

CITY OF OREGON CITY
BEAVERCREEK ROAD SANITARY SEWER IMPROVEMENTS
AUGUST 2017



15350 SW SEQUOIA PRKY, SUITE 220
PORTLAND, OREGON 97224
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www.tetrattech.com



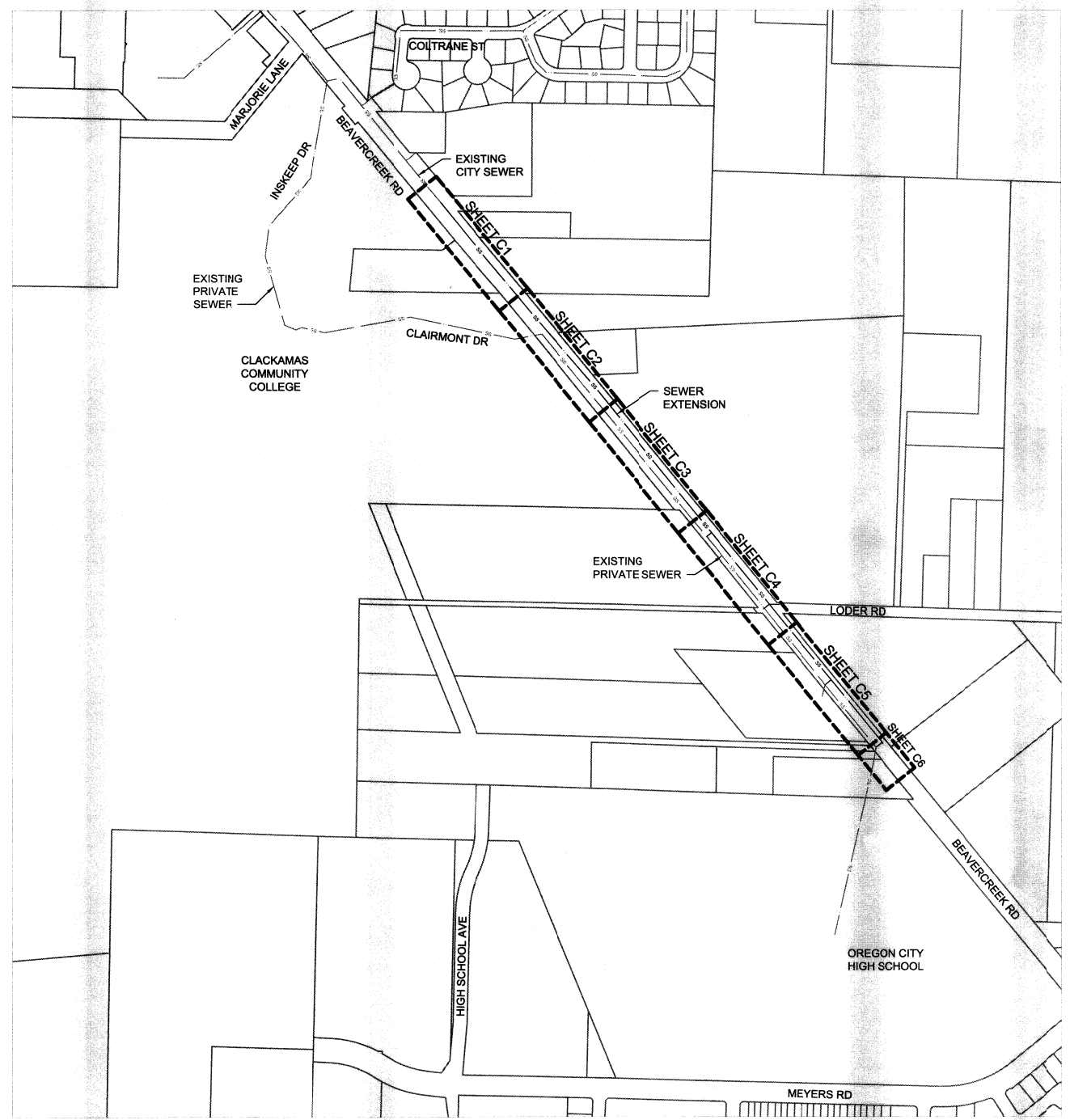
Tt PROJECT No.:
135-15285-16001

CITY OF OREGON CITY
625 CENTER STREET
P.O. BOX 3040
OREGON CITY, OREGON 97045
OREGON CITY PUBLIC WORKS DEPARTMENT
JONATHAN ARCHIBALD, P.E., PROJECT ENGINEER
(503) 974-5506

CITY PROJECT NO: CI 16-013

DRAWING INDEX

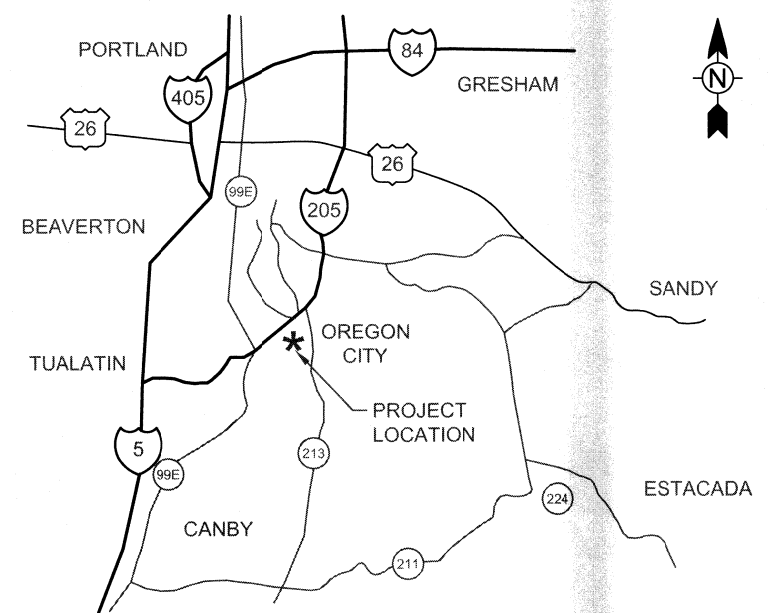
SHT #	DESCRIPTION
G1	COVER
G2	GENERAL NOTES, ABBREVIATIONS AND LEGEND
C1	PLAN AND PROFILE SANITARY SEWER BEAVERCREEK ROAD
C2	PLAN AND PROFILE SANITARY SEWER BEAVERCREEK ROAD
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C9	COUNTY DETAILS
C10	EROSION CONTROL NOTES AND DETAILS



PROJECT SITE MAP
AND SHEET KEY
NTS



VICINITY MAP:



