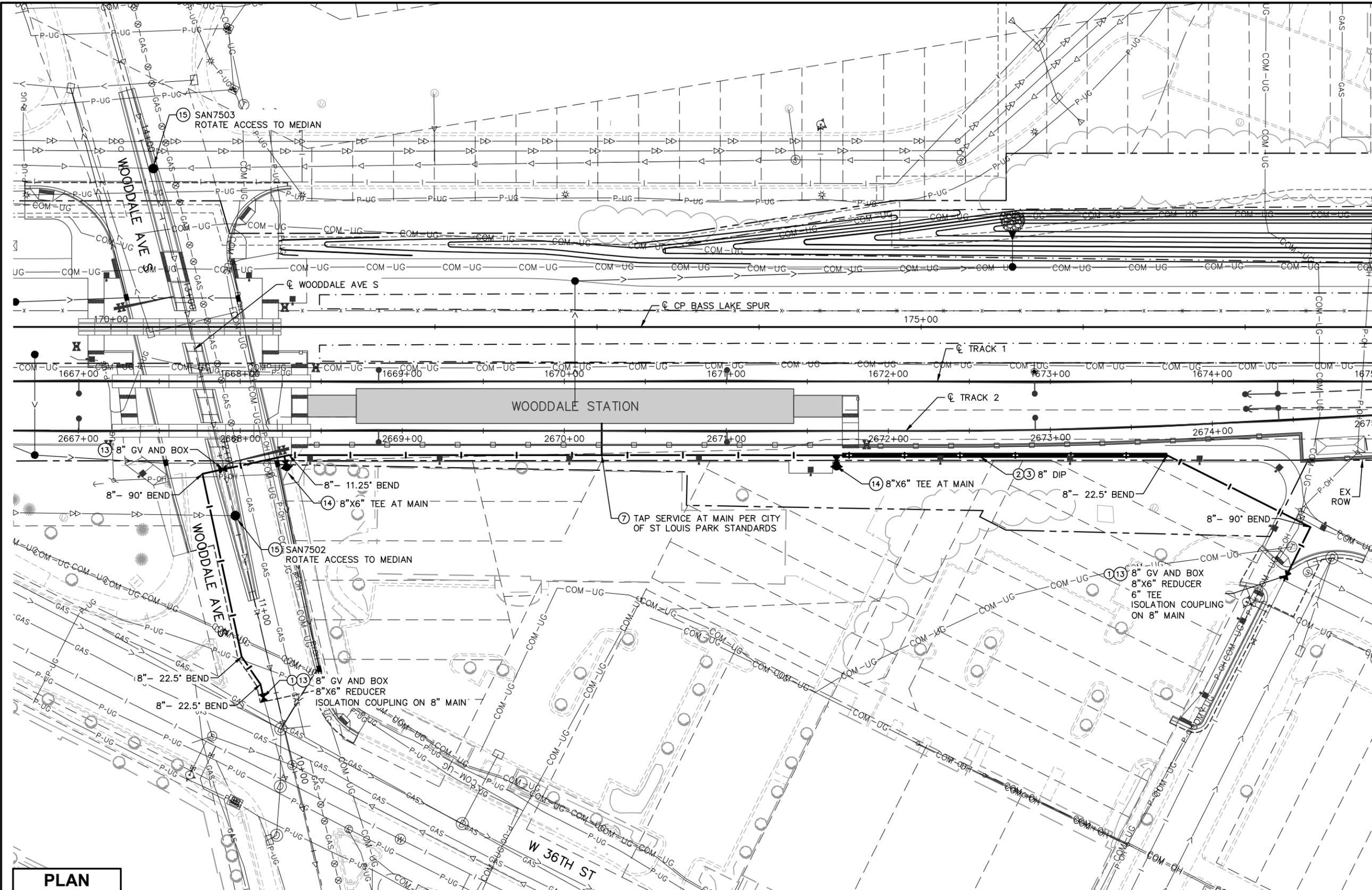
**CIVIL EAST - VOLUME 7
UTILITIES
WOODDALE STATION 1 OF 3
REMOVALS**

DISCIPLINE: UTILITIES SHEET NAME: E2-UTL-PLN - 004

SHEET
27
OF
73

NOTES:

- * SEE SHEET E0-UTL-NTS-002 FOR UTILITY LEGEND.
- * (XX) = SANITARY AND WATER PLAN CONSTRUCTION NOTE. REFER TO SHEET E0-UTL-NTS-002 FOR NOTES.



PLAN

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL



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**CIVIL EAST - VOLUME 7
UTILITIES
WOODDALE STATION 2 OF 3
PLAN**

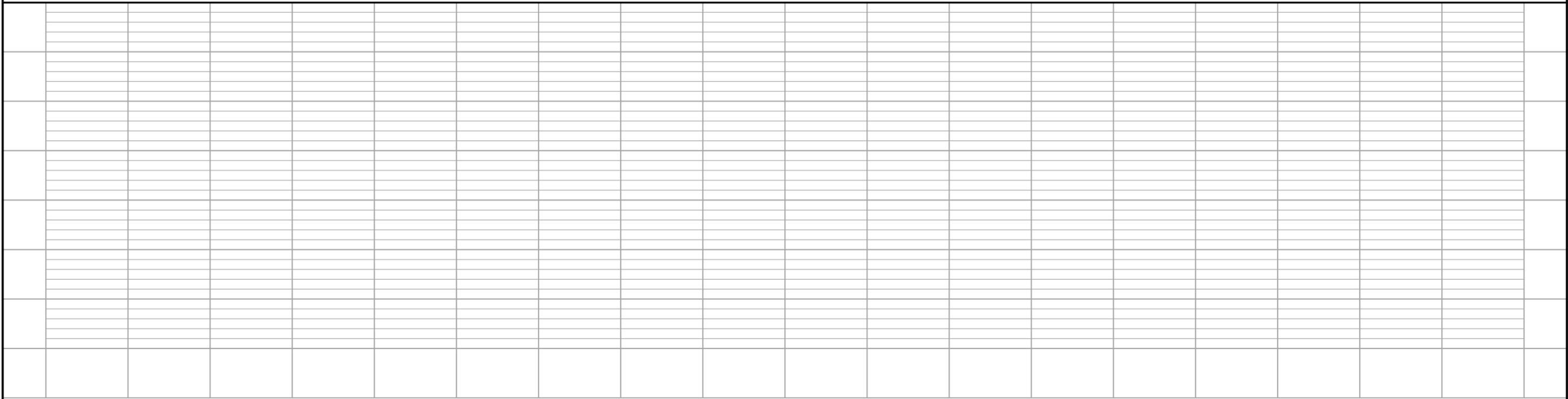
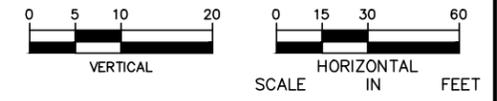
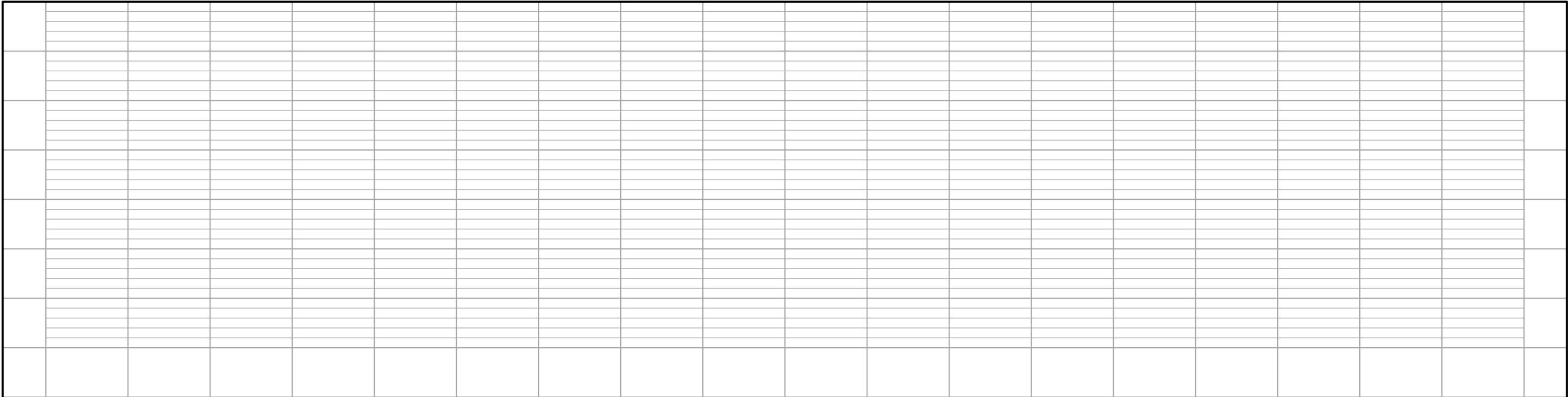
DISCIPLINE: UTILITIES

SHEET NAME: E2-UTL-PLN - 005

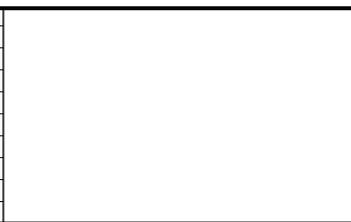
SHEET
28
OF
73

Sep. 21 2015 11:03 am V:\3400_ADC\CAD\00_EAST\PLANSHEETS\UTILITIES\E2-UTL-PLN.dwg By: MakiEM

Sep. 21 2015 11:04 am V:\3400_ADC\CAD\CAD\00_EAST\PLANSHEETS\UTILITIES\E2-UTL-PLN.dwg By: Mokiem



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METROPOLITAN COUNCIL

SOUTHWEST
Green Line LRT Extension

CIVIL EAST - VOLUME 7
UTILITIES
WOODDALE STATION 3 OF 3
PROFILES

DISCIPLINE: UTILITIES SHEET NAME: E2-UTL-PLN - 006

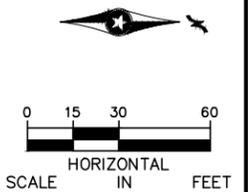
SHEET 29 OF 73

Sep. 21 2015 11:05 am V:\3400_ADC\CAD\CAD\00_EAST\PLANSHEETS\UTILITIES\E2-UTL-PLN.dwg By: MakiEM



NOTES:

- * SEE SHEET E0-UTL-NTS-002 FOR UTILITY LEGEND.
- (XX) = SANITARY AND WATER PLAN CONSTRUCTION NOTE. REFER TO SHEET E0-UTL-NTS-002 FOR NOTES.



REMOVALS

NO.	DATE	BY	CHECK DESIGN	REVISION / SUBMITTAL



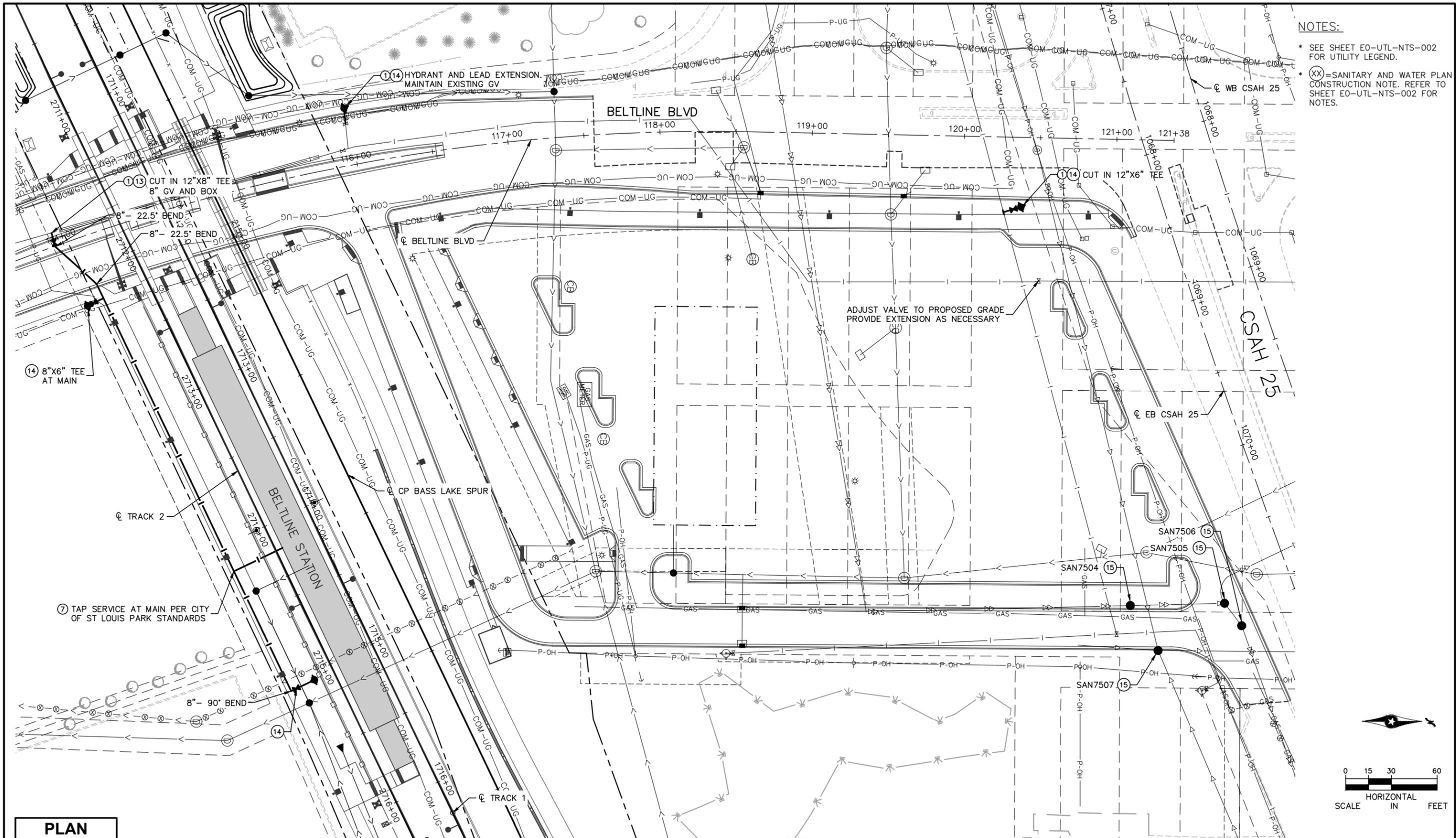
60% SUBMITTAL - 09/28/15

**CIVIL EAST - VOLUME 7
UTILITIES
BELTLINE STATION 1 OF 3
REMOVALS**

DISCIPLINE: UTILITIES SHEET NAME: E2-UTL-PLN - 007

**SHEET
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OF
73**

Sep. 21 2015 11:06 am V:\3400_ADC\CAD\00_EAST\PLANSHEETS\UTILITIES\E2-UTL-PLN.dwg By: MakiEM



NOTES:

- * SEE SHEET E0-UTL-NTS-002 FOR UTILITY LEGEND.
- * (XX) = SANITARY AND WATER PLAN CONSTRUCTION NOTE. REFER TO SHEET E0-UTL-NTS-002 FOR NOTES.

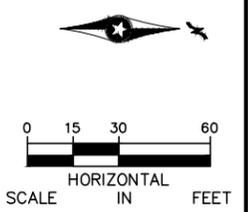
PLAN

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

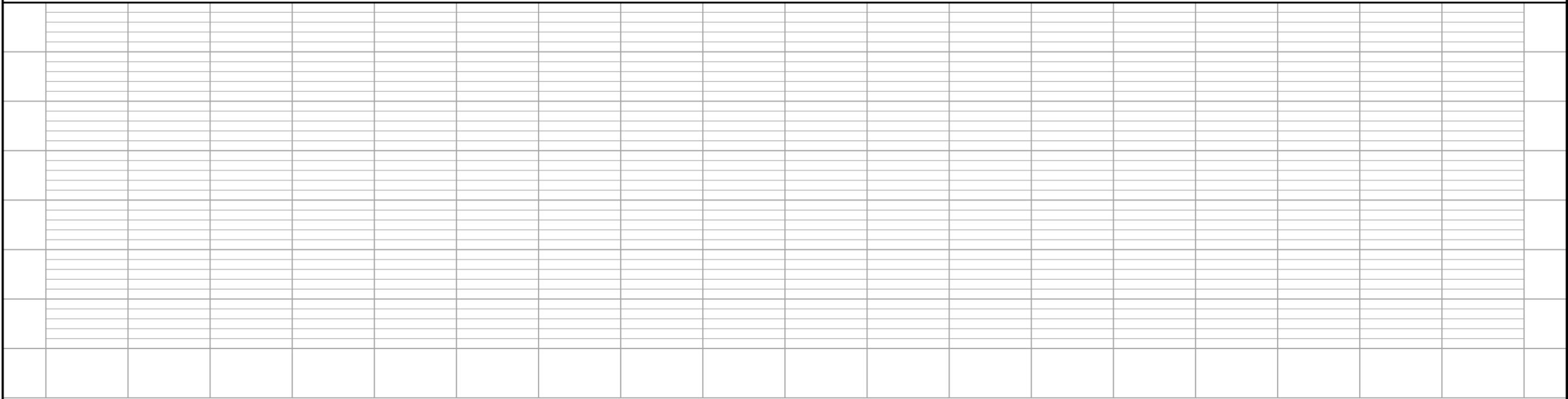
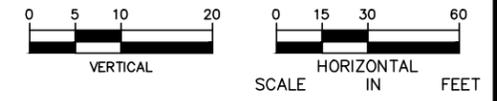
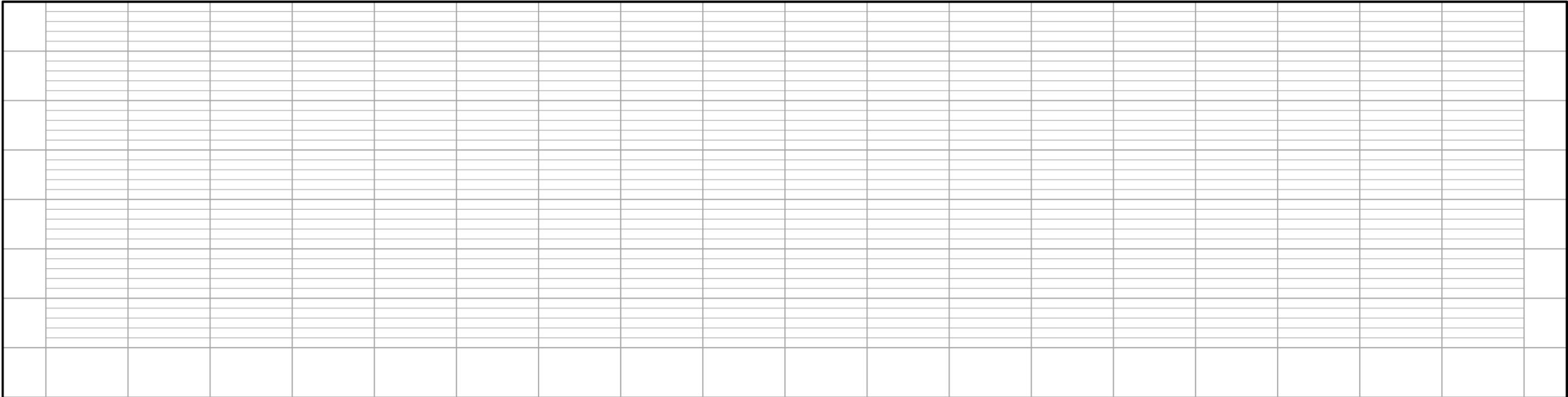


60% SUBMITTAL - 09/28/15

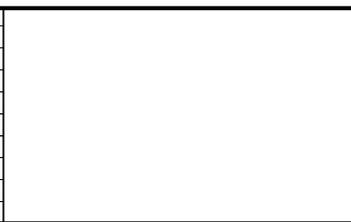
CIVIL EAST - VOLUME 7 UTILITIES BELTLINE STATION 2 OF 3 PLAN		SHEET 31 OF 73
DISCIPLINE: UTILITIES	SHEET NAME: E2-UTL-PLN - 008	



Sep. 21 2015 11:07 am V:\3400_ADC\CAD\00_EAST\PLANSHEETS\UTILITIES\E2-UTL-PLN.dwg By: Mokiem



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60% SUBMITTAL - 09/28/15

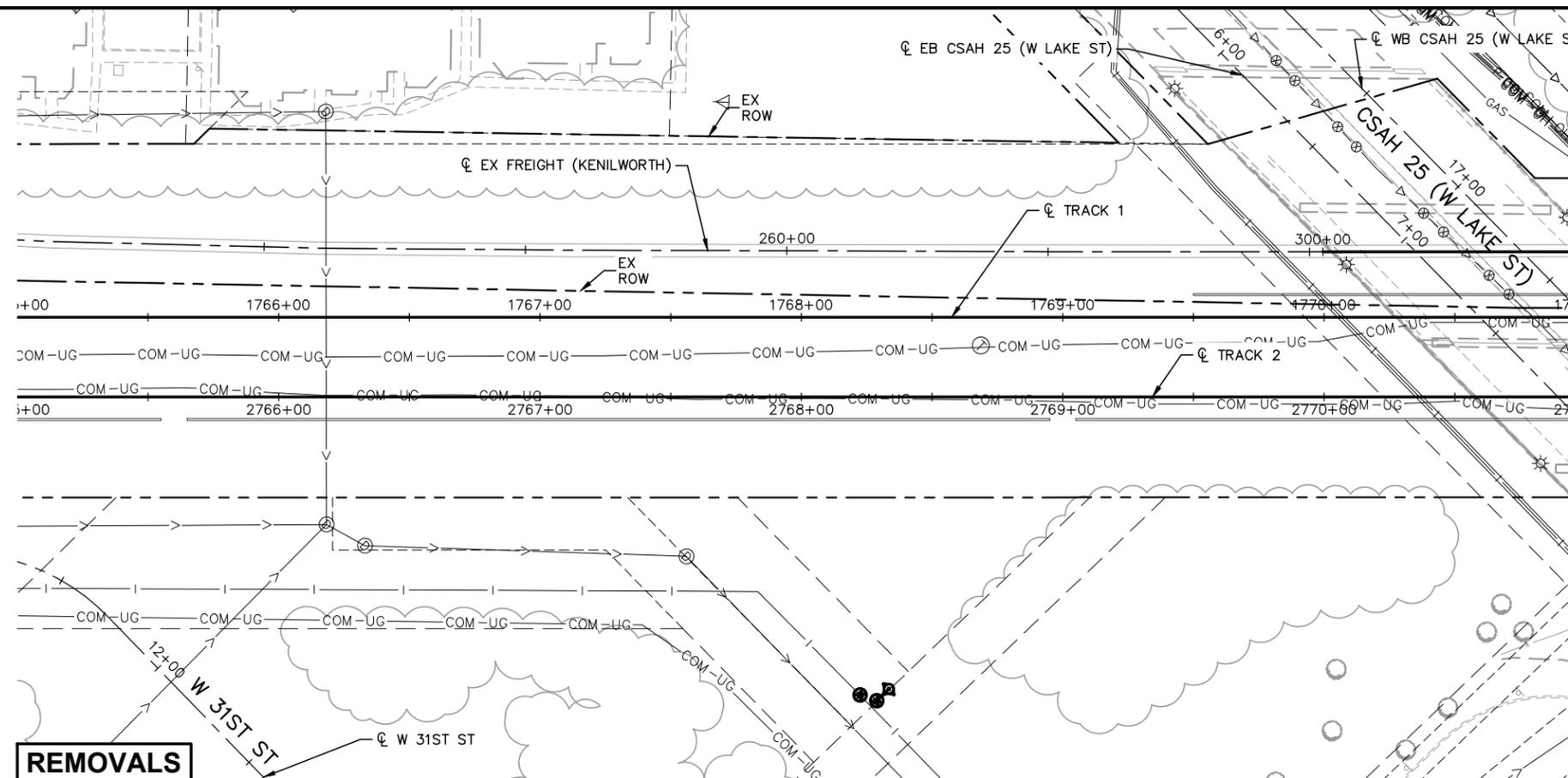
METROPOLITAN COUNCIL

SOUTHWEST
Green Line LRT Extension

CIVIL EAST - VOLUME 7
UTILITIES
BELTLINE STATION 3 OF 3
PROFILES

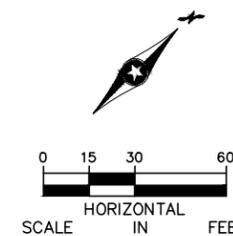
DISCIPLINE: UTILITIES SHEET NAME: E2-UTL-PLN - 009

SHEET 32 OF 73



NOTES:

- * SEE SHEET E0-UTL-NTS-002 FOR UTILITY LEGEND.
- * (XX) = SANITARY AND WATER PLAN CONSTRUCTION NOTE. REFER TO SHEET E0-UTL-NTS-002 FOR NOTES.



