# CITY OF LEWISTON

## NEZ PERCE COUNTY , IDAHO

## 2018 EAST ORCHARDS SEWER EXPANSION
## PHASE I


OWNER
CITY OF LEWISTON
215 D. STREET
LEWISTON, ID 83501
(208) 746-1316

CIVIL/MECHANICAL ENGINEER
MOUNTAIN WATERWORKS
111 W MAIN ST, STE 175
LEWISTON, ID 83501
(208) 780-3990

SURVEY/CONSTRUCTION INSPECTION
JUB ENGINEERS
201 JACKSON STREET
MOSCOW, ID 83843
(208) 746-9010


DRAWING INDEX


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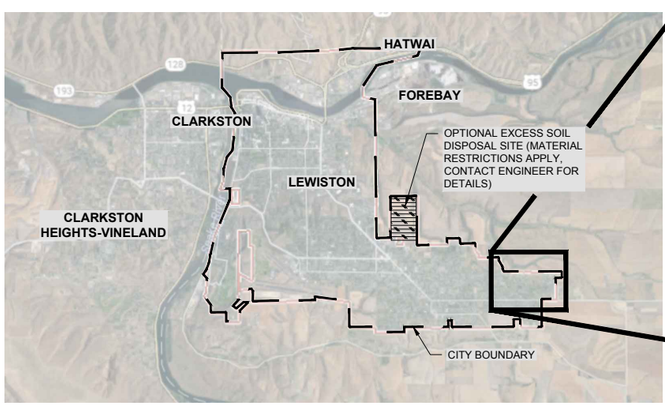
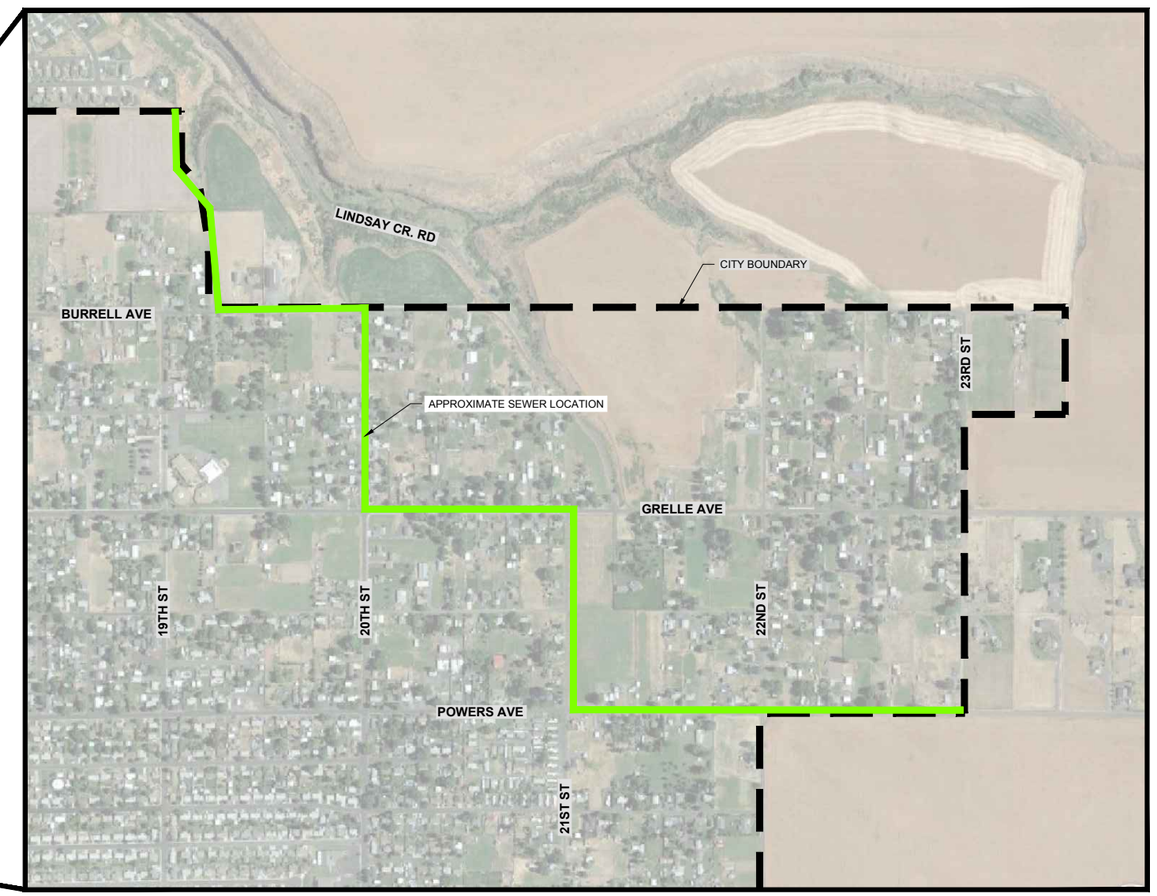