SANITARY SEWER NOTES

LEGEND

STRUCTURE NAME	STRUCTURE DETAIL
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STRUCTURE NAME	STRUCTURE DETAIL
MH A	STA 3+43 N: 612332.5832 E: 7670461.9793
MH B	STA 6+67 N: 612081.3362 E: 7670667.1612
MH C	STA 10+29 N: 611807.6319 E: 7670902.8913
MH D	STA 13+90 N: 611525.8381 E: 7671129.5990
CO 1	STA 17+49 N: 611230.7866 E: 7671334.7491
MH E	STA 17+49 N: 611247.0333 E: 7671354.9078
CO 2	STA 21+02 N: 610954.8441 E: 7671554.8673
MH F1	STA 21+02 N: 610973.5785 E: 7671578.1318
MH F2	STA 21+22 N: 610972.7178 E: 7671609.2198
STUB (LODER)	STA 21+27 N: 610972.5114 E: 7671616.6336
MH G	STA 24+77 N: 610683.8723 E: 7671816.5335
STUB (BEAVERCREEK)	STA 27+89 N: 610434.9500 E: 7672016.9385
MH H	STA 27+89 N: 610440.7066 E: 7672012.2622

BENCHMARKS:

BENCHMARK NO. 1
(OREGON STATE PLAN, NORTH ZONE)
NORTHING = 608,905.400
EASTING = 7,673,274.872
ELEVATION = 501.398 (NAVD 88)

BENCHMARK NO. 2
(OREGON STATE PLAN, NORTH ZONE)
NORTHING = 613,097.416
EASTING = 7,669,795.799
ELEVATION = 393.634 (NAVD 88)

BASIS OF ELEVATIONS:
IE OUT (NORTHWESTERLY DOWN
BEAVERCREEK ROAD) OF SANITARY
SEWER MANHOLE 11913 LOCATED IN
FRONT OF MONEY SAVER MINI STORAGE,
SURVEYED BY RON BUSH ENGINEERING
AND SURVEYING AS 399.35.

1. ALL CONSTRUCTION IS TO BE PERFORMED IN ACCORDANCE WITH THE MOST RECENT VERSION OF CITY OF OREGON CITY STANDARDS AND 2015 OREGON APWA STANDARD SPECIFICATIONS, UNLESS NOTED ON THE PLANS OR SPECIFIED OTHERWISE.
2. CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS AND LICENSES BEFORE STARTING CONSTRUCTION, INCLUDING CLACKAMAS COUNTY RIGHT OF WAY PERMIT. A CITY BUSINESS LICENSE IS REQUIRED.
3. THE CONTRACTOR SHALL POTHOLE AND VERIFY LOCATIONS, ELEVATIONS, TYPES AND SIZES OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTING NEW PIPING AS DIRECTED BY THE ENGINEER. POTHOLING SHALL SUFFICIENTLY PRECEDE LAYING OF PIPE TO ALLOW REQUIRED ELEVATION ADJUSTMENTS TO BE ACCOMPLISHED WITHOUT REWORK. ELEVATION ADJUSTMENTS SHALL BE EXPECTED AND ARE INCIDENTAL TO THE WORK. DEFLECT PIPE AS REQUIRED AND WITHIN (80%) OF MANUFACTURER'S TOLERANCES TO AVOID EXISTING UTILITIES AND COMPLETE TIE-INS.
4. LOCATIONS AND GRADES OF EXISTING UTILITIES ARE BASED UPON INFORMATION PROVIDED BY THE UTILITIES AND ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY. OREGON LAW REQUIRES CONTRACTOR TO FOLLOW RULES ADOPTED BY THE OREGON UTILITY NOTIFICATION CENTER (PHONE NO: (503) 246-6699) SET FORTH IN OAR 952-001-0010 THROUGH OAR 952-001-0090. THE CONTRACTOR SHALL HAVE UTILITIES LOCATED IN ACCORDANCE WITH ORS 757.541 THROUGH 757.571 PRIOR TO COMMENCING CONSTRUCTION. CONTRACTOR SHALL ALSO FIELD VERIFY DEPTHS OF EXISTING UTILITIES TO IDENTIFY POTENTIAL CONFLICTS AND AS REQUIRED FOR CONNECTIONS TO EXISTING SYSTEMS.
5. ALL AREAS SHALL BE RESTORED TO PRECONSTRUCTION CONDITIONS. APPROXIMATE PERMANENT PAVEMENT RESTORATION LIMITS ARE SHOWN ON THE PLANS BUT THE ACTUAL LIMITS SHALL BE APPROVED BY THE ENGINEER DURING CONSTRUCTION.
6. MAINTENANCE OF THE WORK AREA AND APPROACH ROADS IS THE RESPONSIBILITY OF THE CONTRACTOR. THE WORK AREA AND APPROACH ROADS SHALL BE MAINTAINED IN A CLEAN CONDITION, FREE FROM OBSTRUCTIONS AND HAZARDS.
7. UTILITIES OR INTERFERING PORTIONS OF UTILITIES THAT ARE ABANDONED IN PLACE SHALL BE REMOVED BY THE CONTRACTOR TO THE EXTENT NECESSARY TO ACCOMPLISH THE WORK. THE CONTRACTOR SHALL FILL THE REMAINING LINES WITH SAND AND PLUG ALL OTHER PENETRATIONS INTO THE PIPE.
8. ALL EXCAVATIONS SHALL BE BACKFILLED AND PROVIDED WITH AN IMMEDIATE PATCH AT THE END OF EACH DAY. AN IMMEDIATE PATCH MAY INCLUDE STEEL SHEETS WITH SIGNS OR BE A MINIMUM OF TWO-INCH THICK COLD MIX ASPHALT ON 6-INCH THICK LAYER OF CRUSHED ROCK. STEEL SHEETS SHALL BE PINNED AND RAMPED WITH COLD MIX ASPHALT. IMMEDIATE PATCHES SHALL BE REPLACED WITH AN INTERIM OR PERMANENT PATCH WITHIN 36 HOURS.
9. INTERIM PATCHES SHALL CONSIST OF A MINIMUM 2-INCH THICK HMAC ON 6-INCH THICK LAYER OF COMPACTED CRUSHED ROCK. INTERIM PATCHES SHALL BE REPLACED WITH A FINAL PATCH WITHIN 30 DAYS AFTER PLACEMENT. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING TEMPORARY AC PAVEMENT WITH SMOOTH EDGE CONDITIONS AND NO POTHOLES UNTIL PERMANENT PAVEMENT RESTORATION IS COMPLETE. ANY RESTORATION OF TEMPORARY PAVEMENT AS DIRECTED BY THE PROJECT MANAGER SHALL BE AT THE CONTRACTOR'S EXPENSE. EDGES OF TEMPORARY PAVEMENT SHALL BE TACK COATED.
10. STAGING AND STORAGE OF MATERIALS WITHIN THE PUBLIC RIGHT-OF-WAY IS NOT PERMITTED EXCEPT AS SPECIFICALLY AUTHORIZED IN SPECIFICATIONS OR BY THE INSPECTOR AND CITY PROJECT MANAGER.
11. VEHICULAR AND PEDESTRIAN ACCESS TO PROPERTIES SHALL BE MAINTAINED AT ALL TIMES INCLUDING NORMAL DELIVERY AND MAIL SERVICE, UNLESS WRITTEN APPROVAL OF THE CITY'S PROJECT MANAGER IS PROVIDED.
12. THE CONTRACTOR SHALL MAKE PROVISIONS TO KEEP ALL EXISTING UTILITIES IN SERVICE AND PROTECT THEM DURING CONSTRUCTION. CONTRACTOR SHALL IMMEDIATELY REPAIR OR REPLACE ANY DAMAGED UTILITIES USING MATERIALS AND METHODS APPROVED BY THE UTILITY OWNER. NO SERVICE INTERRUPTIONS SHALL BE PERMITTED WITHOUT PRIOR WRITTEN AGREEMENT WITH THE UTILITY PROVIDER.
13. ALL WATER LINE CROSSINGS SHALL BE IN CONFORMANCE WITH OAR CHAPTER 333.
14. CONTRACTOR SHALL NOTIFY PROJECT ENGINEER AND CITY OF OREGON CITY PROJECT MANAGER 48 HOURS IN ADVANCE OF STARTING CONSTRUCTION AND 24 HOURS BEFORE RESUMING WORK AFTER SHUTDOWNS, EXCEPT FOR NORMAL RESUMPTION OF WORK FOLLOWING SATURDAYS, SUNDAYS OR HOLIDAYS.
15. SETTLEMENT OF THE FINISHED SURFACE WITHIN THE WARRANTY PERIOD SHALL BE CONSIDERED TO BE A RESULT OF IMPROPER COMPACTION AND SHALL BE PROMPTLY REPAIRED BY THE CONTRACTOR AT NO EXPENSE TO THE OWNER.
16. UTILITY CONSTRUCTION SEQUENCING WILL BE REQUIRED IN ORDER TO PREVENT CONFLICTS WITH EXISTING UTILITIES REMAINING IN SERVICE UNTIL NEWLY INSTALLED UTILITIES ARE CONNECTED AND IN SERVICE. CONTRACTOR SHALL SEQUENCE UTILITY WORK INCLUDING TEMPORARY CONNECTIONS AND BYPASSES AS REQUIRED SUCH AS TO MINIMIZE DISRUPTION OF SERVICES. ANY DISRUPTION OF SERVICE SHALL BE COORDINATED WITH THE CITY PROJECT MANAGER A MINIMUM 72 HOURS PRIOR TO DISRUPTION. SEE SPEC SECTION 105.4.01 REGARDING CONSTRUCTION SEQUENCING REQUIREMENTS FOR THIS PROJECT.
17. SEE SHEET C10 FOR EROSION CONTROL NOTES.
18. PROPERTY LINES SHOWN ON THE DRAWINGS SHOULD BE CONSIDERED APPROXIMATE AND MAY VARY UPON COMPLETION OF A BOUNDARY SURVEY.