Sep. 21 2015 11:15 am v:\3400_ADC\CAD\CAD\00_EAST\PLANSHEETS\UTILITIES\E3-UTL-PLN.dwg By: MakIEM

NO.	DATE	BY	CHECK DESIGN	REVISION / SUBMITTAL






60% SUBMITTAL - 09/28/15

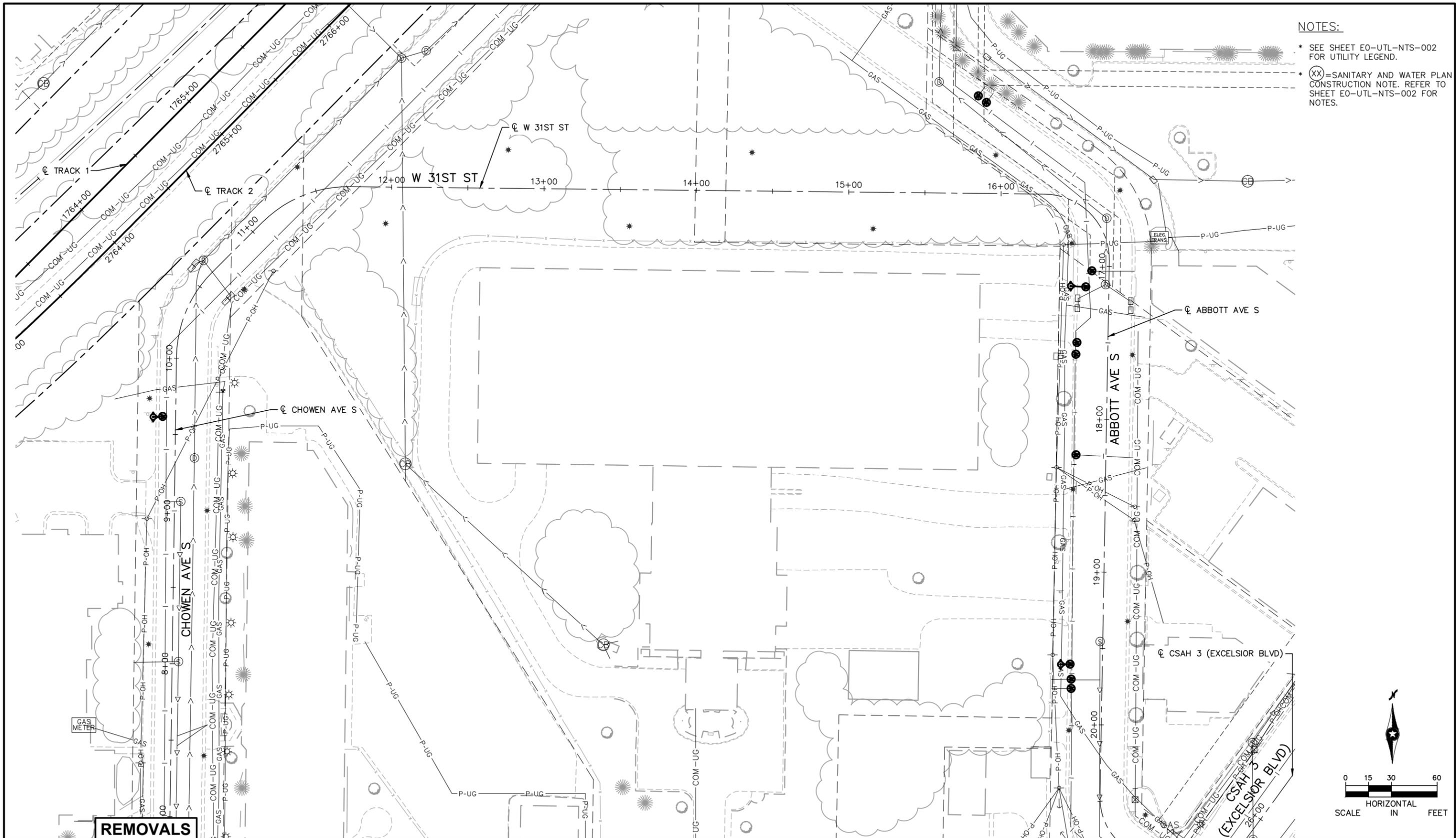



CIVIL EAST - VOLUME 7
UTILITIES
WEST LAKE STATION 1 OF 3
REMOVALS

DISCIPLINE: UTILITIES SHEET NAME: E3-UTL-PLN - 001

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OF
73

Sep. 21 2015 11:18 am v:\3400_ADC\CAD\00_EAST\PLANSHEETS\UTILITIES\E3-UTL-PLN.dwg By: MakiEM



- NOTES:**
- * SEE SHEET E0-UTL-NTS-002 FOR UTILITY LEGEND.
 - * (XX) = SANITARY AND WATER PLAN CONSTRUCTION NOTE. REFER TO SHEET E0-UTL-NTS-002 FOR NOTES.

REMOVALS

NO.	DATE	BY	CHECK DESIGN REVISION / SUBMITTAL








60% SUBMITTAL - 09/28/15

CIVIL EAST - VOLUME 7

UTILITIES

CHOWEN AVE S / ABBOTT AVE S 1 OF 2

REMOVALS

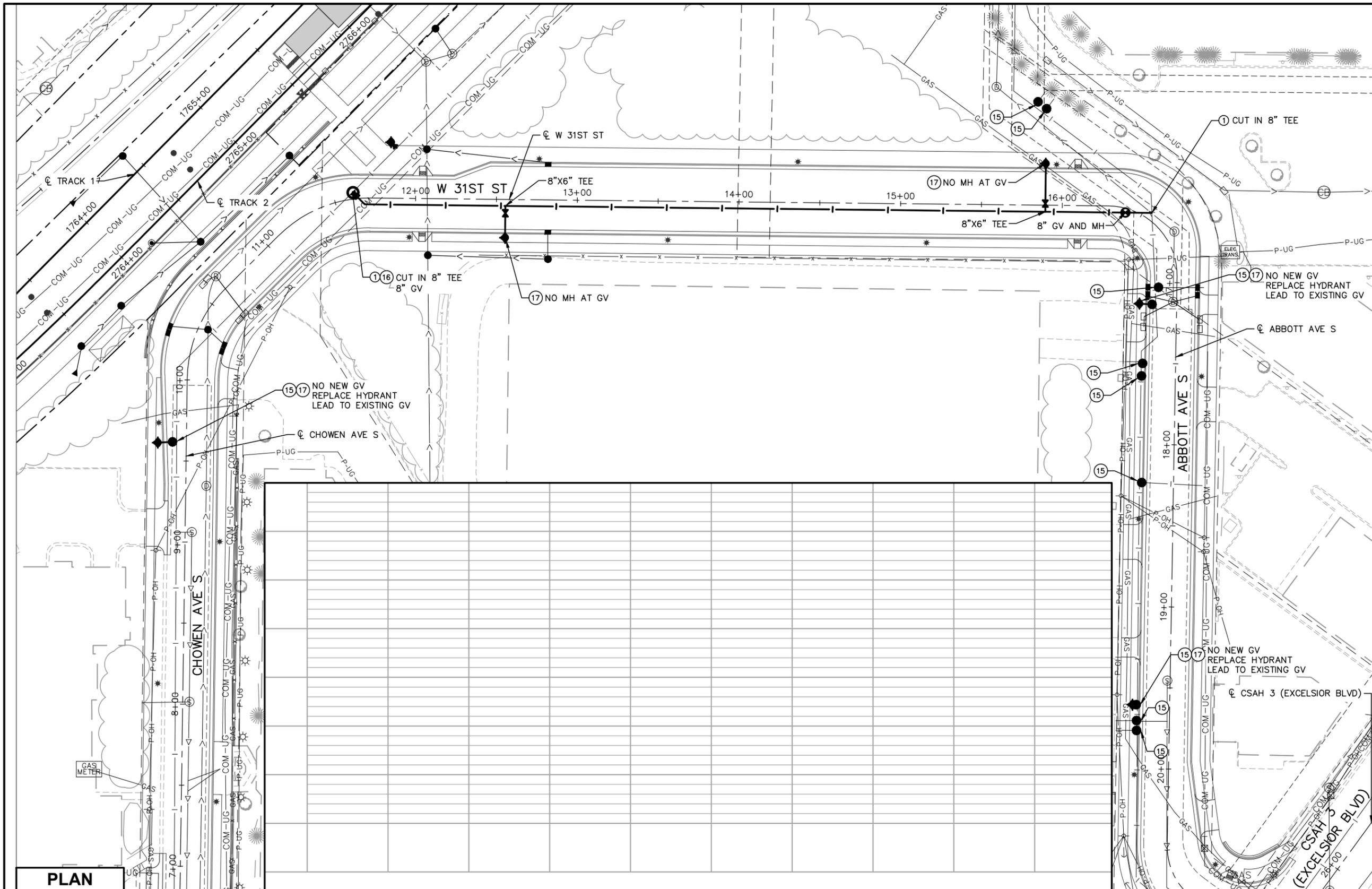
DISCIPLINE: UTILITIES

SHEET NAME: E3-UTL-PLN - 004

SHEET 36 OF 73

SHEET 36 OF 73

Sep. 21 2015 11:19 am v:\3400_ADC\CAD\00_EAST\PLANSHEETS\UTILITIES\E3-UTL-PLN.dwg By: MakiEM



NOTES:

- * SEE SHEET E0-UTL-NTS-002 FOR UTILITY LEGEND.
- * (XX) = SANITARY AND WATER PLAN CONSTRUCTION NOTE. REFER TO SHEET E0-UTL-NTS-002 FOR NOTES.

PLAN

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL



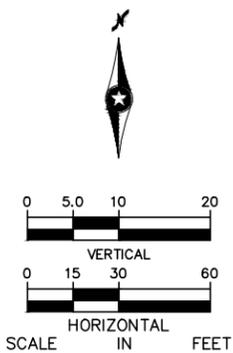
60% SUBMITTAL - 09/28/15

**CIVIL EAST - VOLUME 7
UTILITIES
CHOWEN AVE S / ABBOTT AVE S 2 OF 2
PLAN AND PROFILES**

DISCIPLINE: UTILITIES

SHEET NAME: E3-UTL-PLN - 005

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OF
73

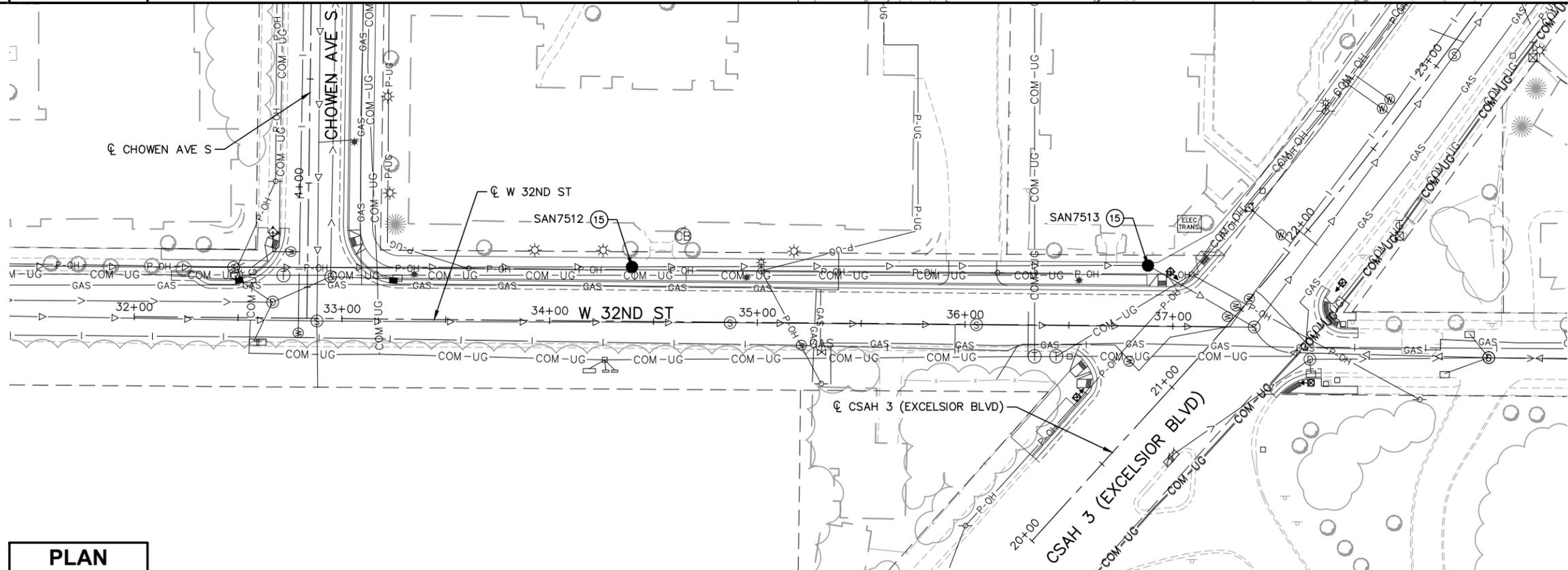


Sep. 21 2015 11:21 am v:\3400_ADC\CAD\00_EAST\PLANSHEETS\UTILITIES\E3-UTL-PLN.dwg By: MakiEM

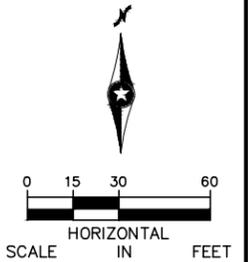
NOTES:

- * SEE SHEET E0-UTL-NTS-002 FOR UTILITY LEGEND.
- * (XX) = SANITARY AND WATER PLAN CONSTRUCTION NOTE. REFER TO SHEET E0-UTL-NTS-002 FOR NOTES.

REMOVALS



PLAN



NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL



60% SUBMITTAL - 09/28/15

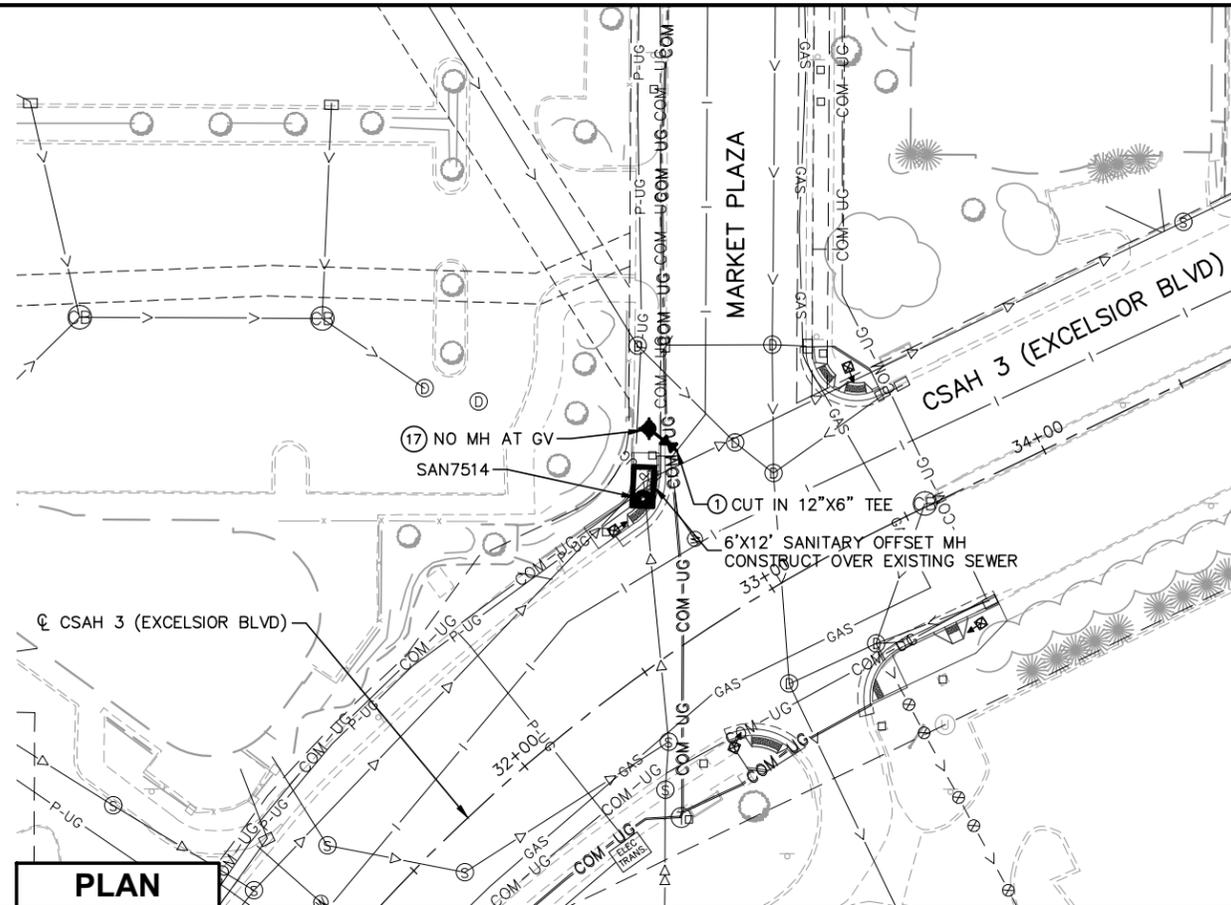
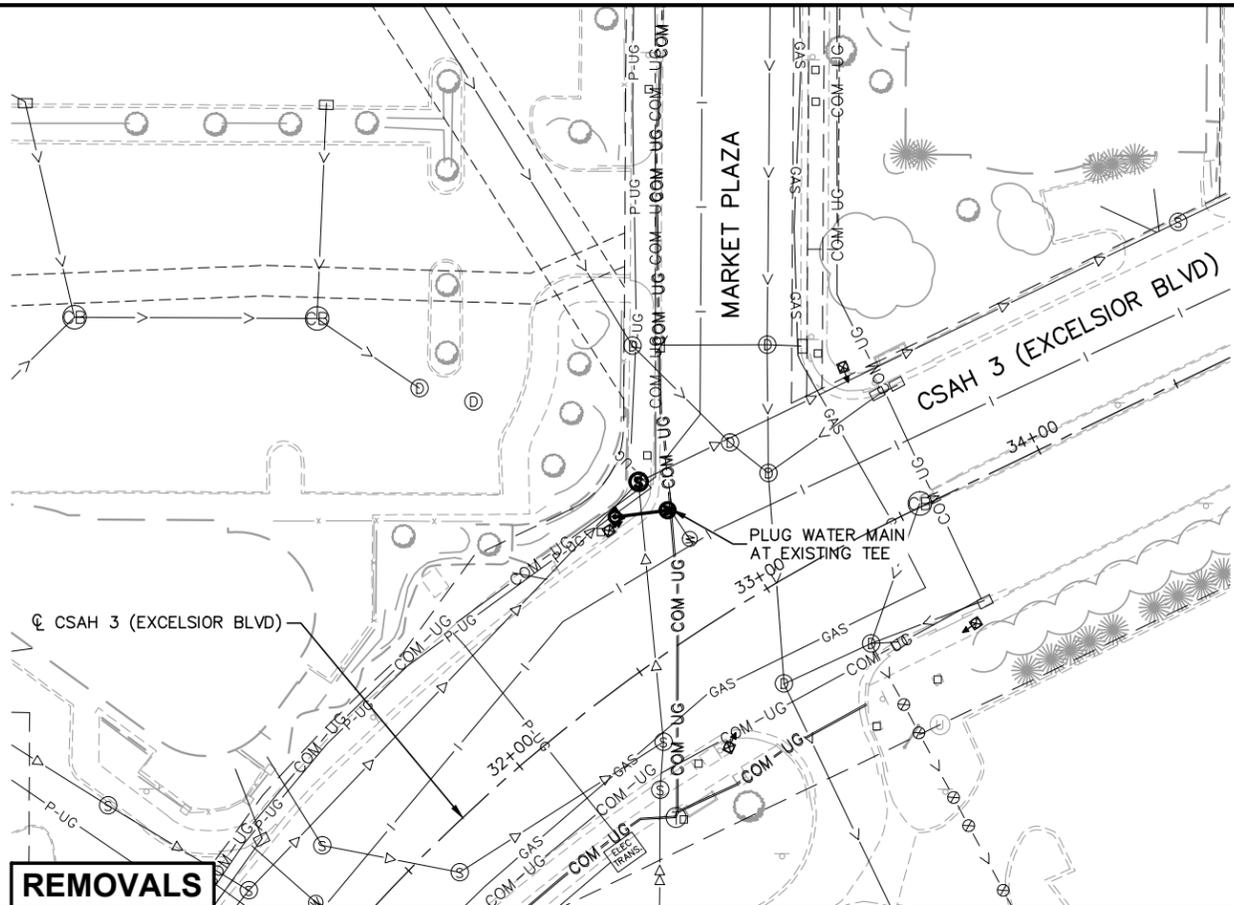
**CIVIL EAST - VOLUME 7
UTILITIES
W 32ND ST
REMOVALS AND PLAN**

DISCIPLINE: UTILITIES

SHEET NAME: E3-UTL-PLN - 006

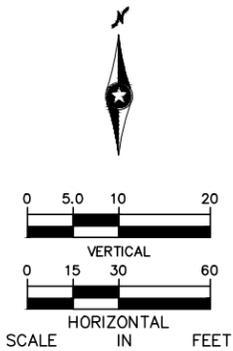
**SHEET
38
OF
73**

Sep. 21 2015 11:24 am v:\3400_ADC\CAD\00_EAST\PLANSHEETS\UTILITIES\E3-UTL-PLN.dwg By: MakiEM



NOTES:

- * SEE SHEET E0-UTL-NTS-002 FOR UTILITY LEGEND.
- * (XX) = SANITARY AND WATER PLAN CONSTRUCTION NOTE. REFER TO SHEET E0-UTL-NTS-002 FOR NOTES.



NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL



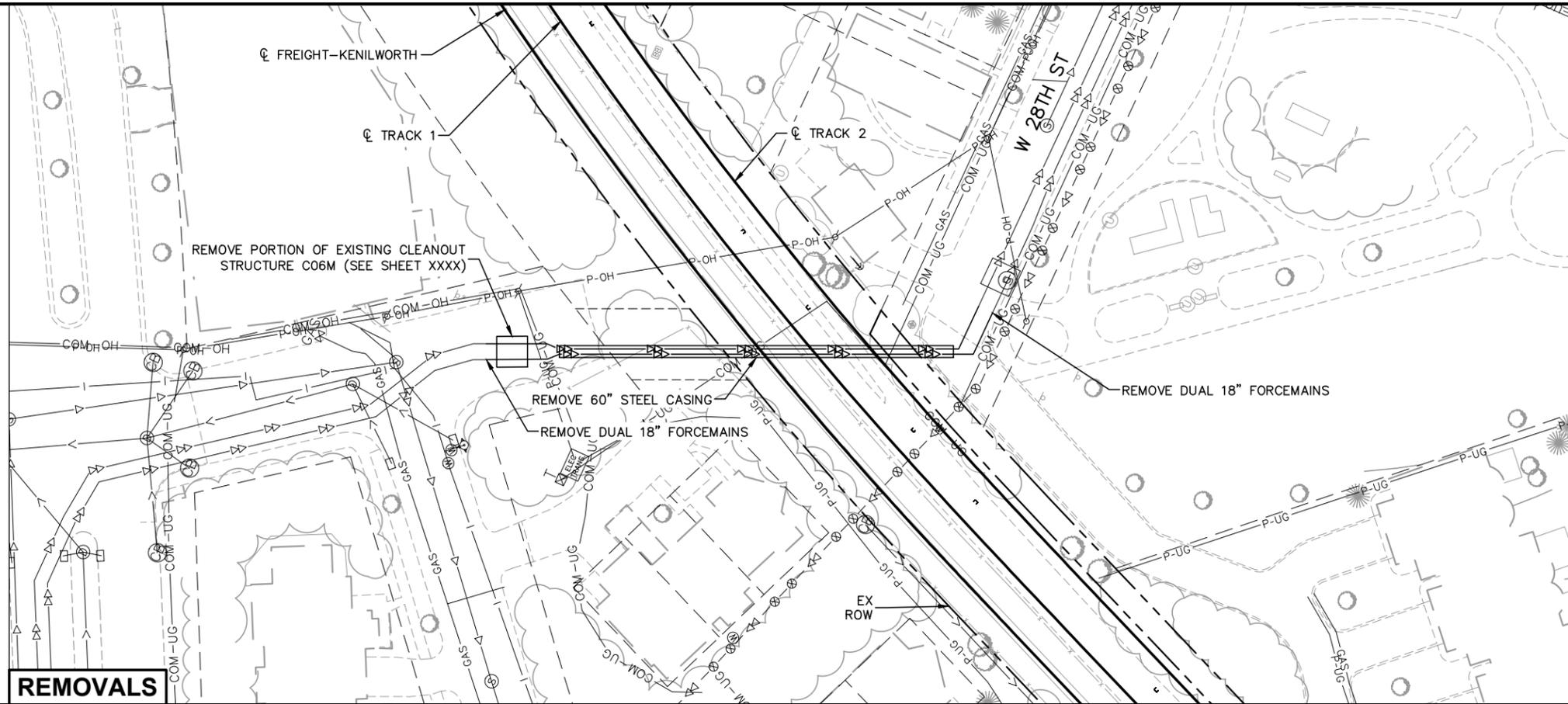
60% SUBMITTAL - 09/28/15

**CIVIL EAST - VOLUME 7
UTILITIES
MARKET PLAZA / EXCELSIOR BLVD
REMOVALS, PLAN, AND PROFILES**

DISCIPLINE: UTILITIES

SHEET NAME: E3-UTL-PLN - 008

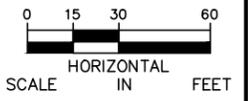
**SHEET
40
OF
73**



REMOVALS

NOTES:

- * SEE SHEET E0-UTL-NTS-002 FOR UTILITY LEGEND.
- * (XX) = SANITARY AND WATER PLAN CONSTRUCTION NOTE. REFER TO SHEET E0-UTL-NTS-002 FOR NOTES.