VICINITY MAP

PROFESSIONAL ENGINEER
LICENSED
10884
11-19-19
STATE OF IDAHO
RYAN J. REHDER




NORTH

LOCATION MAP

| NO. | REVISION | BY | DATE |
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| | | | |

DESIGN
DRAWN OTW
CHECKED
APPROVED

RECORD DRAWING

THESE RECORD DRAWINGS HAVE BEEN PREPARED BASED IN PART ON INFORMATION PROVIDED BY OTHERS

THIS DRAWING WAS PREPARED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREON AND IS NOT TO BE USED ELSEWHERE

Mountain WATERWORKS

ENGINEERING AND ENVIRONMENTAL SOLUTIONS
111 MAIN ST. SUITE 175
LEWISTON, IDAHO 83501
208.780.3990

IDAHO OFFICES
BOISE · LEWISTON · COEUR D'ALENE

EAST ORCHARDS SEWER EXPANSION
LEWISTON, IDAHO

TITLE SHEET

VERIFY SCALE
BAR IS ONE INCH ON FULL SIZE DRAWING
0 1"

PROJECT : 181.0020
DATE : 11/19/2019
DRAWING NO. G-1


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GENERAL NOTES:

1. ALL CONSTRUCTION WORK SHALL CONFORM TO THE 2015 VERSION OF THE IDAHO STANDARDS FOR PUBLIC WORKS CONSTRUCTION (ISPWC) , THE PLANS AND SPECIFICATIONS INCLUDING ANY AMENDMENTS, AS WELL AS FEDERAL, STATE AND LOCAL REQUIREMENTS. IN THE CASE OF CONFLICT, REFER TO ARTICLE 9 OF THE AGREEMENT. CONTRACTOR SHALL MAINTAIN A COMPLETE HARD COPY OF THE 2015 EDITION OF THE ISPWC ON THE PROJECT SITE AT ALL TIMES.

2. ALL APPROVALS AND PERMITS REQUIRED BY THE CITY OF LEWISTON, IDAHO DEPARTMENT OF TRANSPORTATION, NEZ PERCE COUNTY, UNITED STATES ENVIRONMENTAL PROTECTION AGENCY AND UNITED STATES ARMY CORPS OF ENGINEERS SHALL BE OBTAINED BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION.

3. EXISTING SITE INFORMATION INCLUDING THE LOCATION OF EXISTING SITE CONDITIONS, SURFACE TOPOGRAPHY AND PROJECT BENCHMARKS AS SHOWN ON THESE PLANS HAVE BEEN PROVIDED BY J-U-B ENGINEERS THROUGH FIELD WORK PERFORMED IN THE SUMMER OF 2017.

4. THE TYPES, LOCATIONS, SIZES AND/OR DEPTHS OF EXISTING UNDERGROUND UTILITIES AS SHOWN ON THESE DRAWINGS WERE OBTAINED FROM SOURCES OF VARYING RELIABILITY. THE CONTRACTOR IS CAUTIONED THAT ONLY ACTUAL EXCAVATION WILL REVEAL THE TYPES, EXTENT, SIZES, LOCATIONS AND DEPTHS OF SUCH UNDERGROUND UTILITIES. THE PROJECT ENGINEER ASSUMES NO RESPONSIBILITY FOR THE COMPLETENESS OR ACCURACY OF THE DELINEATION OF SUCH UNDERGROUND UTILITIES, OR THE EXISTENCE OF OTHER BURIED OBJECTS OR UTILITIES WHICH MAY BE ENCOUNTERED, BUT WHICH ARE NOT SHOWN ON THESE DRAWINGS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO IDENTIFY EXACT LOCATIONS OF EXISTING UTILITIES PRIOR TO THE START OF ANY PROJECT CONSTRUCTION. ANY LOCATION WHICH MAY POSE A CONFLICT WITH THE PROPOSED CONSTRUCTION MUST BE REPORTED TO THE PROJECT ENGINEER PRIOR TO THE START OF ANY PROJECT CONSTRUCTION.

5. MINIMUM SEPARATION SHALL BE MAINTAINED BETWEEN POTABLE WATER MAINS AND NON-POTABLE WATER MAINS IN ACCORDANCE WITH THE CITY STANDARD DRAWINGS.