1. CONTRACTOR SHALL FIELD VERIFY SIZE AND LOCATION OF ALL EXISTING SANITARY SEWER SERVICE LATERALS PRIOR TO SANITARY SEWER CONSTRUCTION. NEW SEWER LATERAL PIPING SIZE SHALL BE 4" UNLESS EXISTING SERVICE IS LARGER THAN 4", IN WHICH CASE NEW LATERAL TO MATCH EXISTING DIAMETER.
2. ALL MANHOLE INVERT ELEVATIONS (IE IN, IE OUT) SHOWN ON PLANS ARE PROJECTED TO MANHOLE CENTER.
3. WHEN CONNECTING NEW SANITARY SEWER PIPING TO EXISTING PIPING, REMOVE EXISTING PIPE TO NEAREST JOINT. CONNECT NEW PIPE TO EXISTING WITH FERNCO DONUT JOINT SEALER OR EQUAL. CONTRACTOR SHALL FIELD VERIFY EXISTING PIPE TYPE AND SIZE.
4. CAST IRON PAVING RINGS ARE NOT PERMITTED ON NEW MANHOLES. FOR ADJUSTMENT OF EXISTING MANHOLE RIMS IN ASPHALT OVERLAY AREAS, ONE CAST IRON PAVING RING IS PERMITTED AND SHALL BE SPOT WELD TO THE FRAME TO PREVENT MOVEMENT.
5. THE MINIMUM CENTER TO CENTER DISTANCE BETWEEN SANITARY SERVICE LATERALS IS 3 FEET.
6. ALL BACKFILL TO BE CLASS B UNLESS SHOWN OTHERWISE. SEE CITY STANDARD DWG #313.

1. TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE MUTCD AND THE TRAFFIC CONTROL PLAN SUBMITTED BY THE CONTRACTOR AND APPROVED BY THE CITY AND THE COUNTY. A COPY OF THE APPROVED PLAN SHALL BE AVAILABLE AT THE WORK SITE AT ALL TIMES. THE CITY RESERVES THE RIGHT TO MODIFY TRAFFIC CONTROL AS MAY BE NECESSARY TO INSURE PUBLIC SAFETY.
2. THE CONTRACTOR IS RESPONSIBLE FOR PROVISION OF TIMELY NOTIFICATION OF TRAFFIC FLOW DISRUPTIONS TO AREA WIDE EMERGENCY SERVICES, TRASH COLLECTORS, POSTAL SERVICE, TRI-MET, THE CITY OF OREGON CITY, AND CLACKAMAS COUNTY.
3. ADVANCE WARNING OF IMMINENT TRAFFIC DISRUPTION SHALL BE PROVIDED TO THE GENERAL MOTORING PUBLIC BY PLACEMENT OF AN ADVANCE NOTIFICATION SIGN AT EACH END OF THE CONSTRUCTION AREA 72 HOURS (MIN) BEFORE INITIATION OF CONSTRUCTION WORK.
4. TRAFFIC CONTROL PLANS SHALL COMPLY WITH THE OREGON DEPARTMENT OF TRANSPORTATION "SHORT TERM TRAFFIC CONTROL HANDBOOK". TRAFFIC CONTROL DEVICES SHALL COMPLY WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" PREPARED BY THE FEDERAL HIGHWAY ADMINISTRATION, LATEST REVISION. CONTRACTOR SHALL COMPLY WITH ALL CONDITIONS SPECIFIED IN ROAD PERMITS ISSUED FOR THIS PROJECT.
5. CONTRACTOR SHALL COORDINATE ALL STREET AND SIDEWALK CLOSURES WITH THE CITY. CONTRACTOR SHALL SUPPLY SIGNING AND BARRICADES AS REQUIRED TO ASSURE AUTOMOTIVE AND PEDESTRIAN SAFETY.
6. TWO TRAVEL LANES SHALL BE MAINTAINED AT ALL TIMES UNLESS SPECIFICALLY APPROVED BY THE CITY AND COUNTY.