NOTES:

1. DO NOT BEGIN REMOVALS UNTIL TEMPORARY CONVEYANCE HAS BEEN INSTALLED. MADE OPERATIONAL, AND APPROVED BY THE COUNCIL AUTHORIZED REPRESENTATIVE AND METROPOLITAN COUNCIL ENVIRONMENTAL SERVICES

Sep. 21 2015 11:28 am v:\3400_ADC\CAD\CAD\00_EAST\PLANSHEETS\UTILITIES\E3-UTL-PLN.dwg By: MakiEM

NO.	DATE	BY	CHECK DESIGN	REVISION / SUBMITTAL



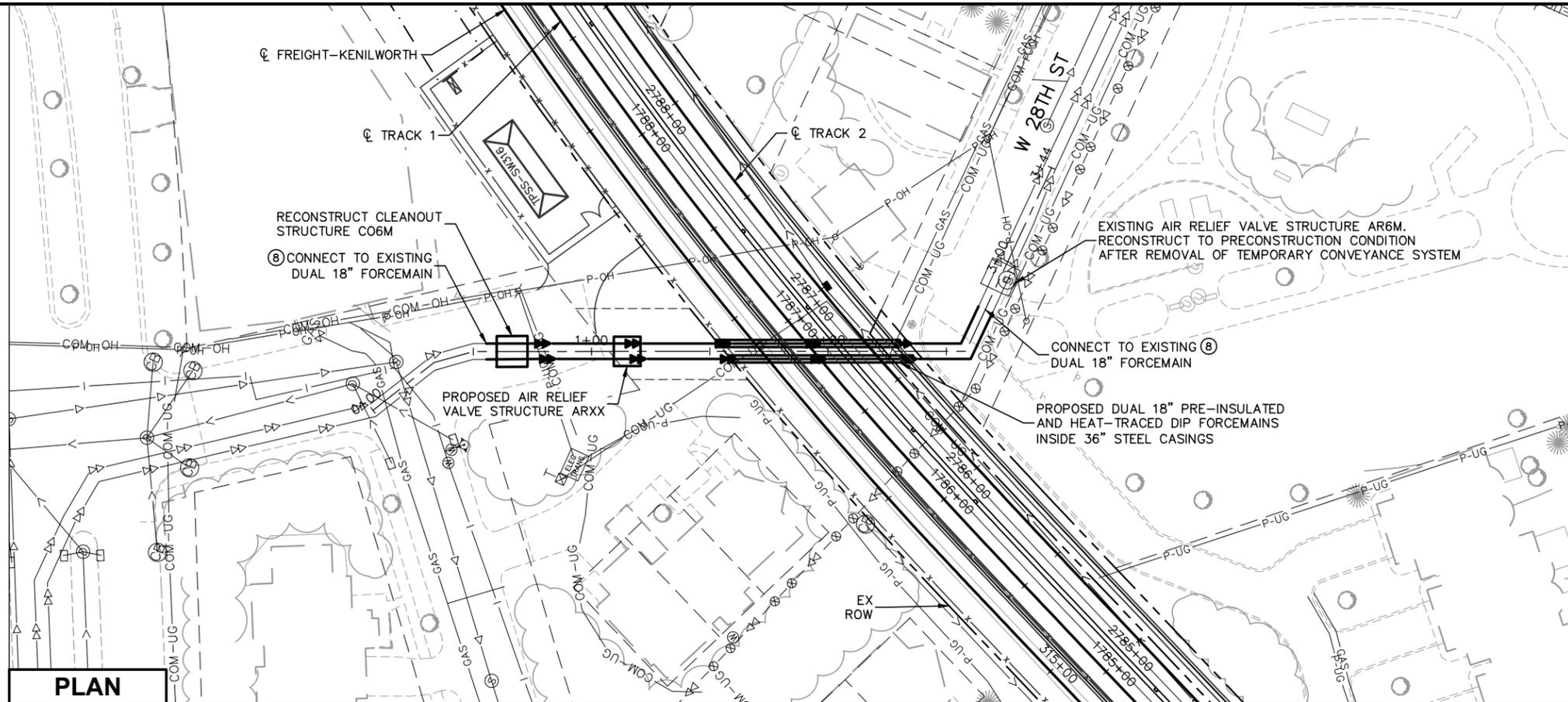
60% SUBMITTAL - 09/28/15

SOUTHWEST
Green Line LRT Extension

CIVIL EAST - VOLUME 7	
UTILITIES	
MCES FORCEMAIN 1 OF 3	
REMOVALS	
DISCIPLINE:	SHEET NAME:
UTILITIES	E3-UTL-PLN - 011

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 OF
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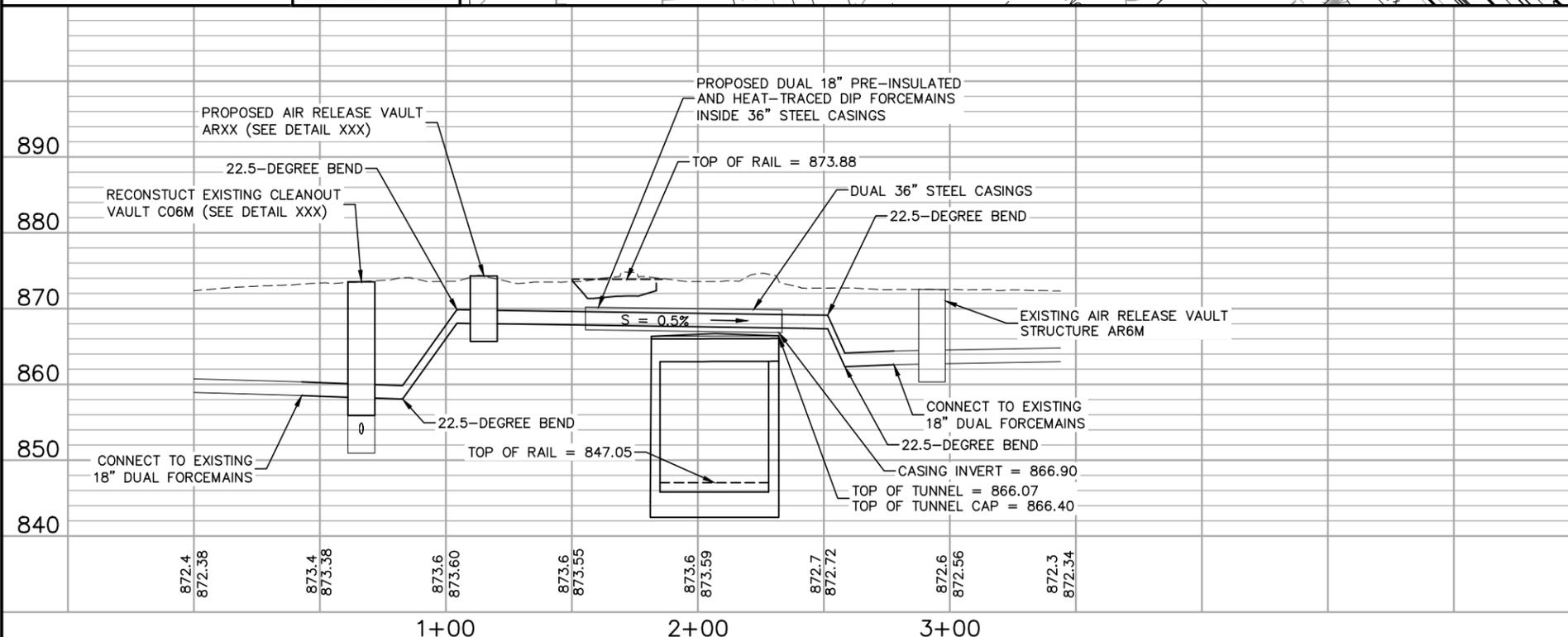
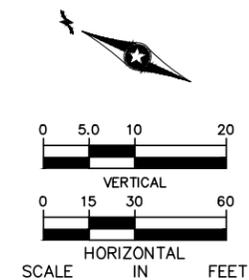
Sep. 21 2015 11:29 am v:\3400_ADC\CAD\00_EAST\PLANSHEETS\UTILITIES\E3-UTL-PLN.dwg By: Mokiem



PLAN

NOTES:

- * SEE SHEET E0-UTL-NTS-002 FOR UTILITY LEGEND.
- * (XX) = SANITARY AND WATER PLAN CONSTRUCTION NOTE. REFER TO SHEET E0-UTL-NTS-002 FOR NOTES.



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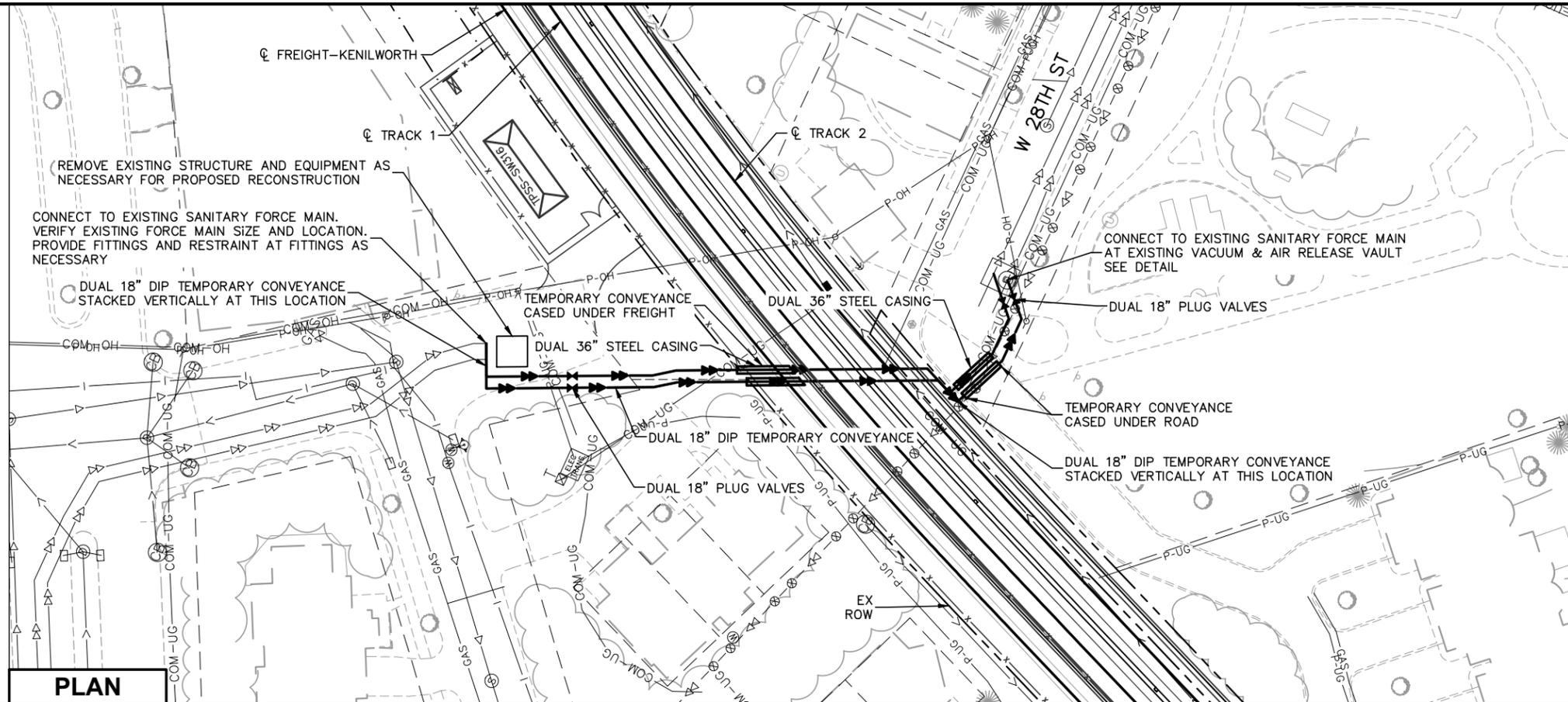
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**CIVIL EAST - VOLUME 7
UTILITIES
MCES FORCEMAIN 2 OF 3
PLAN AND PROFILES**

DISCIPLINE: UTILITIES SHEET NAME: E3-UTL-PLN - 012

**SHEET
44
OF
73**

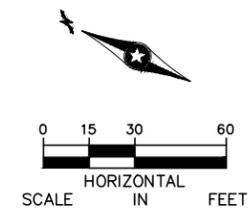
Sep. 21 2015 11:30 am v:\3400_ADC\CAD\00_PLANS\PLANSHEETS\UTILITIES\E3-UTL-PLN.dwg By: Mokiem



PLAN

NOTES:

- * SEE SHEET E0-UTL-NTS-002 FOR UTILITY LEGEND.
- * (XX) = SANITARY AND WATER PLAN CONSTRUCTION NOTE. REFER TO SHEET E0-UTL-NTS-002 FOR NOTES.



NOTES:

1. THE TEMPORARY CONVEYANCE PLAN SHOWN REPRESENTS THE MINIMUM CONDITIONS THAT MUST BE MET AND THE MINIMUM EQUIPMENT THAT MUST BE FURNISHED, INSTALLED, AND MAINTAINED. CONTRACTOR IS RESPONSIBLE FOR FURNISHING, INSTALLING, AND MAINTAINING ANY ADDITIONAL EQUIPMENT CONTRACTOR DEEMS NECESSARY FOR THE PERFORMANCE OF WORK.
2. THE TEMPORARY CONVEYANCE PLAN SHOWN IS BASED ON USE OF 18" DIAMETER DUCTILE IRON PIPE.
3. CONTRACTOR IS RESPONSIBLE FOR DESIGNING, FURNISHING, INSTALLING, AND MAINTAINING THE TEMPORARY CONVEYANCE SYSTEM INCLUDING ALL REQUIRED PIPE RESTRAINT AND STRUCTURAL SUPPORT. DESIGN TO BE CERTIFIED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF MINNESOTA.
4. THE TEMPORARY CONVEYANCE PLAN SHALL INCLUDE VACUUM BREAK/ AIR RELEASE VALVING INSTALLED AT THE HIGH POINT OF THE SYSTEM. PROVIDE MEASURES TO CONTAIN ANY WASTE BLOW OFF FROM AIR RELEASE. PROVIDE MEASURES FOR ODOR CONTROL FROM AIR RELEASE.
5. CONTRACTOR SHALL PROTECT AND MAINTAIN CONTINUOUS OPERATION OF THE TEMPORARY CONVEYANCE SYSTEM.
6. CONTRACTOR IS RESPONSIBLE TO COORDINATE THE TEMPORARY CONVEYANCE SYSTEM INSTALLATION AND OPERATION WITH OTHER PROJECT CONSTRUCTION. CONTRACTOR IS RESPONSIBLE FOR ANY RECONSTRUCTION, ADJUSTMENT, RELOCATION, ETC. OF THE TEMPORARY CONVEYANCE SYSTEM AS NEEDED FOR THE PERFORMANCE OF WORK.
7. PROVIDE A SANITARY FORCE MAIN TEMPORARY CONVEYANCE PLAN FOR REVIEW BY THE METROPOLITAN COUNCIL ENVIRONMENTAL SERVICES 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 METROPOLITAN COUNCIL ENVIRONMENTAL SERVICES 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.
8. PROTECT TEMPORARY CONVEYANCE SYSTEM FROM FREEZING. METHODS USED SHALL INCLUDE THE ABILITY TO MEASURE AND RECORD PIPE TEMPERATURE AND AMBIENT AIR TEMPERATURE.
9. PROVIDE A METHOD FOR SECURING (LOCKS, ENCLOSURES, ETC.) VALVES FROM UNAUTHORIZED OPERATION. PROVIDE METROPOLITAN COUNCIL ENVIRONMENTAL SERVICES AND COUNCIL AUTHORIZED REPRESENTATIVE ACCESS TO OPERATION OF VALVES AT ALL TIMES.
10. MAINTAIN UNOBSTRUCTED VEHICLE ACCESS AT DEAN COURT AND WEST 28TH STREET. TEMPORARY OBSTRUCTIONS MUST BE SCHEDULED WITH AND APPROVED BY THE COUNCIL AUTHORIZED REPRESENTATIVE AND PROPERTY OWNERS.
11. REMOVE THE TEMPORARY CONVEYANCE SYSTEM, IN ITS ENTIRETY, AFTER INSTALLATION, ACCEPTANCE (BY METROPOLITAN COUNCIL ENVIRONMENTAL SERVICES AND COUNCIL AUTHORIZED REPRESENTATIVE), AND OPERATION OF THE PERMANENT FORCE MAIN RELOCATION.
12. ALL SHUTDOWNS OF THE EXISTING FORCE MAIN AND TEMPORARY CONVEYANCE SYSTEM MUST BE APPROVED, SCHEDULED (SCHEDULE TO INCLUDE START, DURATION, AND END OF SHUTDOWN) AND COORDINATED WITH METROPOLITAN COUNCIL ENVIRONMENTAL SERVICES AND COUNCIL AUTHORIZED REPRESENTATIVE PRIOR TO COMMENCING SHUTDOWN. APPROVAL OF THE SHUTDOWN SCHEDULE IS SUBJECT TO (BUT NOT LIMITED TO) PERSONNEL AVAILABILITY, SEASONAL INFLUENCES, AND PROJECT SCHEDULE AND PHASING.
13. ALL SHUTDOWNS SHALL BE PHASED TO MAINTAIN CONTINUOUS OPERATION AND FLOW IN ONE PIPE.

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CIVIL EAST - VOLUME 7

UTILITIES

MCES FORCEMAIN 3 OF 3

TEMPORARY CONVEYANCE

DISCIPLINE:

SHEET NAME:

UTILITIES

E3-UTL-PLN - 013

SHEET

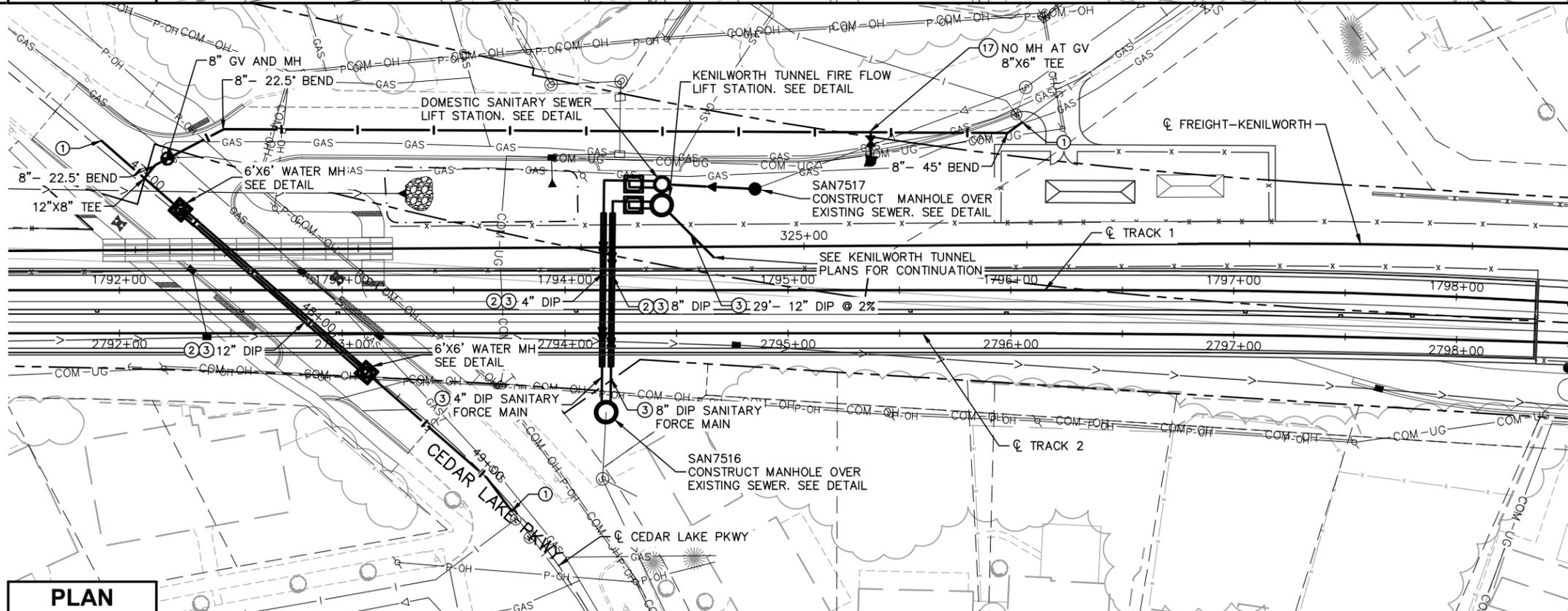
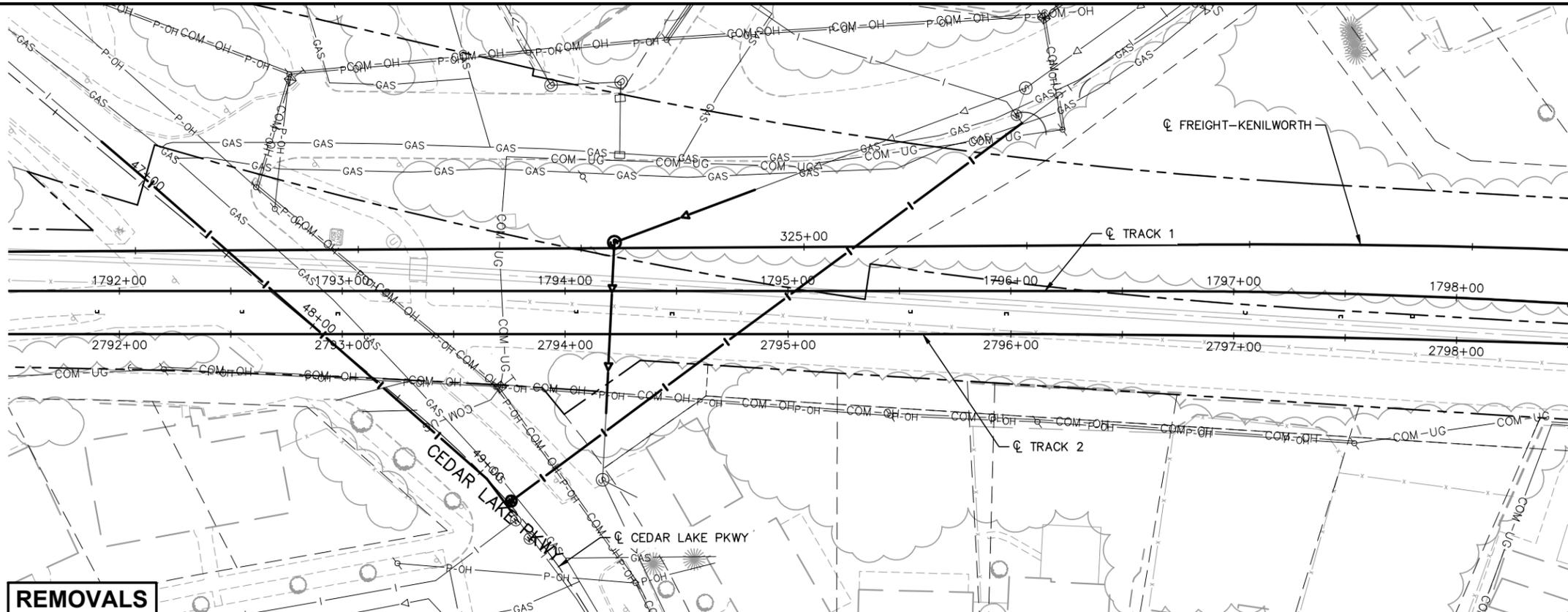
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OF

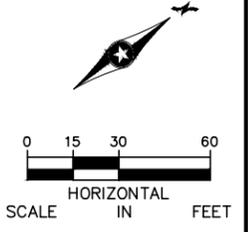
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NOTES:

- * SEE SHEET E0-UTL-NTS-002 FOR UTILITY LEGEND.
- * (XX) = SANITARY AND WATER PLAN CONSTRUCTION NOTE. REFER TO SHEET E0-UTL-NTS-002 FOR NOTES.