- COMPLETE THE PROJECT AS SEQUENCED BELOW AND SUBMIT A DETAILED SCHEDULE THAT SHOWS THE ASSOCIATED TIME FOR EACH STEP:
- INSTALL THE SANITARY SEWER MAIN
- TEST MAIN LINES
- INSTALL LATERALS BEGINNING OF THE UPSTREAM END AND MOVING DOWNSTREAM
- TEST LATERAL LINES
- PAVEMENT/SURFACE RESTORATION
2. BACKFILL SHALL BE PLACED AND COMPACTED IN A MAXIMUM OF 12-INCH LIFTS. COMPACTION TESTING REQUIRED AT A FREQUENCY OF 2 TESTS FOR EVERY 100 FEET OF TRENCH. THE TESTS SHALL OCCUR AT 4-FEET BELOW FINISH GRADE, AND AT THE TOP OF THE BACKFILL SECTION.
3. ALL SEWER LINES SHALL BE VIDEO INSPECTED BY THE CONTRACTOR PER APWA DIVISION III SECTION 303.3.11 AND A MANDREL PASSED THROUGH ALL NEW MAIN LINES TO CHECK DEFLECTION PER APWA DIVISION III, SECTION 303.3.10.
4. ALL SEWER LINES SHALL BE AIR TESTED PER DIVISION III, SECTION 303.3.9C OF THE STANDARD SPECIFICATIONS. AS REQUIRED BY APWA MANHOLES SHALL BE HYDROSTATICALLY TESTED IN ACCORDANCE WITH APWA DIVISION III, SECTION 306.3.03. ALL MANHOLES MAY BE VACUUM TESTED AS A SUBSTITUTION FOR HYDROSTATIC TESTING IF APPROVED BY THE CITY ENGINEER.
5. PAVEMENT RESURFACING, WHERE REQUIRED, SHALL CONFORM TO APWA DIVISION II OF THE STANDARD SPECIFICATIONS AND THE CLACKAMAS COUNTY ROADWAY STANDARDS. COMPACTION SHALL MEET COUNTY REQUIREMENTS PER STANDARD DRAWING U200.
6. CONTRACTOR SHALL SUBMIT A BYPASS PUMPING PLAN TO THE ENGINEER FOR APPROVAL PRIOR TO CONSTRUCTION PER SECTION 00490 OF THE SPECIFICATIONS. DRY SEASON DAILY PEAK FLOW ASSUMED TO BE 180 GPM.

- | | |
|--------|-----------------------------------|
| AC | ASPHALTIC CONCRETE |
| APWA | AMERICAN PUBLIC WORKS ASSOCIATION |
| BM | BENCHMARK |
| BTM | BOTTOM |
| CB | CATCH BASIN |
| CDF | CONTROLLED DENSITY FILL |
| CI | CAST IRON |
| CL | CENTERLINE |
| CMP | CORRUGATED METAL PIPE |
| CO | CLEANOUT |
| CONC | CONCRETE |
| CONST | CONSTRUCTION |
| COORD | COORDINATE(S) |
| CPLG | COUPLING |
| DET | DETAIL |
| DI | DUCTILE IRON |
| DIP | DUCTILE IRON PIPE |
| DIA | DIAMETER |
| DWG | DRAWING |
| E | ELECTRICITY |
| EL | ELEVATION |
| EOP | EDGE OF PAVEMENT |
| EQ | EQUAL |
| ESMT | EASEMENT |
| EXIST | EXISTING |
| EXP | EXPANSION |
| FAB | FABRICATE |
| FH | FIRE HYDRANT |
| FLEX | FLEXIBLE |
| FLG | FLANGE |
| FT | FEET |
| G | GAS |
| GAL | GALVANIZED |
| GV | GATE VALVE |
| HDPE | HIGH DENSITY POLYETHYLENE |
| HORIZ | HORIZONTAL |
| HYD | HYDRANT |
| IE | INVERT ELEVATION |
| IR | IRON ROD |
| JT | JOINT |
| LAT | LATERAL |
| LF | LINEAR FEET |
| LOC | LOCATION |
| LT | LEFT |
| MAX | MAXIMUM |
| MECH | MECHANICAL |
| MFR | MANUFACTURER |
| MH | MANHOLE |
| MIN | MINIMUM |
| MJ | MECHANICAL JOINT |
| NIC | NOT IN CONTRACT |
| NTS | NOT TO SCALE |
| OC | ON CENTER |
| OD | OUTSIDE DIAMETER |
| PP | POWER POLE |
| PSI | POUNDS PER SQUARE INCH |
| PT | POINT |
| PVC | POLYVINYL CHLORIDE |
| ROW | RIGHT-OF-WAY |
| RCP | REINFORCED CONCRETE PIPE |
| REQ'D | REQUIRED |
| RIM | RIM ELEVATION |
| RT | RIGHT |
| S/W | SIDEWALK |
| SD | STORM DRAIN |
| SVC | SERVICE |
| SHT | SHEET |
| SL | SLOPE |
| SPEC | SPECIFICATIONS |
| SQ YD | SQUARE YARD |
| SS | SANITARY SEWER |
| STA | STATION |
| STL | STEEL |
| STD | STANDARD |
| TB | THRUST BLOCK |
| T, TEL | TELEPHONE |
| TEMP | TEMPORARY |
| TL | TAXLOT |
| TRANS | TRANSITION |
| TYP | TYPICAL |
| VERT | VERTICAL |
| VLT | VAULT |
| W | WATER |
| WS | WATER SERVICE |
| W/ | WITH |

- | SYMBOL
(EXISTING) | DESCRIPTION |
|----------------------|---------------------------------|
| | FOUND BENCHMARK
- SEE G002 |
| | POWER POLE |
| | LIGHT POLE |
| | GAS METER |
| | GAS VALVE |
| | GUY ANCHOR |
| | WATER BLOWOFF VALVE |
| | WATER VALVE |
| | WATER METER |
| | FIRE HYDRANT |
| | SIGN |
| | CLEANOUT |
| | SANITARY SEWER MANHOLE |
| | STORM SEWER MANHOLE |
| | CATCH BASIN |
| | MAILBOX |
| | CABLE TELEVISION JUNCTION BOX |
| | DECIDUOUS TREE |
| | EVERGREEN TREE |
| | SHRUBS |
| | SITE ADDRESS |
| | EXISTING CURB |
| | UNDERGROUND WATER LINE |
| | OVERHEAD LINE |
| | UNDERGROUND TELE-COM |
| | UNDERGROUND STORM DRAIN LINE |
| | UNDERGROUND SANITARY SEWER LINE |
| | UNDERGROUND POWER |
| | UNDERGROUND GAS LINE |
| | SS LINE TO BE ABANDONED |
| | FENCE AS NOTED |
| | EDGE OF ASPHALT SURFACE |
| | RETAINING WALL - KEYSTONE |
| | EDGE OF GRAVEL SURFACE |
| | INDEX CONTOUR |
| | MINOR CONTOUR |
| | PROPERTY LINE (APPROXIMATE) |
- | SYMBOL
(IS CONTRACT) | DESCRIPTION |
|-------------------------|----------------------------------|
| | SANITARY SEWER
MANHOLE & PIPE |
| | SANITARY SEWER PIPE |
| | CLEANOUT W/ LATERAL |
| | PAVEMENT RESTORATION |
| | GRIND AND INLAY |



EXPIRES: 12/31/10

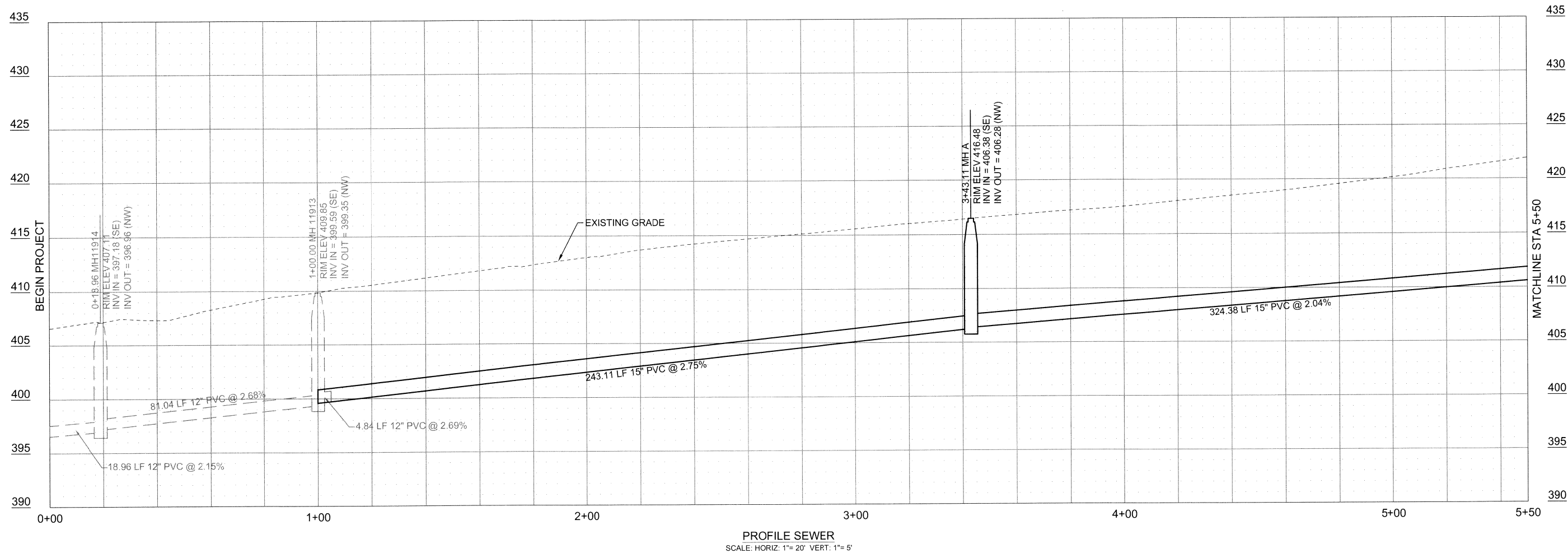
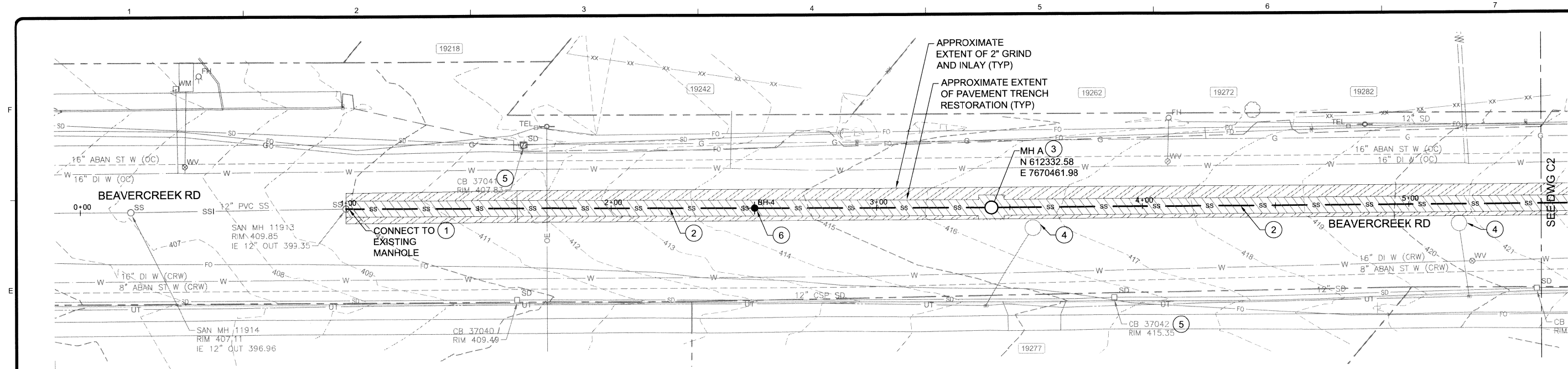
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CITY OF OREGON CITY
BEAVERCREEK ROAD
SANITARY SEWER IMPROVEMENTS
GENERAL NOTES,
ABBREVIATIONS, AND
LEGEND

Project No.:	135-15285-16001
Designed By:	HBD
Drawn By:	HBD
Checked By:	GAM

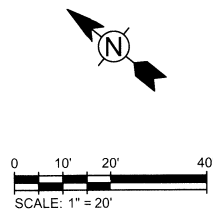
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NOTES:

- 1 REMOVE EXISTING 12-INCH SANITARY SEWER STUB. CORE NEW HOLE IN EXISTING MANHOLE AND CONNECT 15-INCH PVC SANITARY SEWER PER DETAIL 1/C7.
- 2 INSTALL 15-INCH PVC SANITARY SEWER. TRENCH, BACKFILL, AND PAVEMENT RESTORATION PER COUNTY STD DWG U200/C9. TOTAL PAVEMENT THICKNESS TO BE 8 INCHES MINIMUM, INCLUDING 6 INCHES PERMANENT TRENCH RESURFACING AND 2 INCHES GRIND AND INLAY TO EDGE OF EXISTING LANE.
- 3 INSTALL 48-INCH MANHOLE PER CITY STD DWG 401/C8.
- 4 COORDINATE WITH COUNTY TO RESTORE TRAFFIC LOOPS (TYP).
- 5 INSTALL INLET PROTECTION PER DETAIL 1/C10.
- 6 APPROXIMATE BOREHOLE LOCATION (BH-4). EXPLORATION ENCOUNTERED 12-13 INCHES OF AC PAVEMENT.