PLAN



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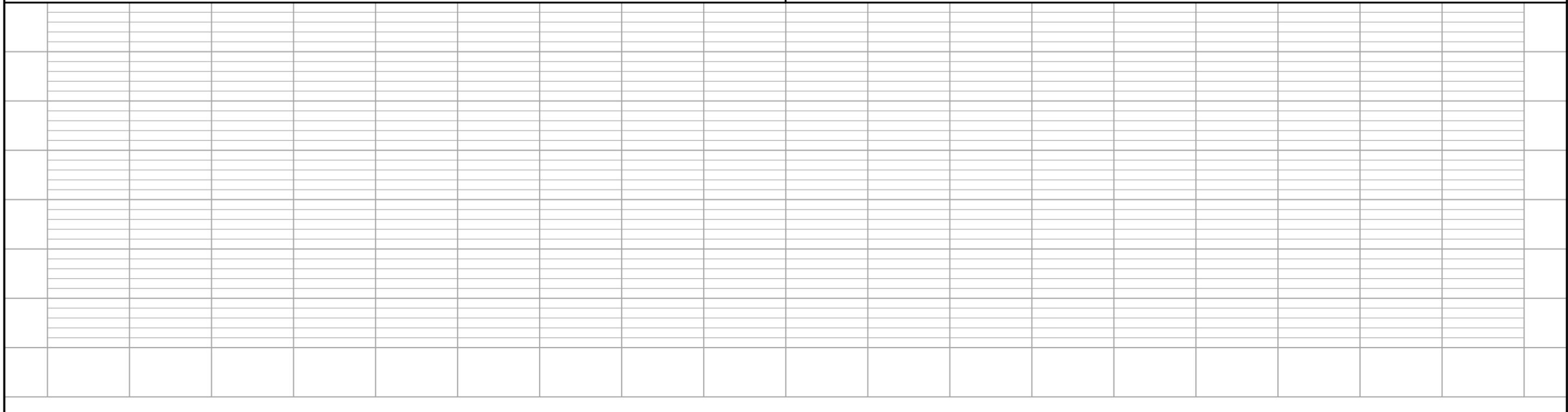
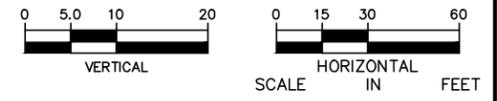
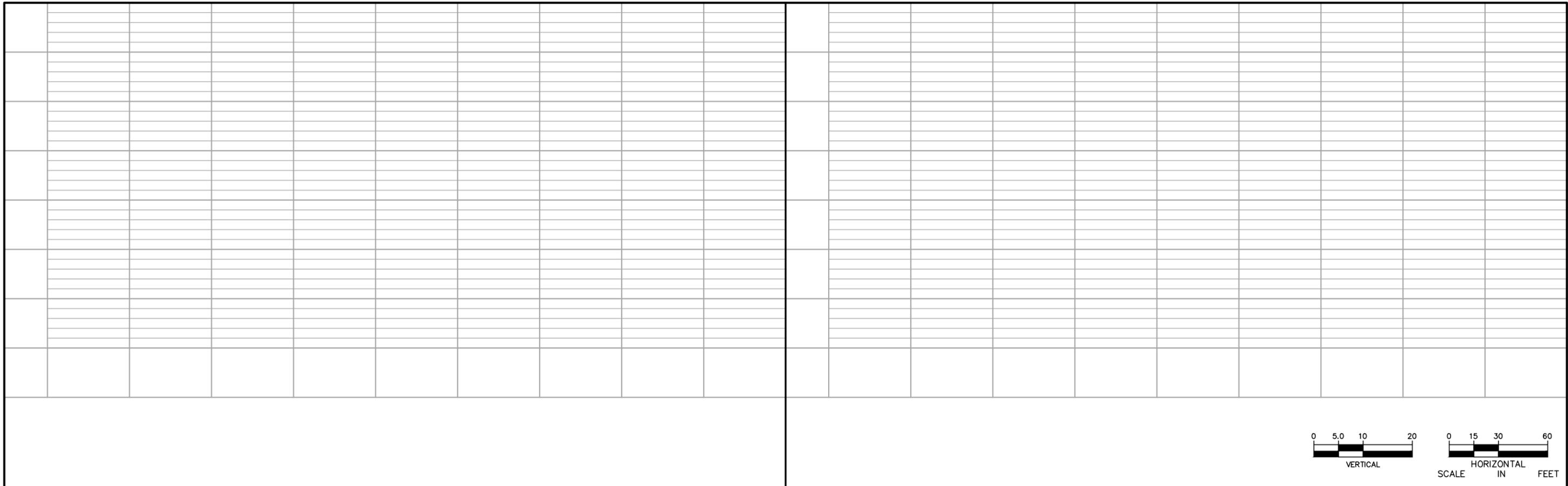




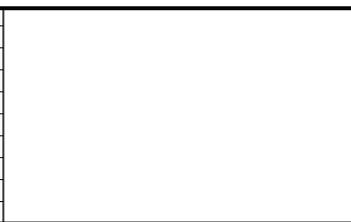


CIVIL EAST - VOLUME 7		SHEET	
UTILITIES			46
CEDAR LAKE AVE 1 OF 2			OF
REMOVALS AND PLAN		73	
DISCIPLINE:	UTILITIES	SHEET NAME:	
		E3-UTL-PLN - 014	

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METROPOLITAN COUNCIL

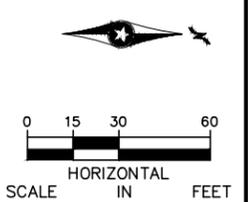
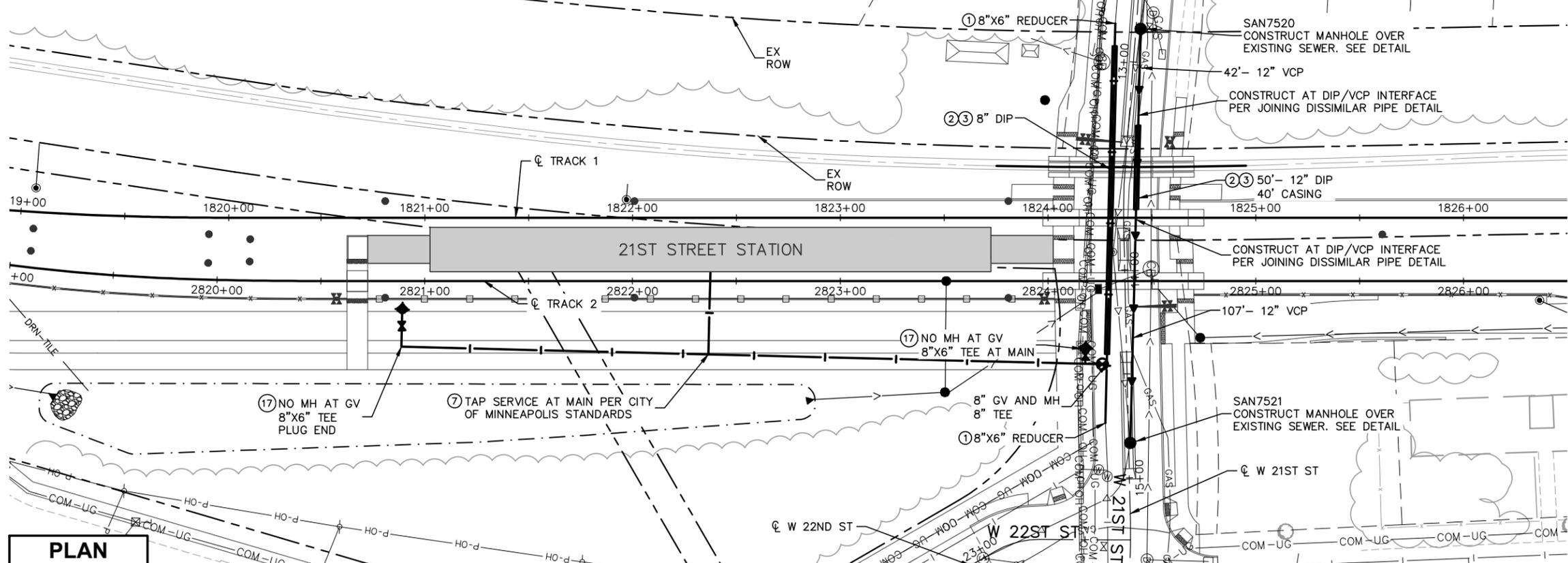
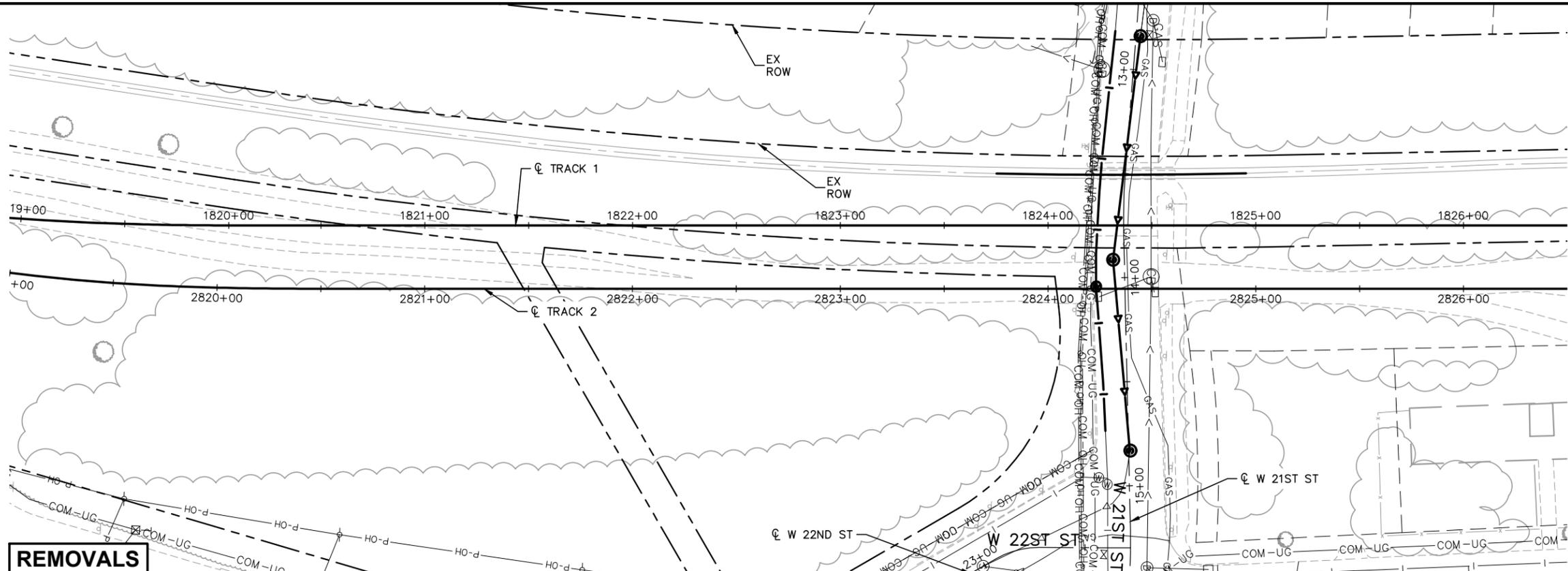
SOUTHWEST
Green Line LRT Extension

**CIVIL EAST - VOLUME 7
UTILITIES
CEDAR LAKE AVE 2 OF 2
PROFILES**

DISCIPLINE: UTILITIES SHEET NAME: E3-UTL-PLN - 015

SHEET
47
OF
73

NOTES:
 * SEE SHEET E0-UTL-NTS-002 FOR UTILITY LEGEND.
 * (XX) = SANITARY AND WATER PLAN CONSTRUCTION NOTE. REFER TO SHEET E0-UTL-NTS-002 FOR NOTES.



PLAN

REMOVALS

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SOUTHWEST
Green Line LRT Extension

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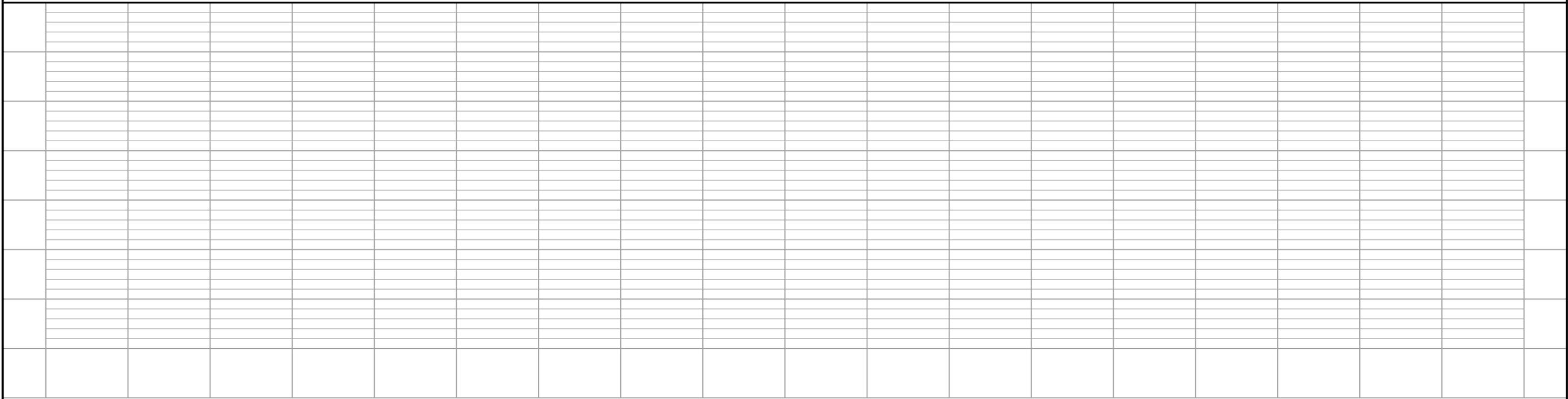
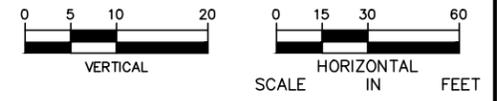
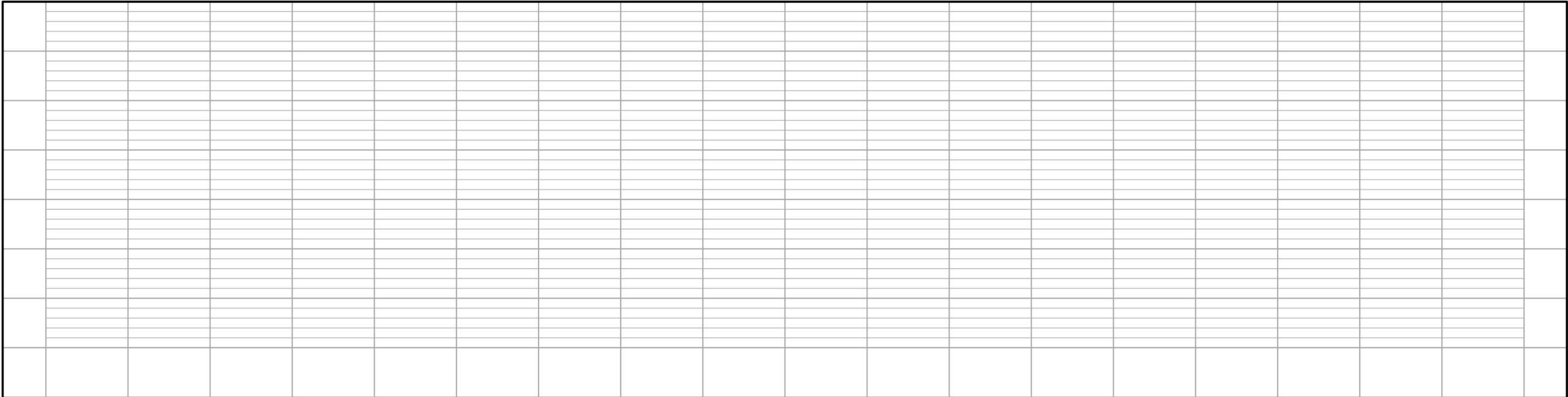
CIVIL EAST - VOLUME 7
UTILITIES
21ST ST STATION 1 OF 2
REMOVALS AND PLAN

DISCIPLINE: **UTILITIES**

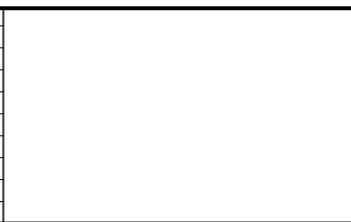
SHEET NAME: **E3-UTL-PLN - 017**

SHEET
49
OF
73

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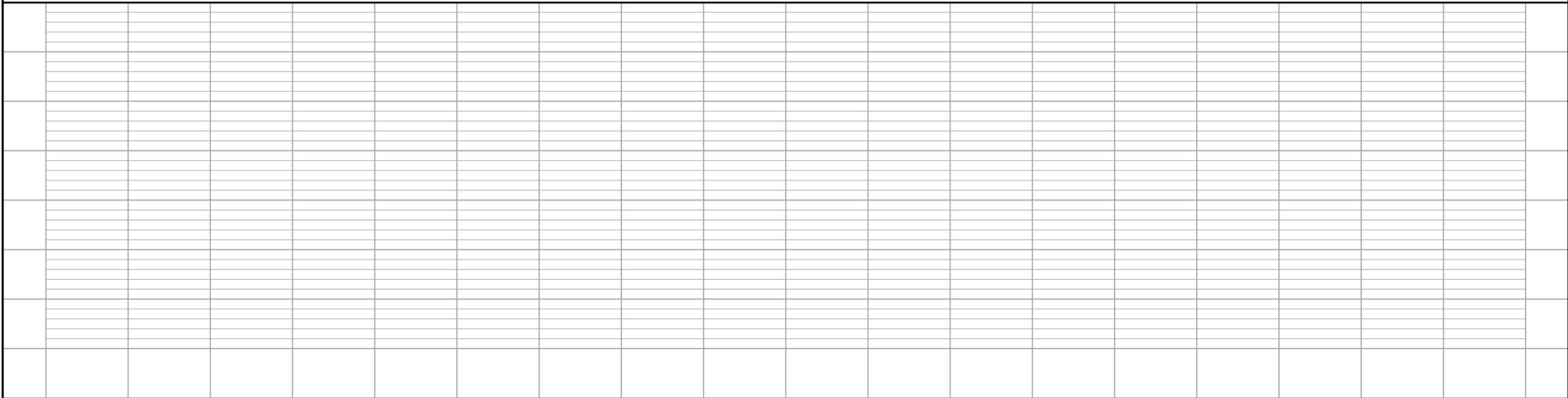
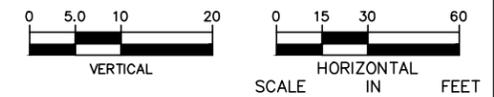
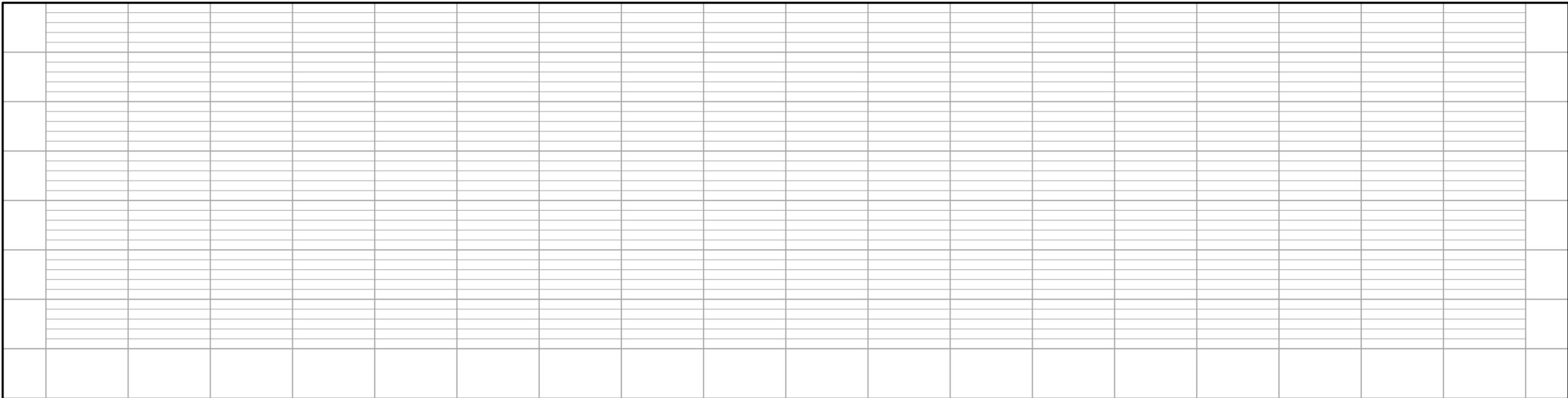
SOUTHWEST
Green Line LRT Extension

**CIVIL EAST - VOLUME 7
UTILITIES
21ST ST STATION 2 OF 2
PROFILES**

DISCIPLINE: UTILITIES SHEET NAME: E3-UTL-PLN - 018

SHEET 50 OF 73

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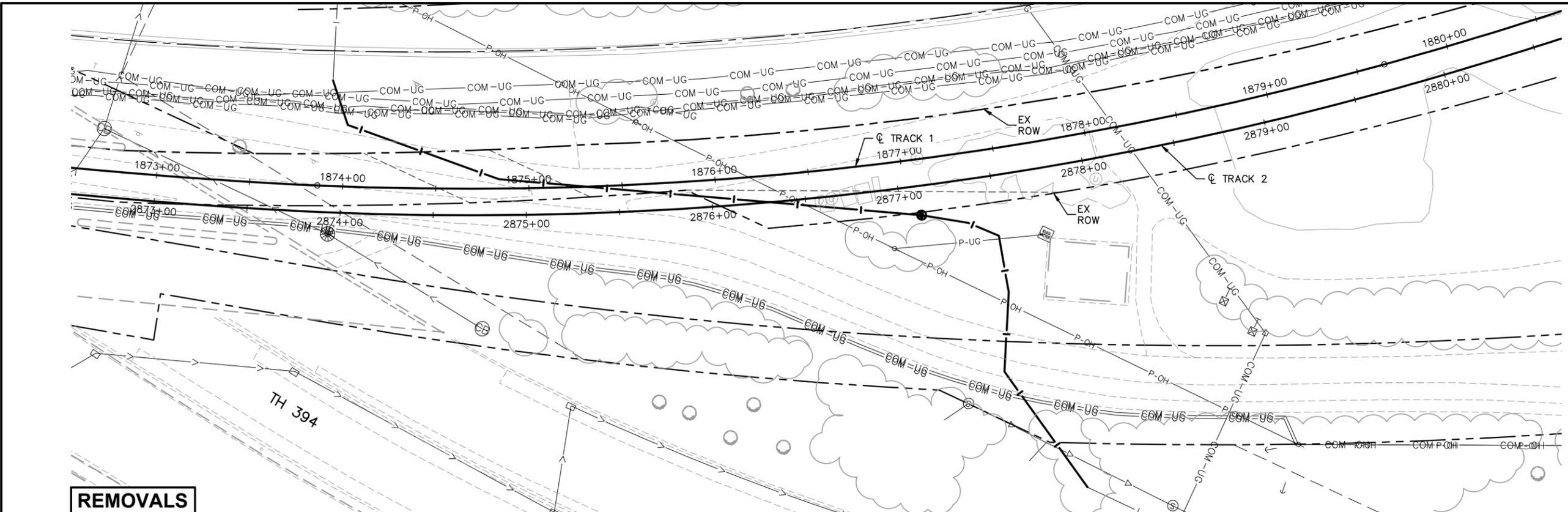
SOUTHWEST
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**CIVIL EAST - VOLUME 7
UTILITIES
PENN STATION 2 OF 2
PROFILES**

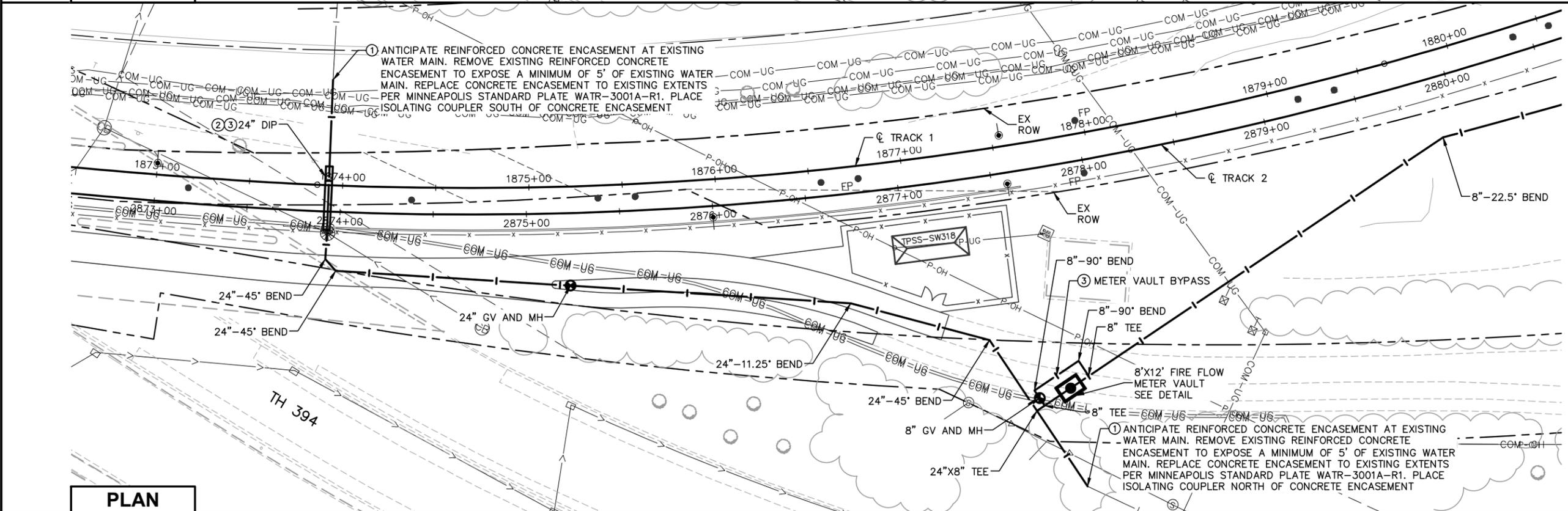
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SHEET 52 OF 73

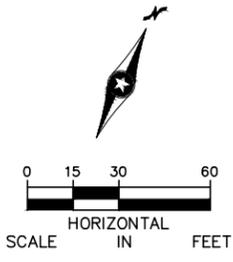
NOTES:
 * SEE SHEET E0-UTL-NTS-002 FOR UTILITY LEGEND.
 * (XX) = SANITARY AND WATER PLAN CONSTRUCTION NOTE. REFER TO SHEET E0-UTL-NTS-002 FOR NOTES.



REMOVALS



PLAN



NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL







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CIVIL EAST - VOLUME 7

UTILITIES

VAN WHITE STATION 1 OF 6

REMOVALS AND PLAN

DISCIPLINE: UTILITIES

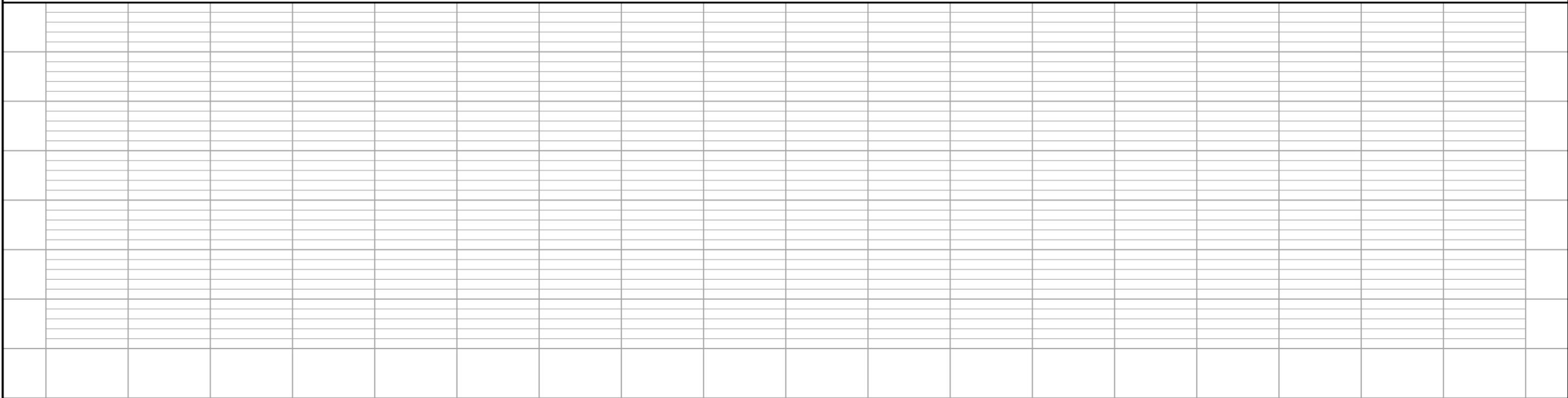
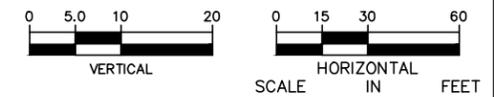
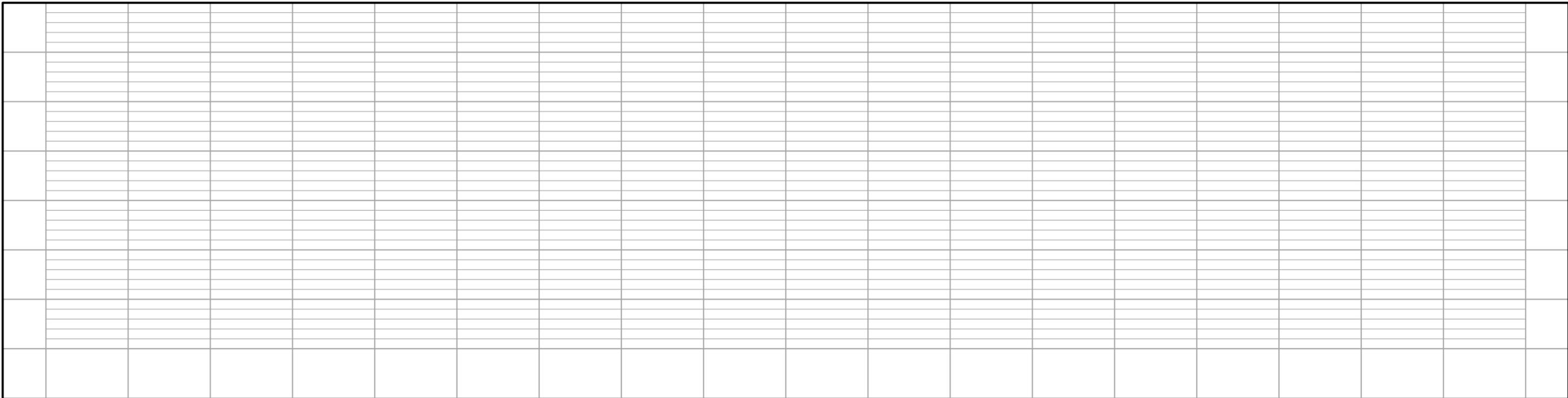
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SHEET **53**

OF **73**

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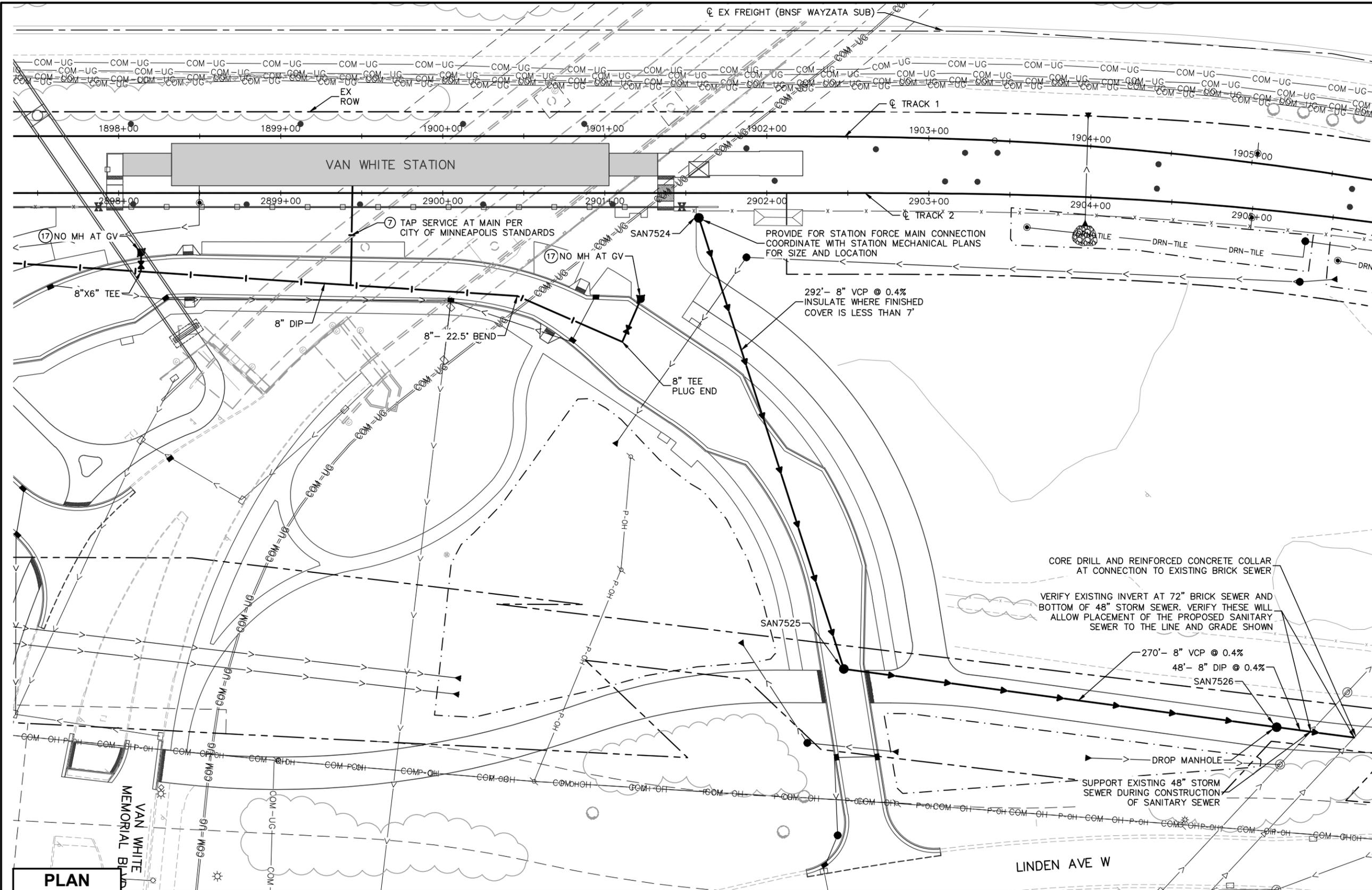
SOUTHWEST
Green Line LRT Extension

CIVIL EAST - VOLUME 7
UTILITIES
VAN WHITE STATION 2 OF 6
PROFILES

DISCIPLINE: UTILITIES SHEET NAME: E4-UTL-PLN - 004

SHEET 54 OF 73

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- NOTES:**
- * SEE SHEET E0-UTL-NTS-002 FOR UTILITY LEGEND.
 - * (XX) = SANITARY AND WATER PLAN CONSTRUCTION NOTE. REFER TO SHEET E0-UTL-NTS-002 FOR NOTES.

PLAN

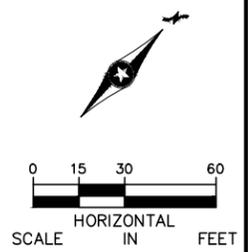
NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL



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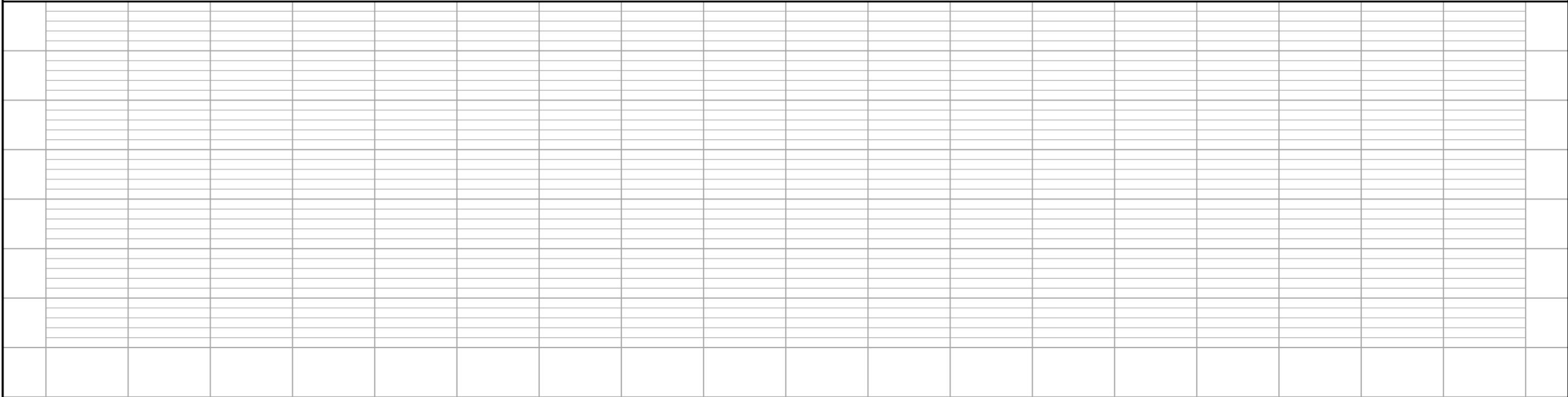
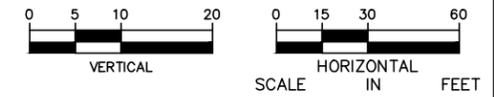
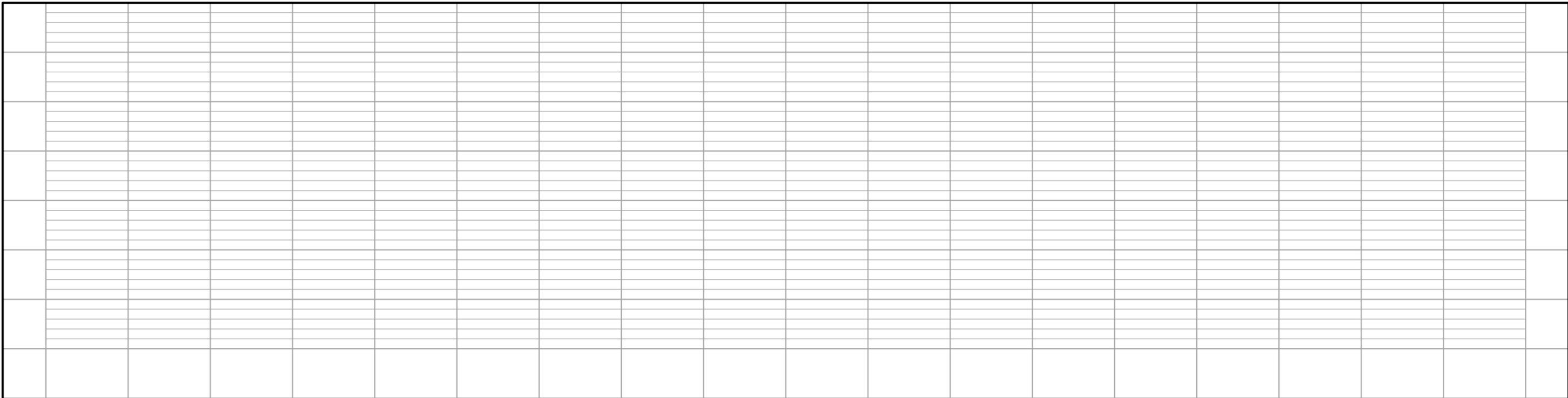
**CIVIL EAST - VOLUME 7
UTILITIES
VAN WHITE STATION 5 OF 6
PLAN**

DISCIPLINE: UTILITIES SHEET NAME: E4-UTL-PLN - 007



SHEET
57
OF
73

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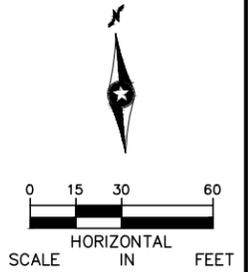
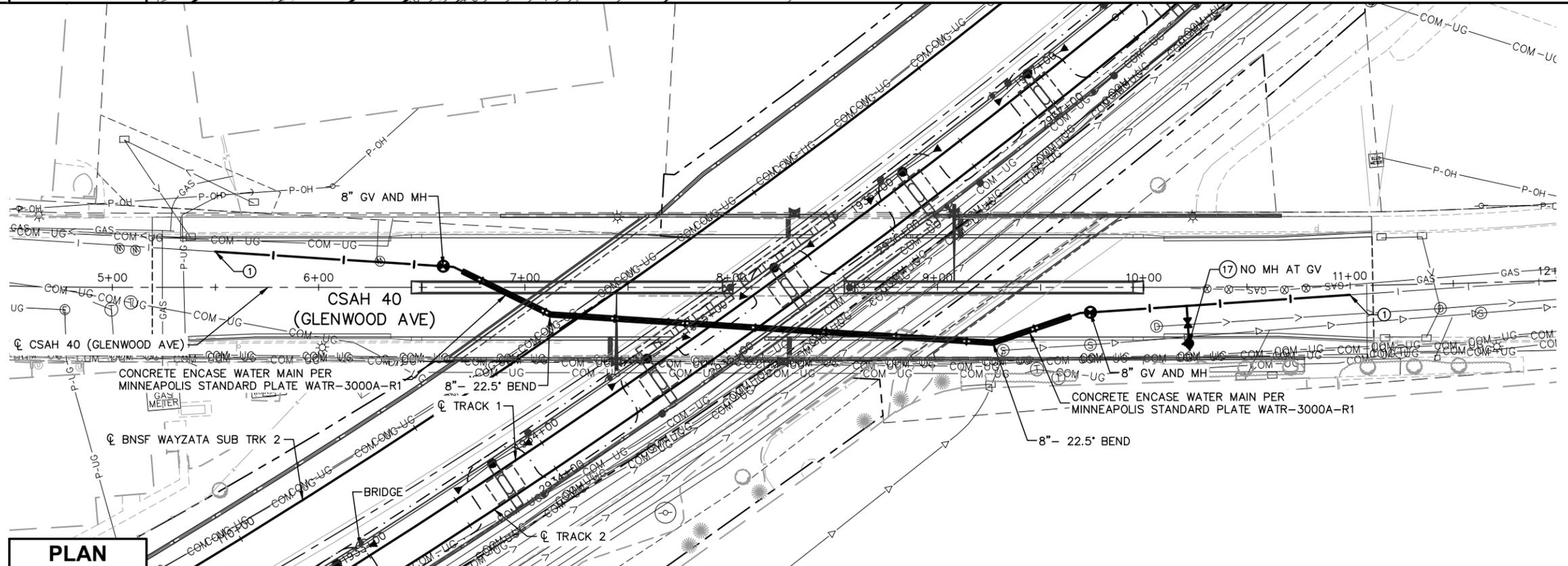
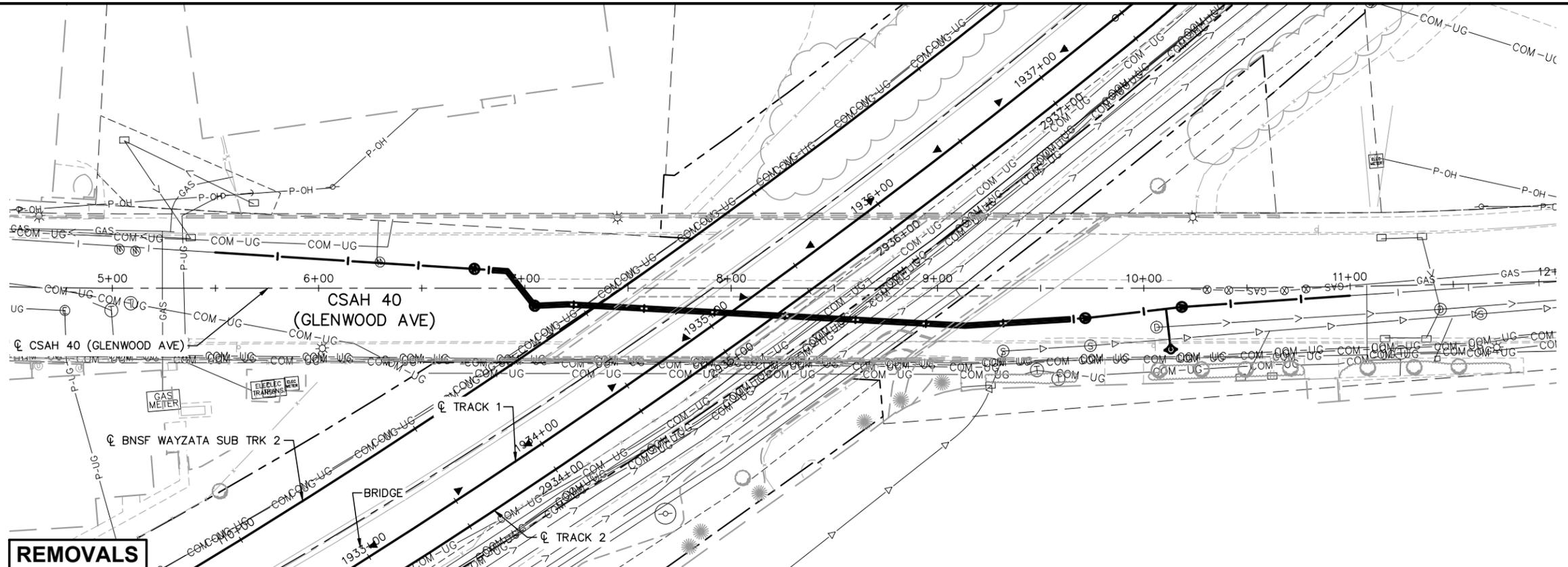
SOUTHWEST
Green Line LRT Extension

**CIVIL EAST - VOLUME 7
UTILITIES
VAN WHITE STATION 6 OF 6
PROFILES**

DISCIPLINE: UTILITIES SHEET NAME: E4-UTL-PLN - 008

SHEET 58 OF 73

- NOTES:**
- * SEE SHEET E0-UTL-NTS-002 FOR UTILITY LEGEND.
 - * (XX) = SANITARY AND WATER PLAN CONSTRUCTION NOTE. REFER TO SHEET E0-UTL-NTS-002 FOR NOTES.