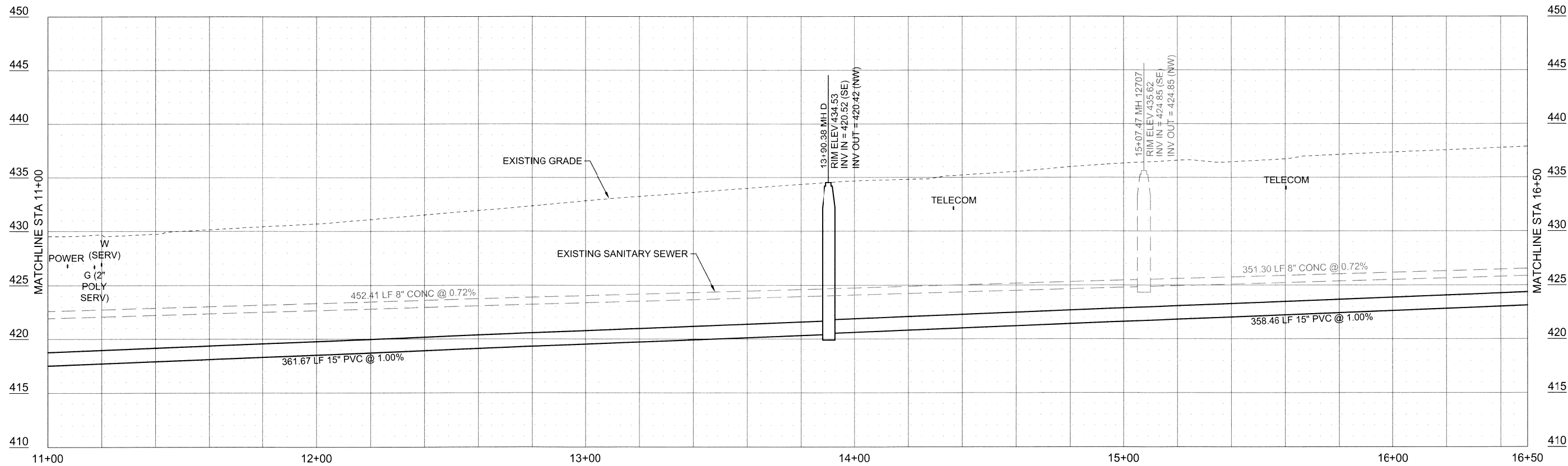
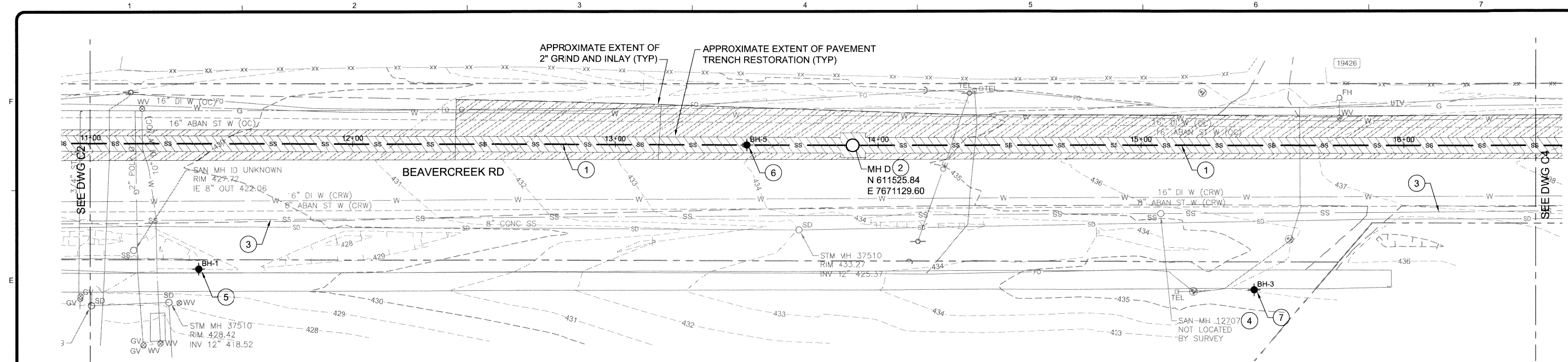
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CITY OF OREGON CITY
BEAVERCREEK ROAD
SANITARY SEWER IMPROVEMENTS
PLAN AND PROFILE
SANITARY SEWER
BEAVERCREEK ROAD

Project No.: 135-15235-16001
Designed By: HBD
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C1

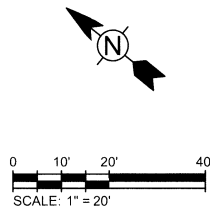
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PROFILE SEWER
SCALE: HORIZ: 1"= 20' VERT: 1"= 5'

NOTES:

1. INSTALL 15-INCH PVC SANITARY SEWER. TRENCH, BACKFILL, AND PAVEMENT RESTORATION PER COUNTY STD DWG U200/C9. TOTAL PAVEMENT THICKNESS TO BE 8 INCHES MINIMUM, INCLUDING 6 INCHES PERMANENT TRENCH RESURFACING AND 2 INCHES GRIND AND INLAY TO EDGE OF EXISTING LANE.
2. INSTALL 48-INCH MANHOLE PER CITY STD DWG 401/C8.
3. FILL EXISTING SANITARY SEWER WITH SAND AND ABANDON IN PLACE.
4. REMOVE MANHOLE CONE, PLUG PIPE OPENINGS WITH CONCRETE, AND FILL PER DETAIL 2/C7.
5. APPROXIMATE BOREHOLE LOCATION (BH-1). EXPLORATION ENCOUNTERED 8 INCHES OF AC PAVEMENT AND BOULDERS BELOW 19 FEET.
6. APPROXIMATE BOREHOLE LOCATION (BH-5). EXPLORATION ENCOUNTERED 12-13 INCHES OF AC PAVEMENT, 7 INCHES OF CONCRETE PAVEMENT, AND BASALT BOULDERS AND WEATHERED BASALT BELOW 15 FEET.
7. APPROXIMATE BOREHOLE LOCATION (BH-3). EXPLORATION ENCOUNTERED BOULDERS BELOW 18 FEET.



MARK	DATE	DESCRIPTION

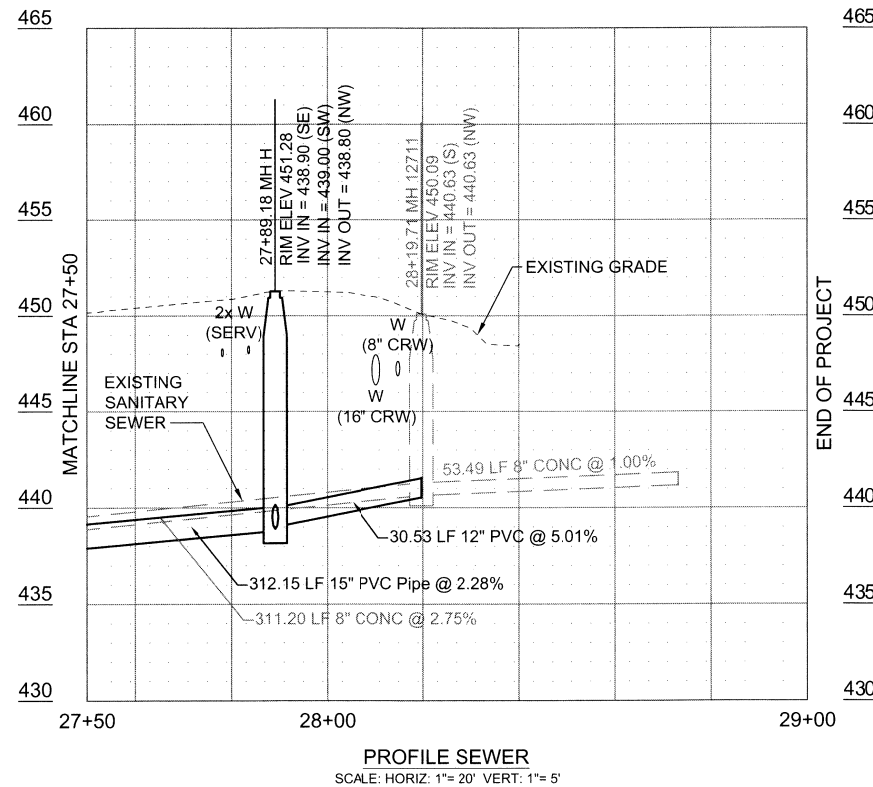
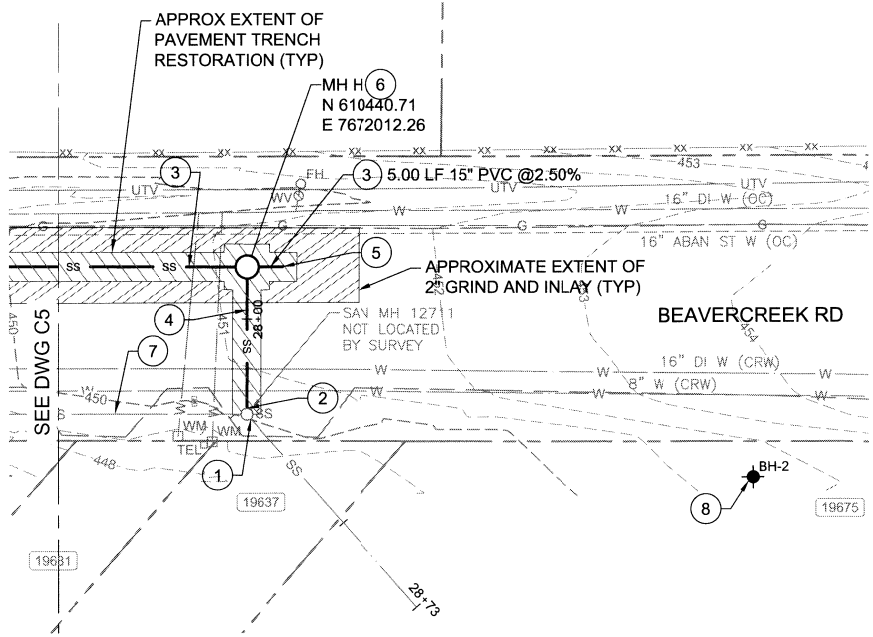
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BEAVERCREEK ROAD

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C3

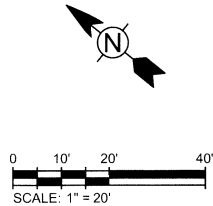
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F
E
D
C
B
A



NOTES:

- 1 FIELD VERIFY LOCATION OF EXISTING SANITARY MANHOLE. COORDINATE WITH ENGINEER TO ADJUST MH H LOCATION AND INVERT ELEVATION TO MATCH.
- 2 CORE NEW HOLE IN EXISTING MANHOLE AND CONNECT 8-INCH PVC SANITARY SEWER PER DETAIL 1/C7. AFTER NEW SEWER IS CONNECTED AT DOWNSTREAM POINT, PLUG EXISTING SEWER WITH CONCRETE TO NORTHWEST.
- 3 INSTALL 15-INCH PVC SANITARY SEWER, TRENCH, BACKFILL, AND PAVEMENT RESTORATION PER COUNTY STD DWG U200/C9. TOTAL PAVEMENT THICKNESS TO BE 8 INCHES MINIMUM, INCLUDING 6 INCHES PERMANENT TRENCH RESURFACING AND 2 INCHES GRIND AND INLAY TO EDGE OF EXISTING LANE.
- 4 INSTALL 12-INCH PVC SANITARY SEWER, TRENCH, BACKFILL, AND PAVEMENT RESTORATION PER COUNTY STD DWG U200/C9. TOTAL PAVEMENT THICKNESS TO BE 8 INCHES MINIMUM, INCLUDING 6 INCHES PERMANENT TRENCH RESURFACING AND 2 INCHES GRIND AND INLAY TO EDGE OF EXISTING LANE.
- 5 PROVIDE 12-INCH PVC SANITARY SEWER STUB, ENDING WITH PLUG AND RUBBER GASKET.
- 6 INSTALL 48-INCH MANHOLE PER CITY STD DWG 401/C8.
- 7 FILL EXISTING SANITARY SEWER WITH SAND AND ABANDON IN PLACE.
- 8 APPROXIMATE BOREHOLE LOCATION (BH-2).