PLAN

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**CIVIL EAST - VOLUME 7
UTILITIES
GLENWOOD AVE 1 OF 2
REMOVALS AND PLAN**

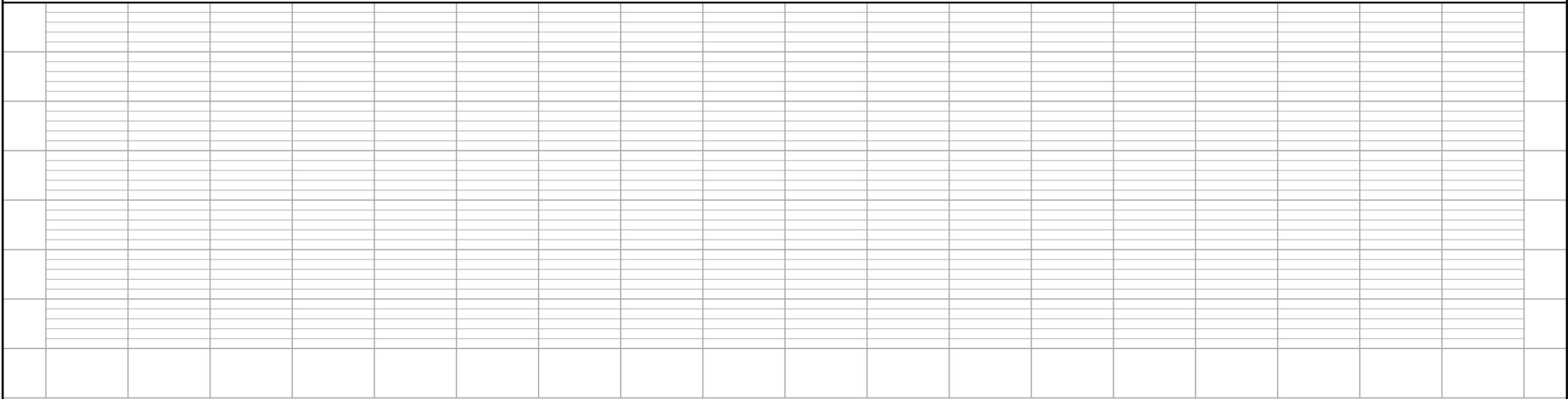
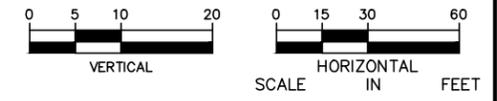
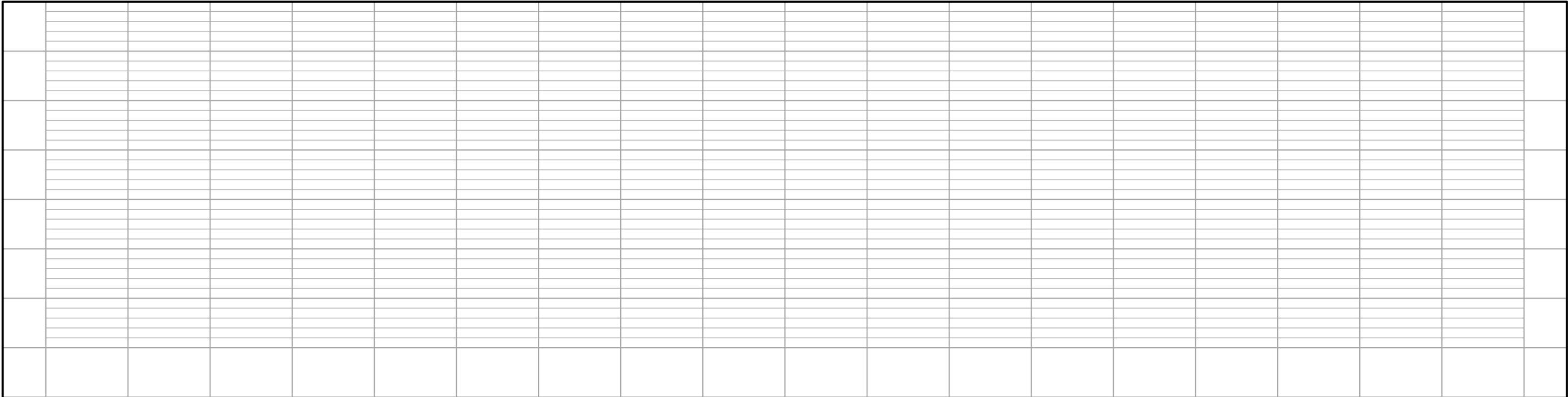
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60
OF
73**

DISCIPLINE: UTILITIES

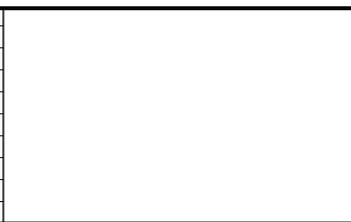
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METROPOLITAN COUNCIL

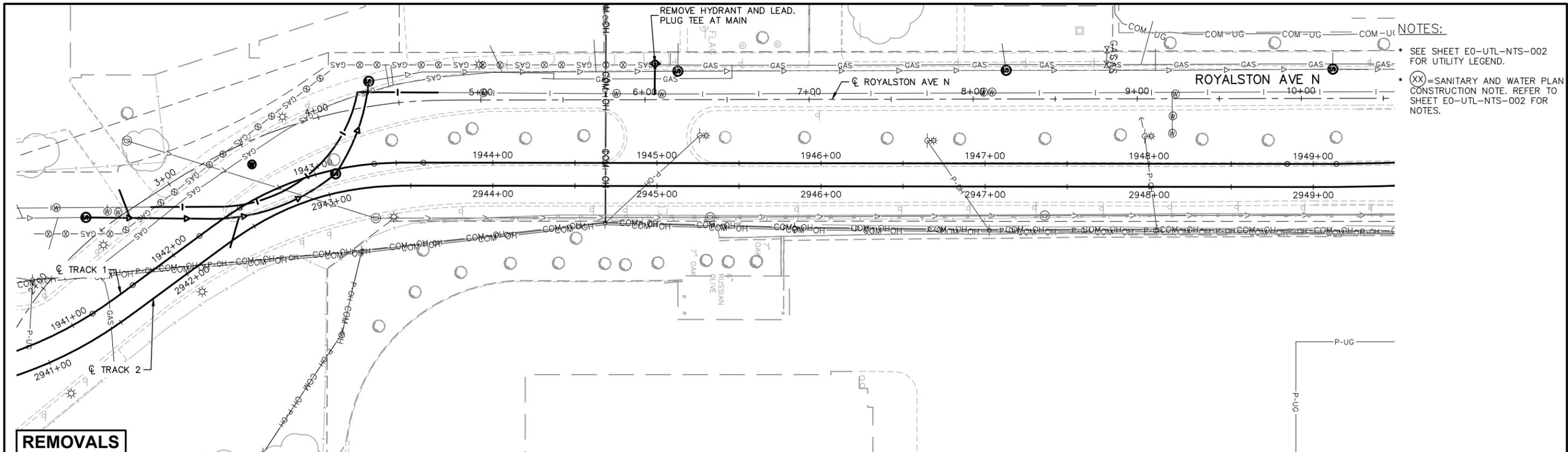
SOUTHWEST
Green Line LRT Extension

**CIVIL EAST - VOLUME 7
UTILITIES
GLENWOOD AVE 2 OF 2
PROFILES**

DISCIPLINE: UTILITIES SHEET NAME: E4-UTL-PLN - 011

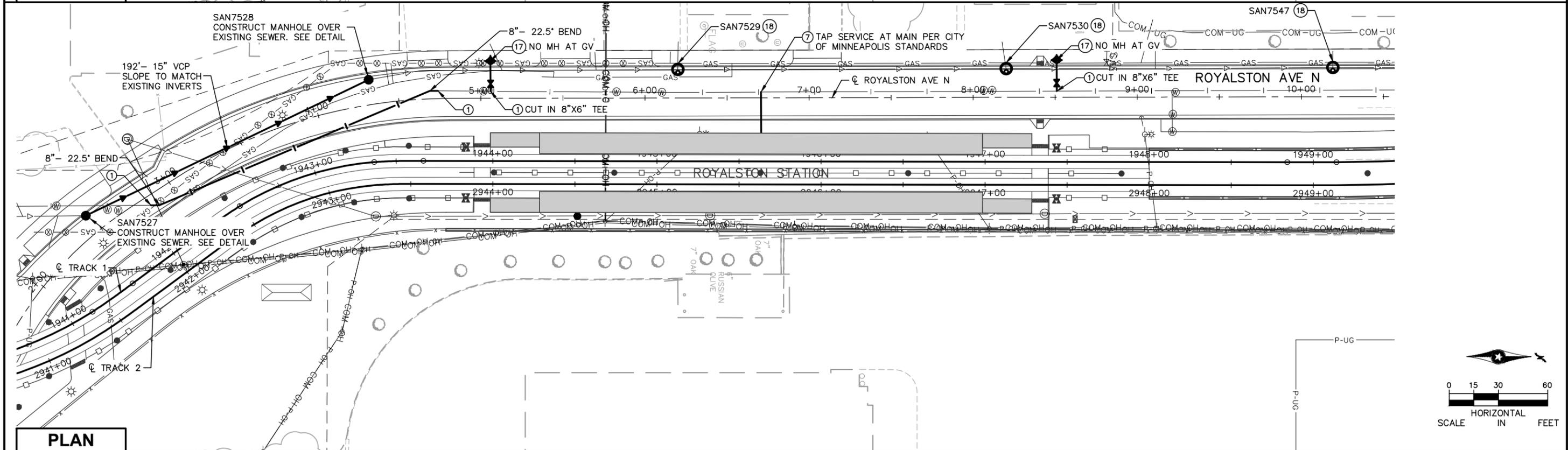
SHEET 61 OF 73

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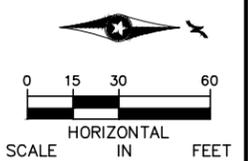


NOTES:
 * SEE SHEET E0-UTL-NTS-002 FOR UTILITY LEGEND.
 * (XX) = SANITARY AND WATER PLAN CONSTRUCTION NOTE. REFER TO SHEET E0-UTL-NTS-002 FOR NOTES.

REMOVALS



PLAN



NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL



60% SUBMITTAL - 09/28/15

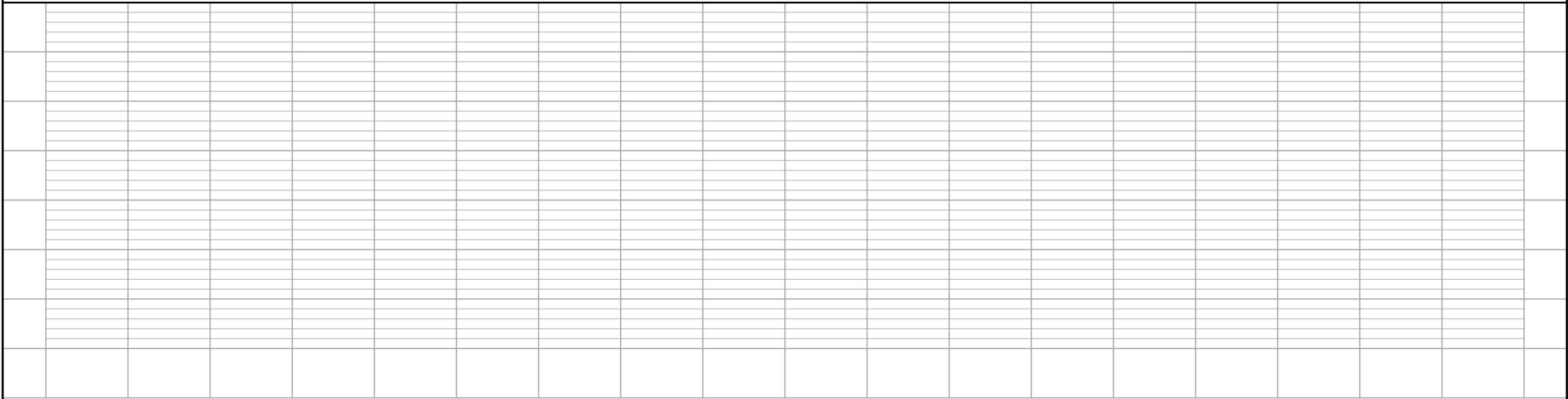
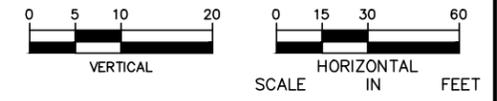
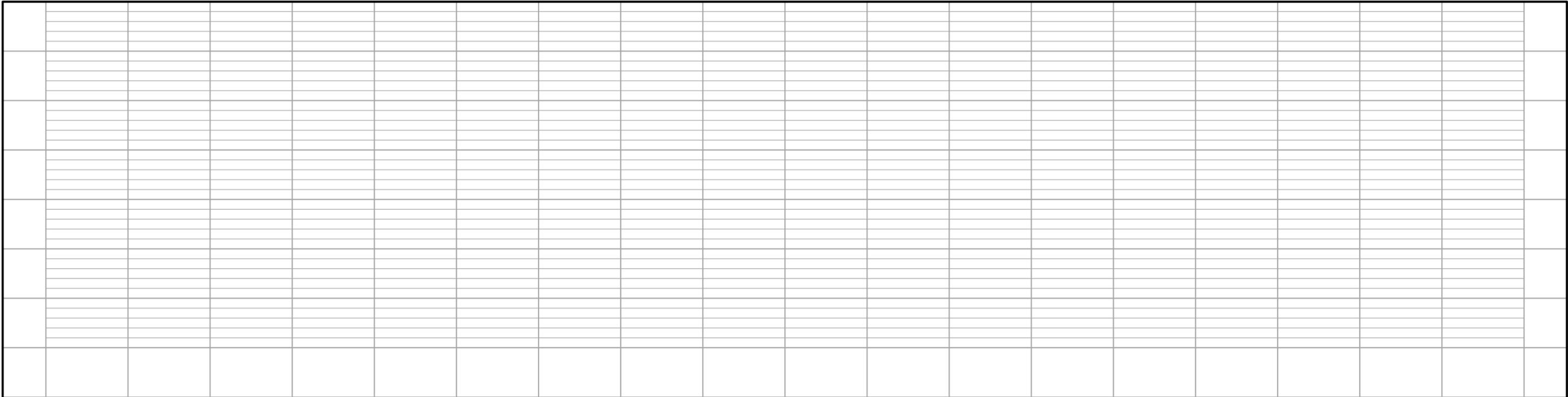




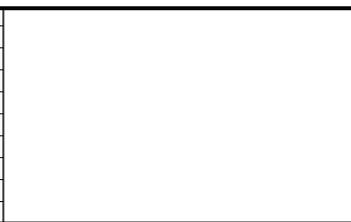


CIVIL EAST - VOLUME 7		SHEET	
UTILITIES			62
ROYALSTON STATION 1 OF 2			
REMOVALS AND PLANS		73	
DISCIPLINE: UTILITIES	SHEET NAME: E4-UTL-PLN - 012		

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METROPOLITAN COUNCIL

SOUTHWEST
Green Line LRT Extension

CIVIL EAST - VOLUME 7
UTILITIES
ROYALSTON STATION 2 OF 2
PROFILES

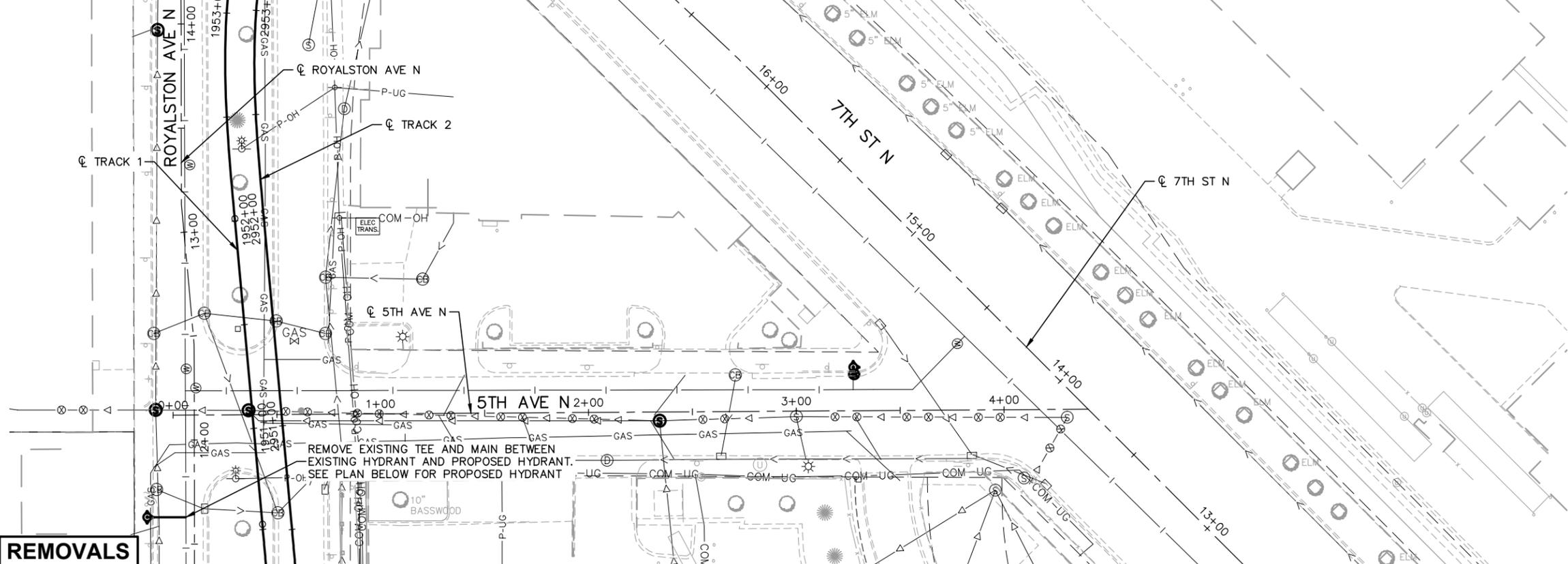
DISCIPLINE: UTILITIES SHEET NAME: E4-UTL-PLN - 013

SHEET 63 OF 73

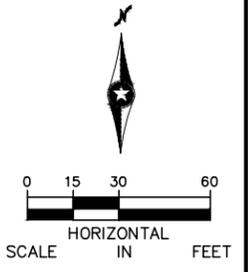
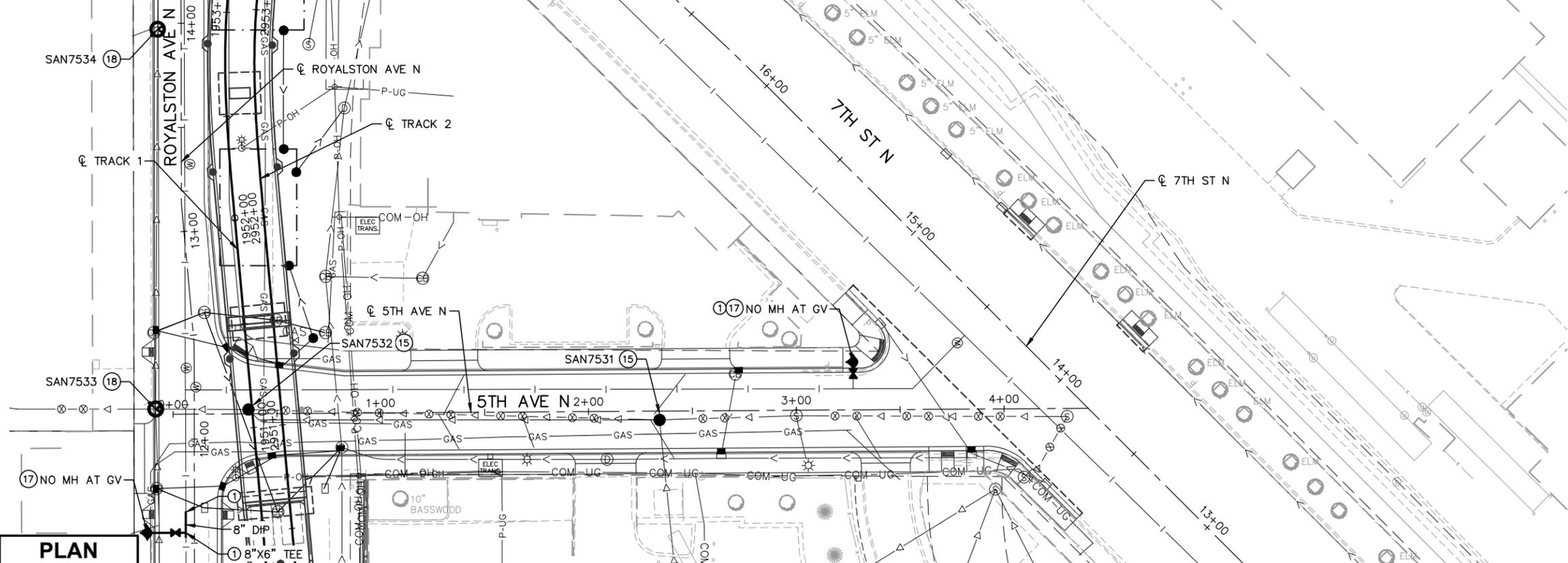
NOTES:

- * SEE SHEET E0-UTL-NTS-002 FOR UTILITY LEGEND.
- * (XX) = SANITARY AND WATER PLAN CONSTRUCTION NOTE. REFER TO SHEET E0-UTL-NTS-002 FOR NOTES.

REMOVALS



PLAN



Sep. 21 2015 11:57 am V:\3400_ADC\CAD\00_EAST\PLANSHEETS\UTILITIES\E4-UTL-PLN.dwg By: MakiEM

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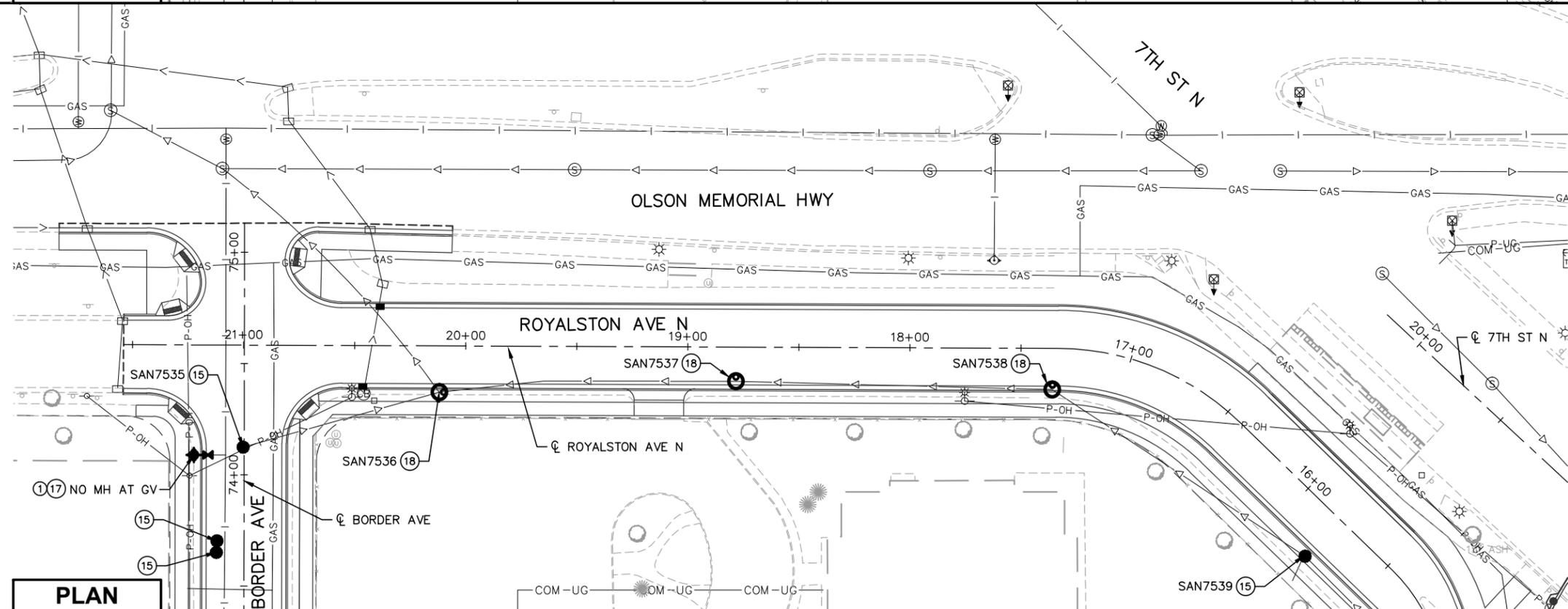
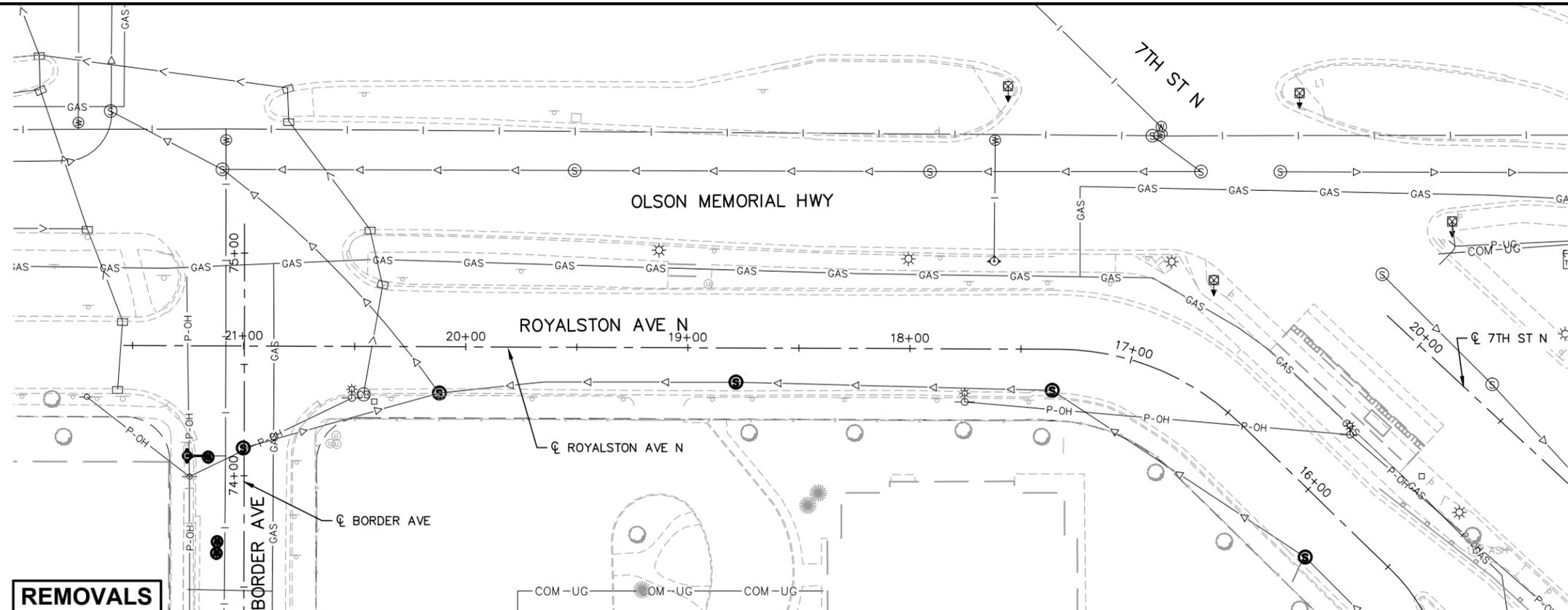
**CIVIL EAST - VOLUME 7
UTILITIES
ROYALSTON AVE N / 5TH AVE N
REMOVALS AND PLAN**

DISCIPLINE: UTILITIES	SHEET NAME: E4-UTL-PLN - 014
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SHEET
64
OF
73

NOTES:

- * SEE SHEET E0-UTL-NTS-002 FOR UTILITY LEGEND.
- * (XX) = SANITARY AND WATER PLAN CONSTRUCTION NOTE. REFER TO SHEET E0-UTL-NTS-002 FOR NOTES.