TETRA TECH

REGISTERED PROFESSIONAL ENGINEER

OREGON

JUL 26 1988

GORDON A. MUNRO

EXPIRES: 2011

CITY OF OREGON CITY

BEAVERCREEK ROAD

SANITARY SEWER IMPROVEMENTS

PLAN AND PROFILE

SANITARY SEWER

BEAVERCREEK ROAD

Project No.: 135-15285-16001

Designed By: HBD

Drawn By: HBD

Checked By: GAM

C6

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15350 SW SEQUOIA PKWY, SUITE 220

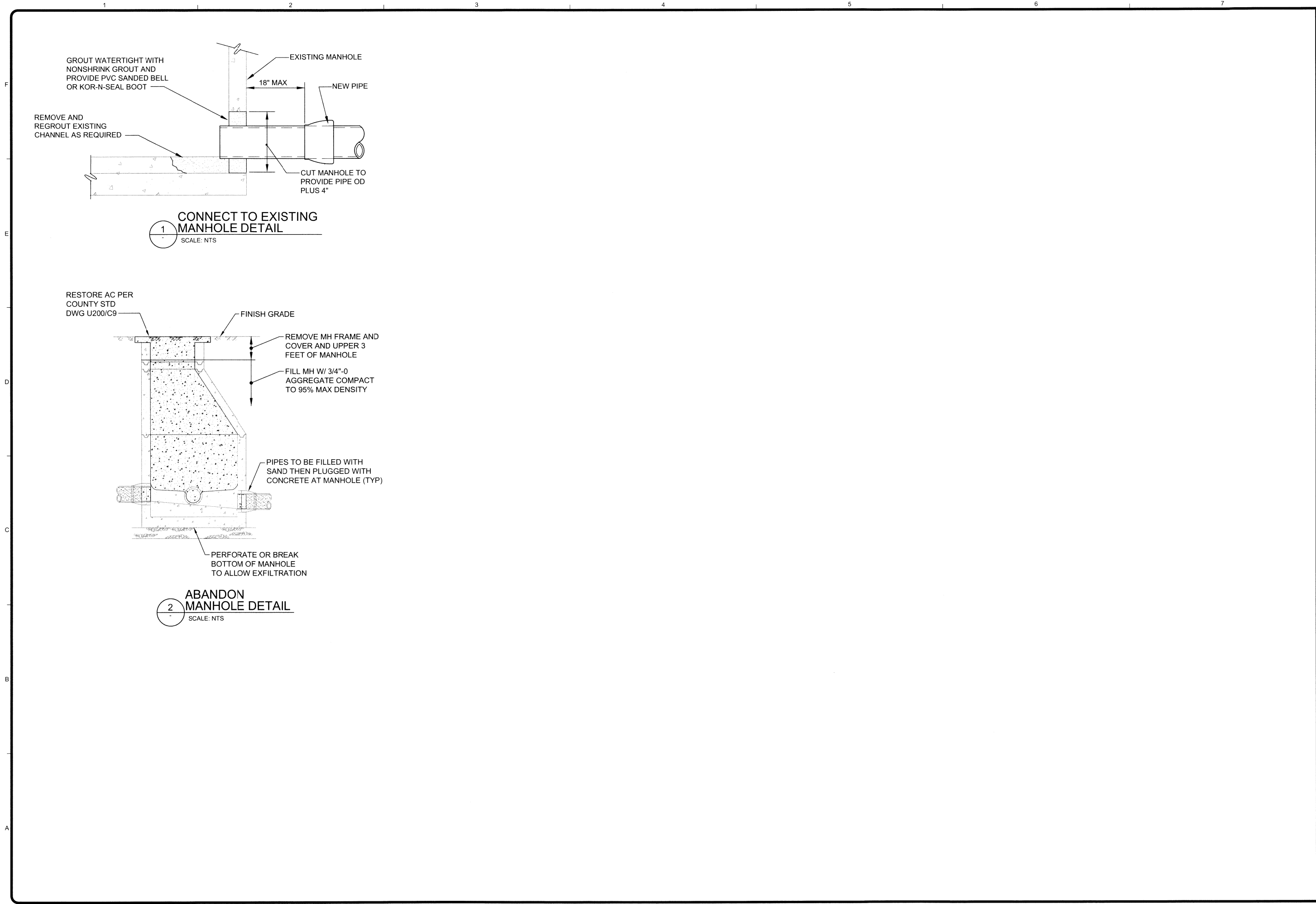
PORTLAND, OREGON 97224

PHONE: 503.684.9097 FAX: 503.698.0683

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Bar Measures 1 inch

8/11/2017 10:02:05 AM - P:\15285\135-15285-16001\CAD\SHEETFILES\C7 - SANITARY SEWER DETAILS.DWG - BENNETTDAGGETT, HUNTER



**TETRA TECH**



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ENGINEER
14,047
OREGON
JUL 26, 1988
GORDON A. MUNRO
EXPIRES: 12/31/18

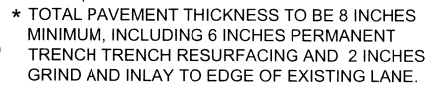
CITY OF OREGON CITY BEAVERCREEK ROAD SANITARY SEWER IMPROVEMENTS SANITARY SEWER DETAILS	MARK	DATE	DESCRIPTION	BY

Project No.:	135-15285-16001
Designed By:	HBD
Drawn By:	HBD
Checked By:	GAM

C7

Bar Measures 1 inch

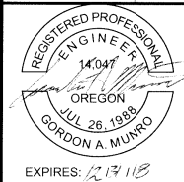
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1. THE EXISTING A.C. SHALL BE SAWCUT THROUGH ENTIRE A.C. SECTION PRIOR TO EXCAVATION.
2. BACKFILL IN PIPE ZONE SHALL BE PLACED IN MAXIMUM 6" LIFTS AND COMPACTED.
3. TRENCH BACKFILL SHALL BE PLACED IN MAXIMUM 12" LIFTS TO 95% DENSITY.
4. THE USE OF CONTROL DENSITY FILL SHALL BE DETERMINED BY CLACKAMAS COUNTY, REFER TO STANDARD DRAWING U-250.
5. SAWCUT EDGES TO BE TACKED WITH HOT LIQUID ASPHALT.
6. WORK RESULTING IN IRREGULAR TRENCH WIDTHS OR INCIDENTAL DAMAGE TO THE ROADWAY SURFACE WILL REQUIRE ANOTHER SAWCUT AND SUBSEQUENT REMOVAL OF A.C. THE SAWCUT LINE SHALL BE APPROVED BY CLACKAMAS COUNTY PRIOR TO THE PERMANENT A.C. REPAIR.
7. RESTORE A.C. SECTION WITH ~~4" OF~~ 1/2" DENSE GRADED AGGREGATE MIX OR AN EQUAL THICKNESS OF THAT REMOVED WHICHEVER IS GREATER, PLACE A.C. IN MAXIMUM 2" LIFTS.
8. A.C. JOINTS/SEAMS SHALL BE SEALED WITH HOT LIQUID ASPHALT, OR APPROVED EQUAL, AND SANDED.
9. CLACKAMAS COUNTY SHALL BE NOTIFIED FOR INSPECTION.

REVISION	DATE	BY	DEPARTMENT OF TRANSPORTATION AND DEVELOPMENT 150 BEAVERCREEK ROAD OREGON CITY, OR 97045  CLACKAMAS COUNTY	APPROVAL DATE: 1/1/10	SCALE: N.T.S.	STANDARD DRAWING
				STANDARD TRENCH AND BACKFILL		U200

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CITY OF OREGON CITY
BEAVERCREEK ROAD
SANITARY SEWER IMPROVEMENTS
COUNTY DETAILS

Project No.:	135-152&5-16001
Designed By:	HBD
Drawn By:	HBD
Checked By:	GAM

C9