Sep. 21 2015 11:58 am V:\3400_ADC\CAD\CAD\00_EAST\PLANSHEETS\UTILITIES\E4-UTL-PLN.dwg By: MakiEM

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CIVIL EAST - VOLUME 7

UTILITIES

ROYALSTON AVE N / BORDER AVE

REMOVALS AND PLAN

DISCIPLINE: UTILITIES

SHEET NAME: E4-UTL-PLN - 015

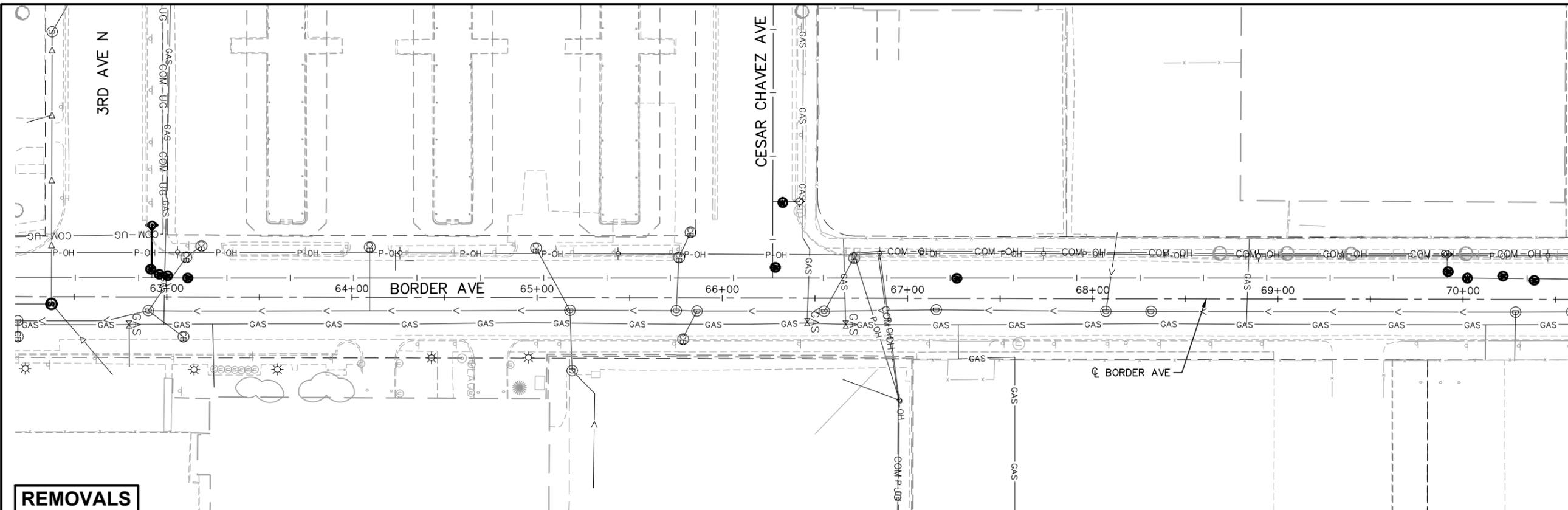
SHEET

65

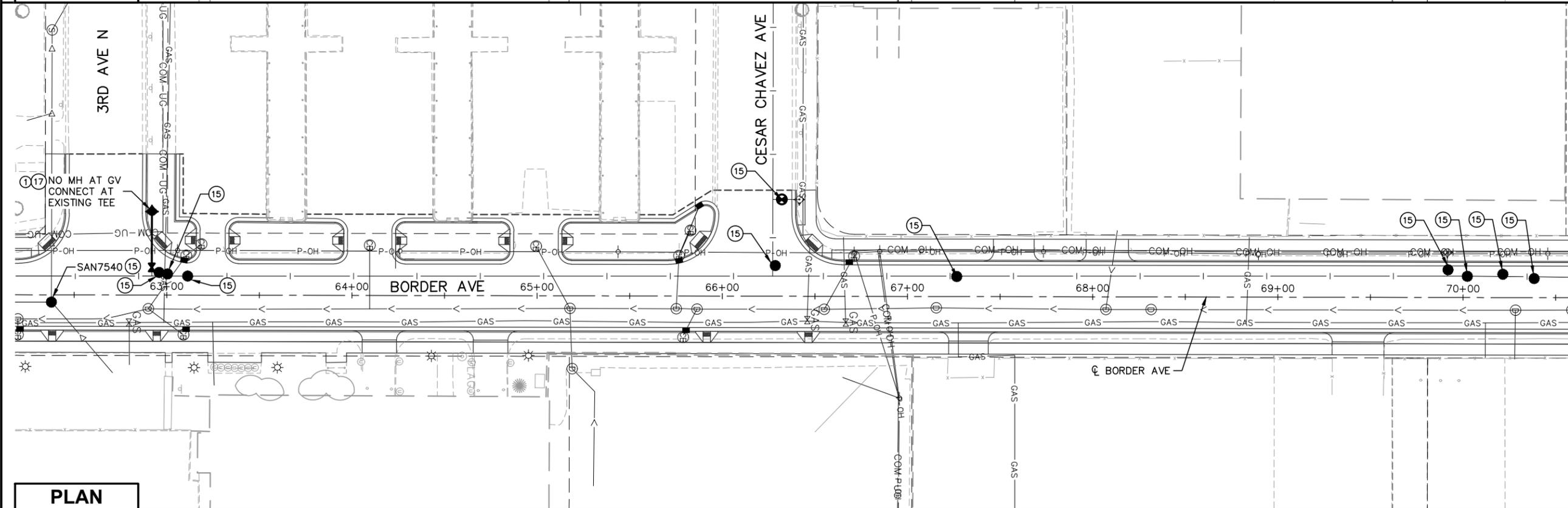
OF

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Sep. 21 2015 12:00 pm v:\3400_ADC\CAD\00_EAST\PLANSHEETS\UTILITIES\E4-UTL-PLN.dwg By: MokEM

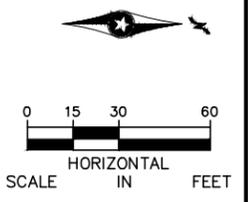


REMOVALS



PLAN

- NOTES:**
- * SEE SHEET E0-UTL-NTS-002 FOR UTILITY LEGEND.
 - * (XX) = SANITARY AND WATER PLAN CONSTRUCTION NOTE. REFER TO SHEET E0-UTL-NTS-002 FOR NOTES.



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CIVIL EAST - VOLUME 7

UTILITIES

BORDER AVE / CESAR CHAVEZ AVE

REMOVALS AND PLAN

DISCIPLINE: UTILITIES

SHEET NAME: E4-UTL-PLN - 016

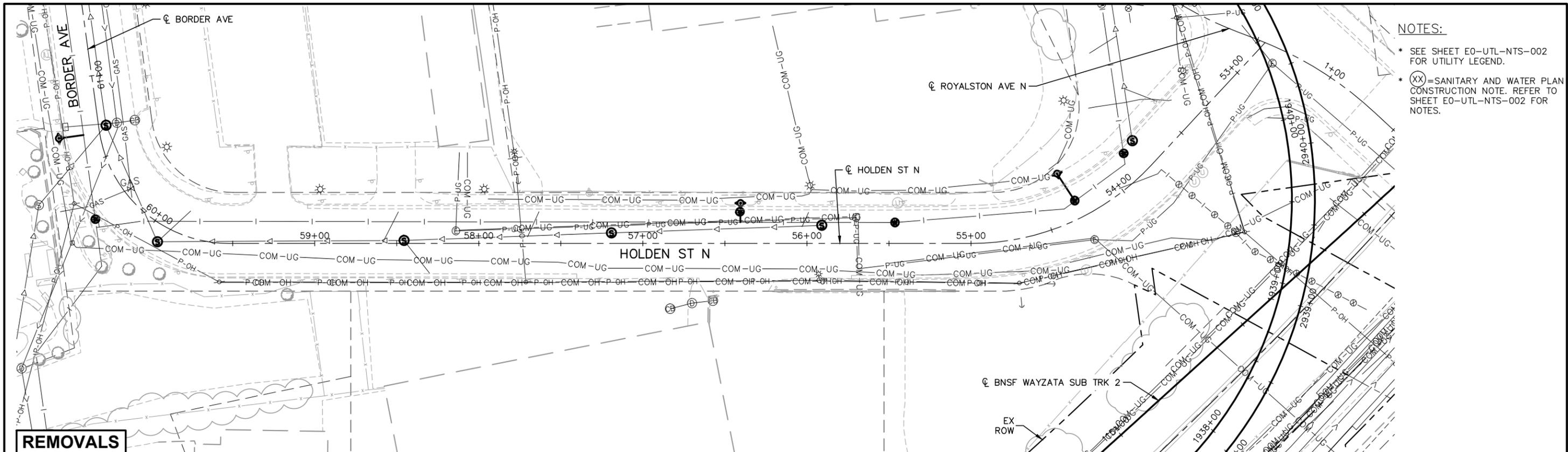
SHEET

66

OF

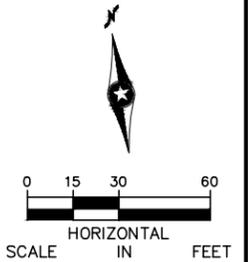
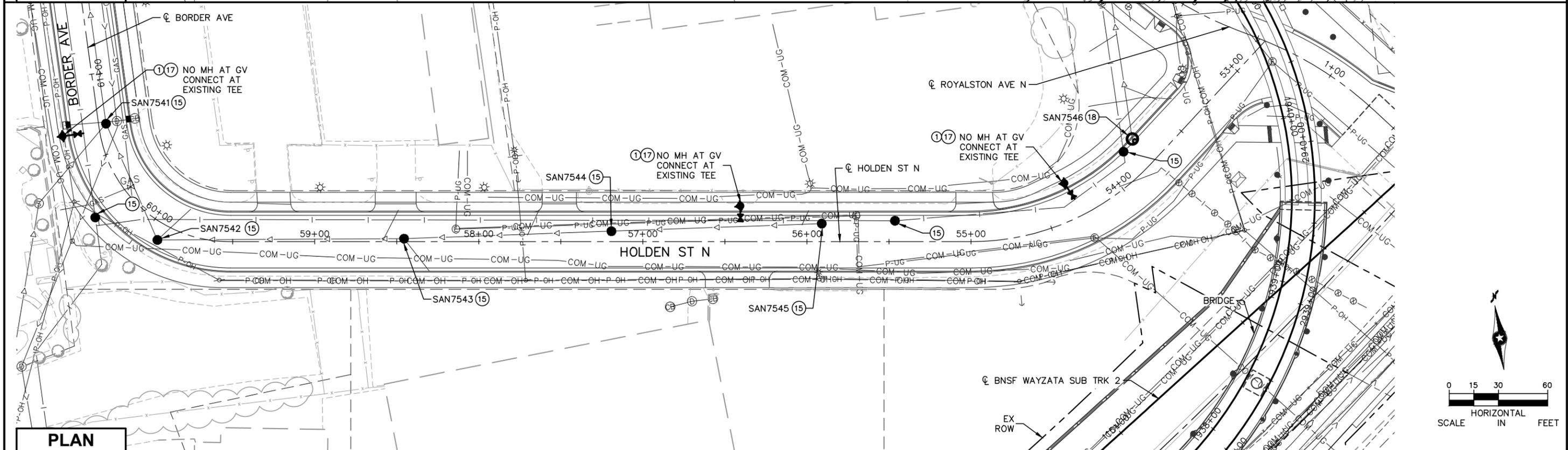
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Sep. 21 2015 12:02 pm v:\3400_ADC\CAD\00_EAST\PLANSHEETS\UTILITIES\E4-UTL-PLN.dwg By: MakiEM



NOTES:

- * SEE SHEET E0-UTL-NTS-002 FOR UTILITY LEGEND.
- * (XX) = SANITARY AND WATER PLAN CONSTRUCTION NOTE. REFER TO SHEET E0-UTL-NTS-002 FOR NOTES.



NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL



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CIVIL EAST - VOLUME 7

UTILITIES

HOLDEN ST N

REMOVALS AND PLAN

DISCIPLINE: UTILITIES

SHEET NAME: E4-UTL-PLN - 017

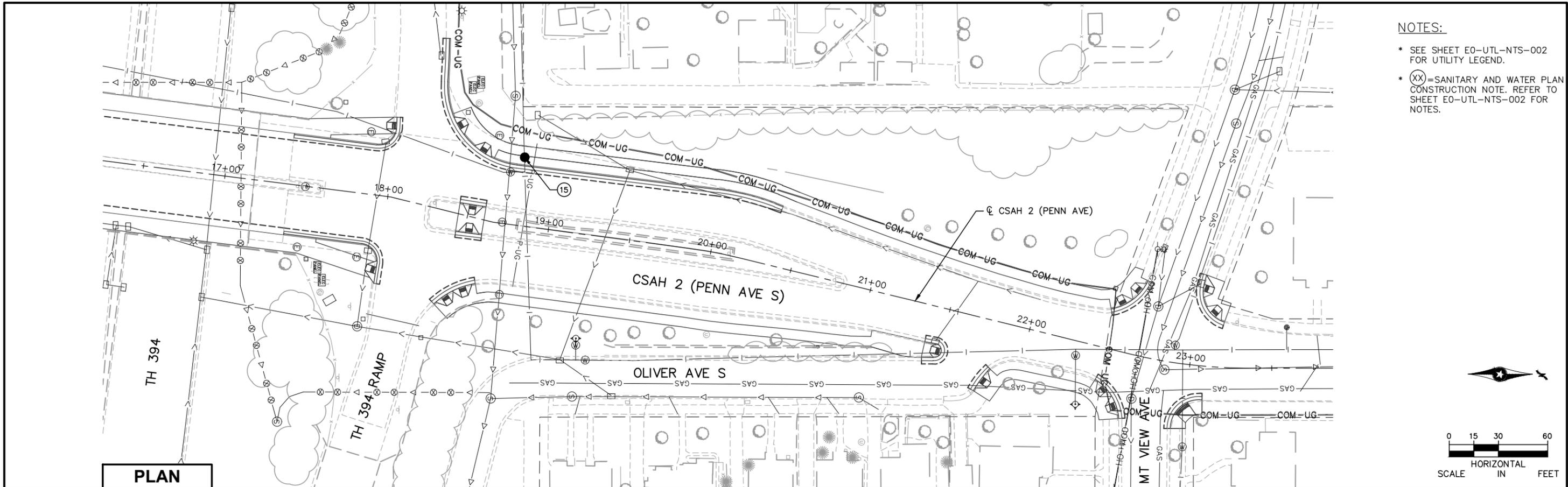
SHEET

67

OF

73

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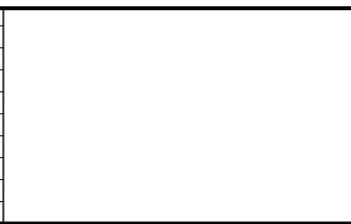


NOTES:

- * SEE SHEET E0-UTL-NTS-002 FOR UTILITY LEGEND.
- * (XX) = SANITARY AND WATER PLAN CONSTRUCTION NOTE. REFER TO SHEET E0-UTL-NTS-002 FOR NOTES.

PLAN

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL



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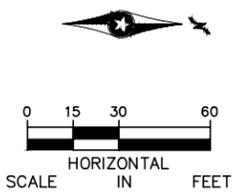
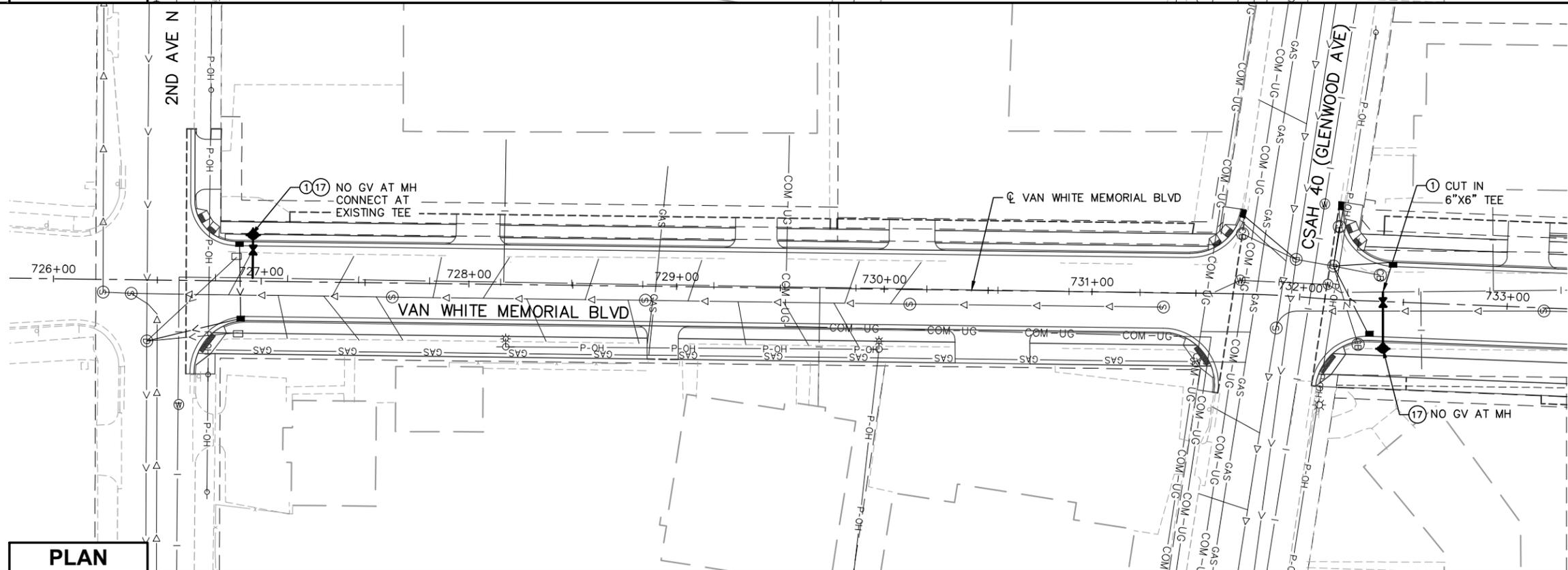
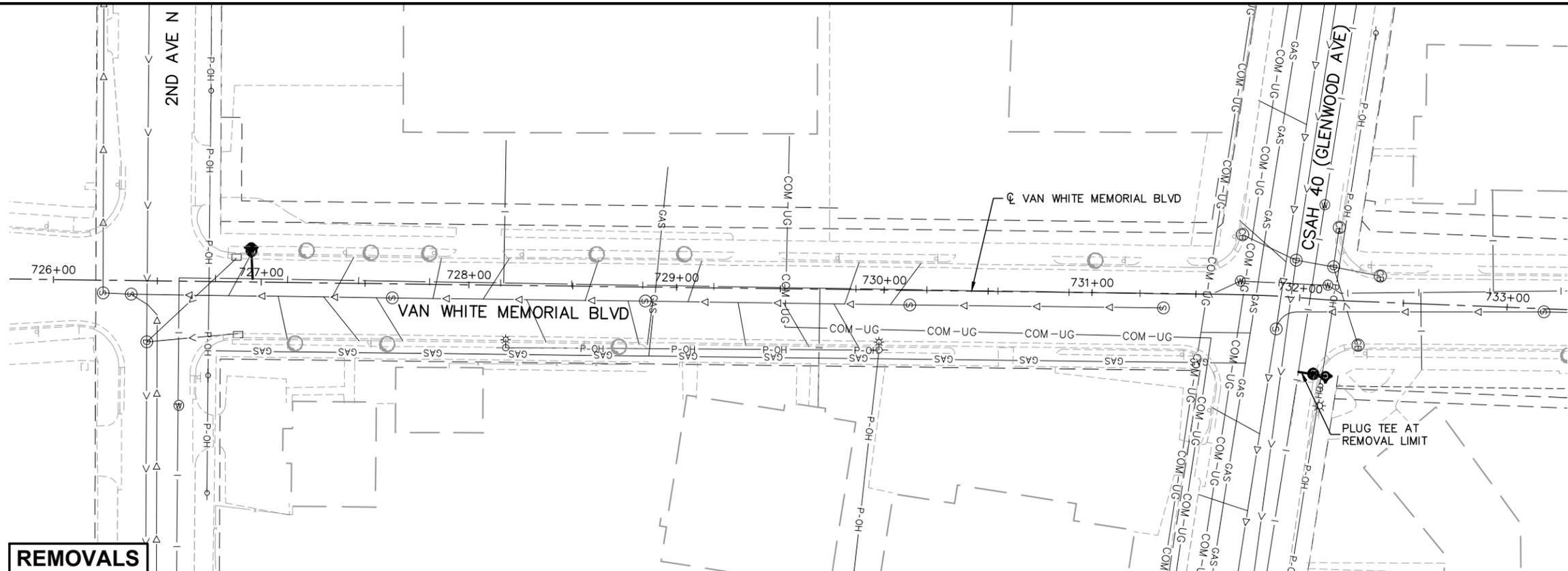
METROPOLITAN COUNCIL **SOUTHWEST**
Green Line LRT Extension

CIVIL EAST - VOLUME 7 UTILITIES PENN AVE S / MT VIEW AVE PLAN		SHEET 68 OF 73
DISCIPLINE: UTILITIES	SHEET NAME: E4-UTL-PLN - 018	

Sep. 21 2015 12:05 pm V:\3400_ADC\CAD\CAD\00_EAST\PLANSHEETS\UTILITIES\E4-UTL-PLN.dwg By: MakiEM

NOTES:

- * SEE SHEET E0-UTL-NTS-002 FOR UTILITY LEGEND.
- * (XX) = SANITARY AND WATER PLAN CONSTRUCTION NOTE. REFER TO SHEET E0-UTL-NTS-002 FOR NOTES.



REMOVALS

PLAN

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL







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CIVIL EAST - VOLUME 7

UTILITIES

VAN WHITE MEMORIAL BLVD

REMOVALS AND PLAN

DISCIPLINE: UTILITIES

SHEET NAME: E4-UTL-PLN - 019

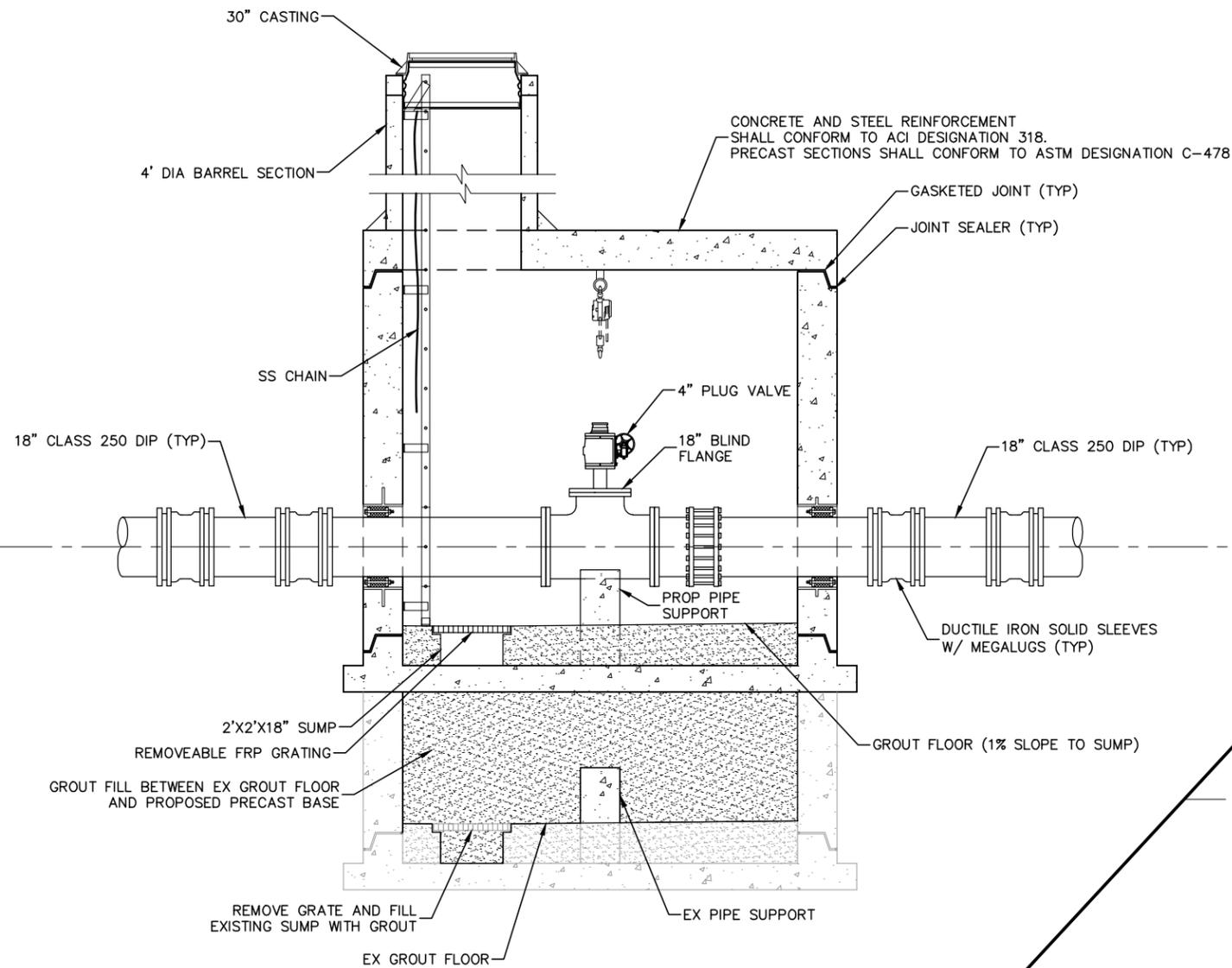
SHEET

69

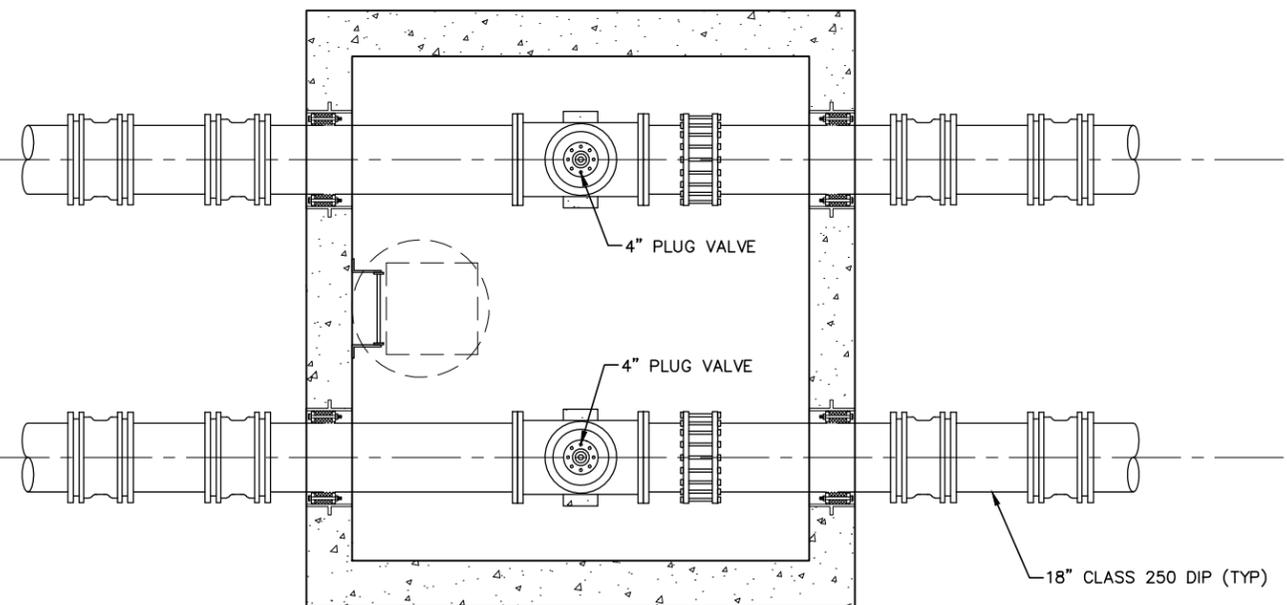
OF

73

Sep. 21 2015 12:05 pm v:\3400_ADC\CAD\CAD\00_EAST\PLANSHEETS\UTILITIES\E0-UTL-DTL.dwg By: MakiEM



1 CLEANOUT VAULT SECTION (C06M)
SCALE: 1"=2'-0"



2 CLEANOUT VAULT PLAN (C06M)
SCALE: 1"=2'-0"

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL



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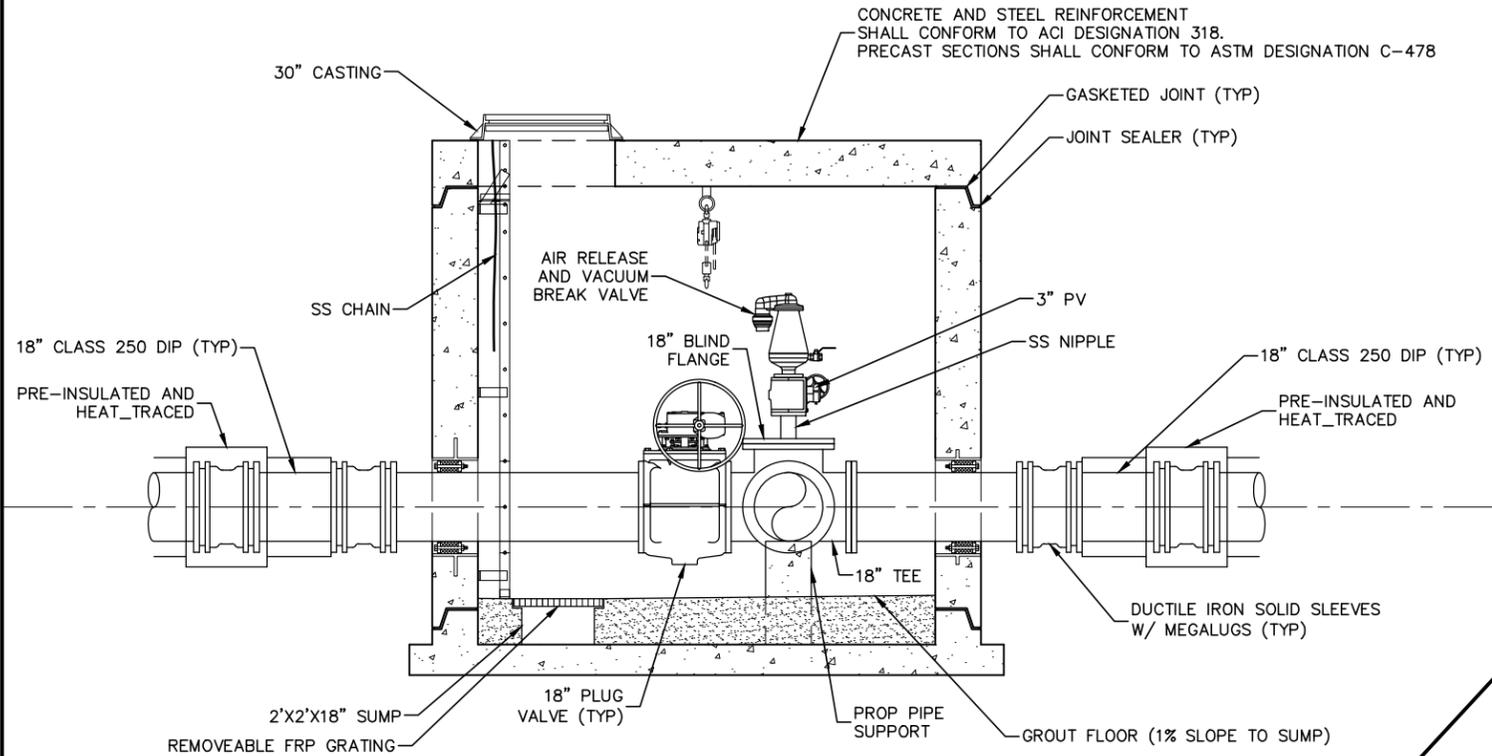
**CIVIL EAST - VOLUME 7
UTILITIES
MCES CLEANOUT VAULT**

DISCIPLINE: UTILITIES

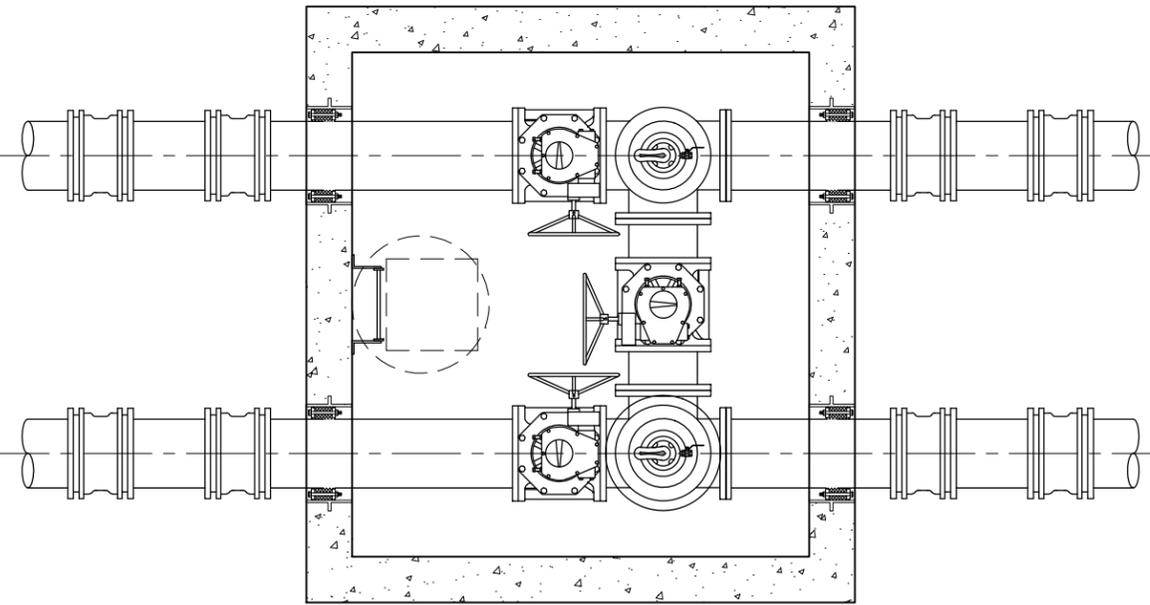
SHEET NAME: E0-UTL-DTL - 001

SHEET
70
OF
73

Sep. 21 2015 12:05 pm v:\3400_ADC\CAD\00_EAST\PLANSHEETS\UTILITIES\E0-UTL-DTL.dwg By: MakiEM



1 AIR RELEASE VAULT SECTION (ARXX)
SCALE: 1"=2'-0"



2 AIR RELEASE VAULT SECTION (ARXX)
SCALE: 1"=2'-0"

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL







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CIVIL EAST - VOLUME 7

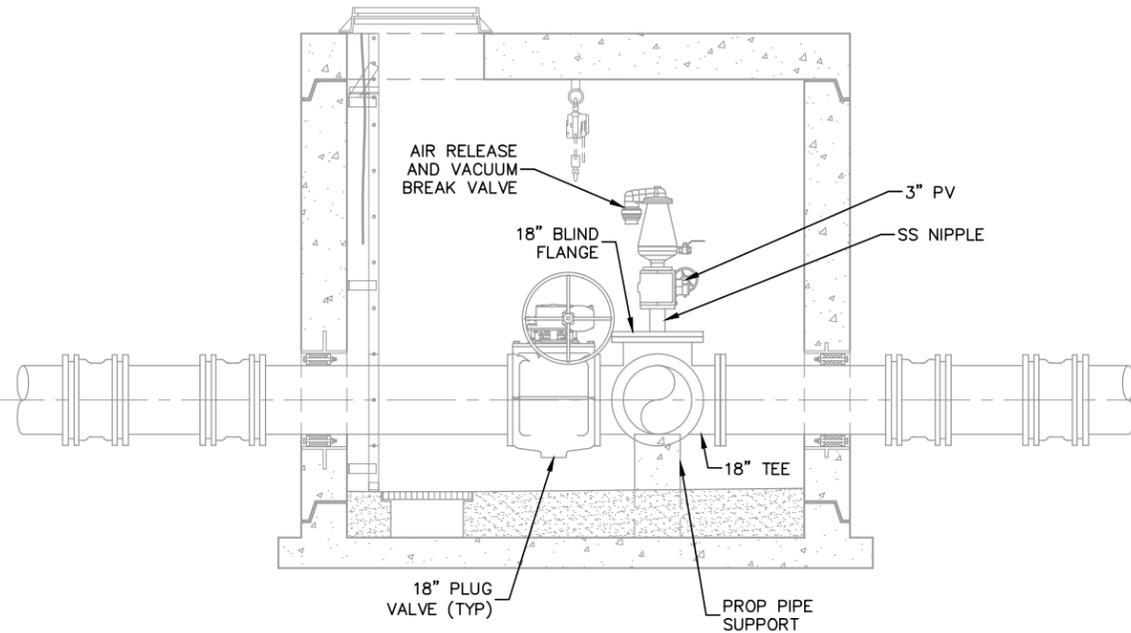
UTILITIES

MCES AIR RELEASE VAULT

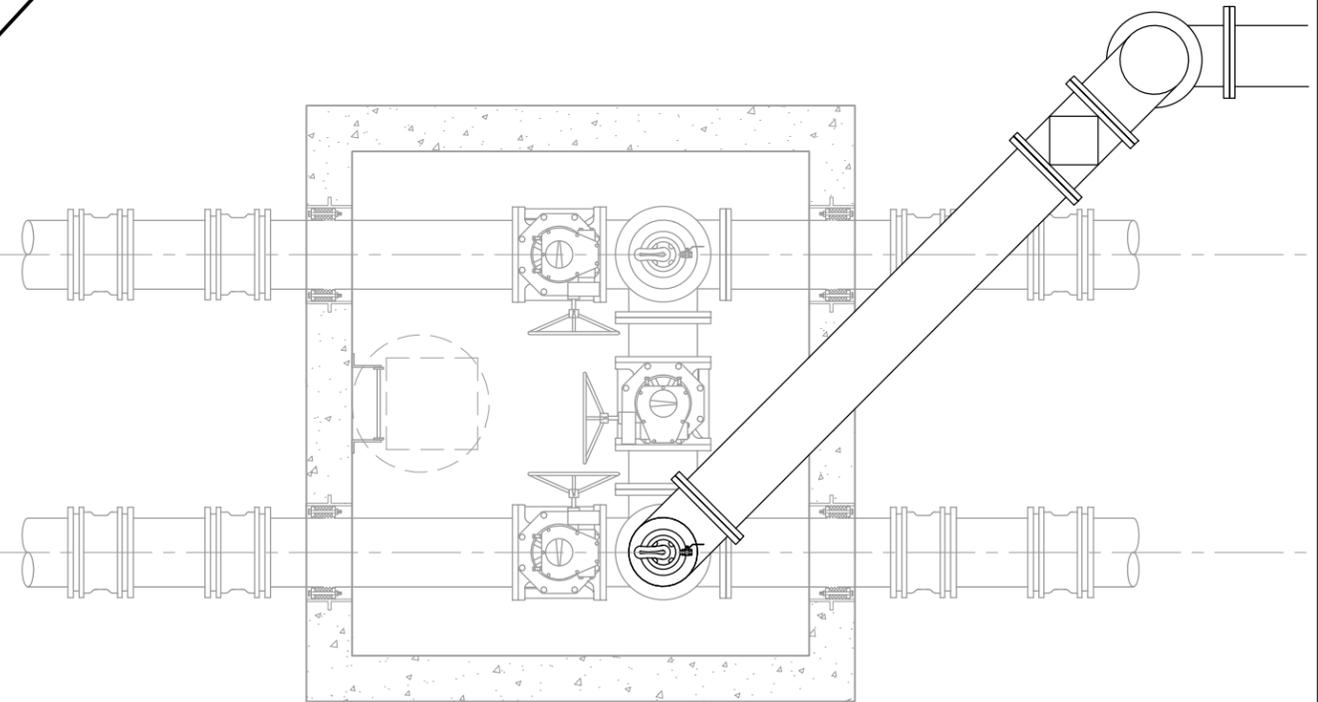
DISCIPLINE: UTILITIES	SHEET NAME: E0-UTL-DTL - 002
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SHEET
71
OF
73

Sep. 21 2015 12:05 pm v:\3400_ADC\CAD\CAD\00_EAST\PLANSHEETS\UTILITIES\E0-Utl-DTL.dwg By: MakiEM



1 AIR RELEASE VAULT SECTION (ARXX)
SCALE: 1"=2'-0"



2 AIR RELEASE VAULT SECTION (ARXX)
SCALE: 1"=2'-0"

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

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**METROPOLITAN
COUNCIL**

SOUTHWEST
Green Line LRT Extension

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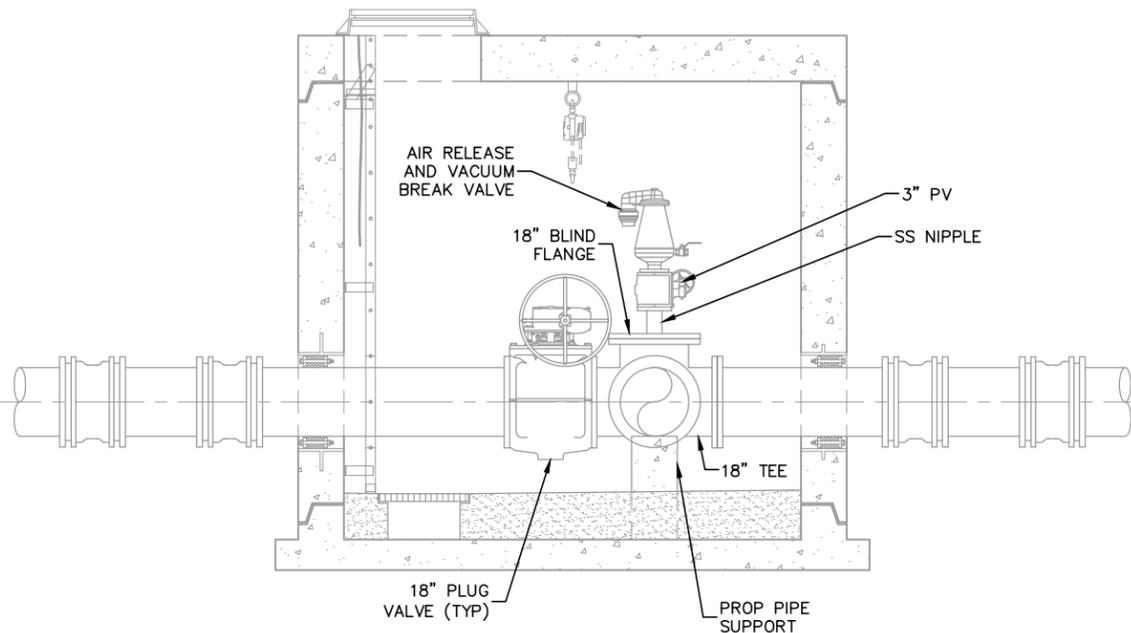
**CIVIL EAST - VOLUME 7
UTILITIES
MCES TEMPORARY CONVEYANCE
STAGING PHASE 1 DETAILS**

DISCIPLINE: UTILITIES

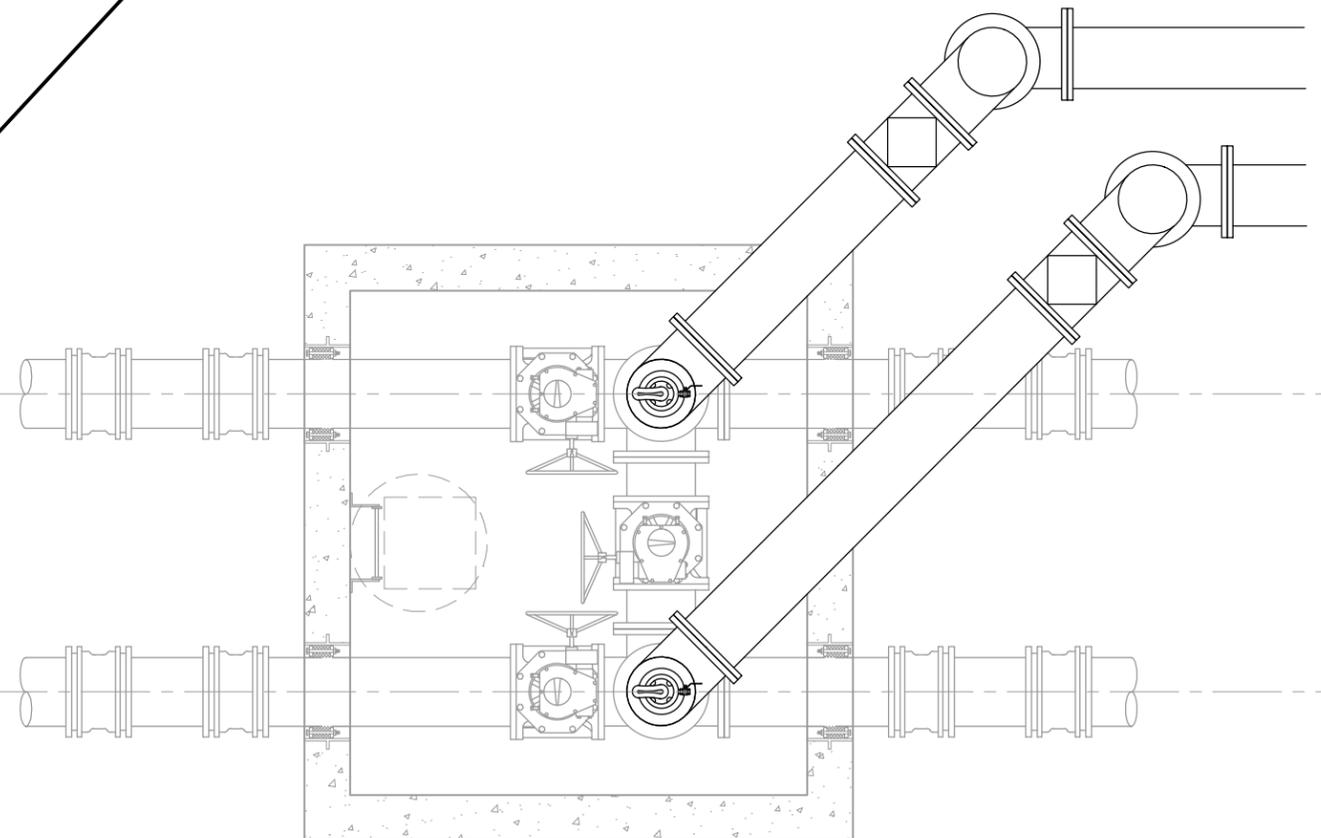
SHEET NAME: E0-Utl-DTL - 003

SHEET
72
OF
73

Sep. 21 2015 12:05 pm v:\3400_ADC\CAD\00_EAST\PLANSHEETS\UTILITIES\E0-Utl-DTL.dwg By: MakiEM



1 AIR RELEASE STRUCTURE SECTION (ARXX)
SCALE: 1"=4'-0"



2 AIR RELEASE STRUCTURE SECTION (ARXX)
SCALE: 1"=4'-0"

NO.	DATE	BY	CHECK	DESIGN	REVISION / SUBMITTAL

AECOM

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METROPOLITAN COUNCIL

SOUTHWEST
Green Line LRT Extension

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**CIVIL EAST - VOLUME 7
UTILITIES
MCES TEMPORARY CONVEYANCE
STAGING PHASE 2 DETAILS**

DISCIPLINE:

UTILITIES

SHEET NAME:

E0-Utl-DTL - 004

SHEET
73
OF
73