6. UNLESS DETAILED, SPECIFIED, OR OTHERWISE INDICATED ON THE DRAWINGS, CONSTRUCTION SHALL BE AS INDICATED ON THE APPLICABLE TYPICAL DETAILS, CITY STANDARD DRAWINGS, AND GENERAL NOTES. TYPICAL DETAILS SHALL APPLY EVEN THOUGH NOT REFERENCED AT SPECIFIC LOCATIONS ON DRAWINGS.

7. WHERE NO CONSTRUCTION DETAILS ARE SHOWN OR NOTED FOR ANY PART OF WORK, DETAILS SHALL BE THE SAME AS FOR OTHER SIMILAR WORK.

8. ANY CHANGES TO THE DESIGN AS SHOWN IN THESE CONSTRUCTION DRAWINGS MUST BE REVIEWED AND APPROVED BY THE PROJECT ENGINEER BEFORE CHANGES ARE MADE. THIS INCLUDES CHANGES REQUESTED BY THE OWNER AND SUBCONTRACTORS.

9. ALL SEWER MAIN LINES AND MANHOLES SHALL BE AIR/VACUUM TESTED IN ACCORDANCE WITH ISPWC.

10. ALL SEWER MAIN LINES SHALL BE HYDROCLEANED AND TV'ED UPON COMPLETION OF ALL UNDERGROUND UTILITY WORK IN ACCORDANCE WITH ISPWC BY A LICENSED CCTV INSPECTION COMPANY SPECIALIZING IN SEWER INSPECTIONS. THE CONTRACTOR SHALL SUBMIT TWO (2) COPIES OF ALL REPORTS TO THE DESIGN ENGINEER FOR REVIEW PRIOR TO PAVING.

11. COAT ALL ALUMINUM IN CONTACT WITH CONCRETE WITH COAL TAR EPOXY.

12. COAT ALL WALL THIMBLES WITH COAL TAR EPOXY.

13. CONTRACTOR SHALL MAINTAIN A COPY OF THE IDAHO DEPARTMENT OF ENVIRONMENTAL QUALITY APPROVED PLANS AND SPECIFICATIONS ON-SITE AT ALL TIMES.

14. THE CONTRACTOR SHALL CALL DIG LINE (800-342-1585) TO LOCATE ALL EXISTING UTILITIES ON EACH SEWER LINE SEGMENT AT LEAST ONE WEEK PRIOR TO EXCAVATION OF THAT SEWER LINE SEGMENT.

15. THE CONTRACTOR SHALL NOTIFY THE CITY OF LEWISTON AND THE LEWISTON ORCHARDS IRRIGATION DISTRICT (LOID) A MINIMUM OF SEVENTY-TWO (72) HOURS PRIOR TO A PLANNED DISRUPTION OF SEWER OR WATER SERVICE.

16. CONTRACTOR SHALL PROTECT ALL EXISTING MONUMENTS, SURVEY MARKERS, STREET SIGNS, UTILITIES, IRRIGATION LINES, PAVEMENT, TREES, FENCES, AND ANY OTHER IMPORTANT OBJECTS ON OR ADJACENT TO THE JOB SITE FROM DAMAGE AND REPAIR OR REPLACE DAMAGED FACILITIES AS REQUIRED BY THE OWNER AND THE PROJECT ENGINEER.

17. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS BEFORE STARTING WORK AND SHALL IMMEDIATELY NOTIFY THE PROJECT ENGINEER OF ANY DISCREPANCIES.

18. CONTRACTOR SHALL PROVIDE THE PROJECT ENGINEER WITH ONE COPY OF REDLINED AS-BUILT DRAWINGS PRIOR TO PROJECT ACCEPTANCE.

19. THE CONTRACTOR SHALL NOTIFY THE CITY OF LEWISTON AND THE PROJECT ENGINEER A MINIMUM OF FOURTY-EIGHT (48) HOURS PRIOR TO ANY SEWER PIPELINE TESTING, TV WORK AND THE POURING OF CONCRETE COLLARS.

20. THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL TRAFFIC CONTROL REQUIREMENTS AS REQUIRED BY THE CITY OF LEWISTON, NEZ PERCE COUNTY OR THE IDAHO DEPARTMENT OF TRANSPORTATION.

21. CONTRACTOR IS RESPONSIBLE FOR COMPLIANCE WITH ALL APPLICABLE SAFETY LAWS OF ANY JURISDICTIONAL BODY INCLUDING, BUT NOT LIMITED TO, SAFE WORKING PRACTICES WITHIN AND AROUND THE CONSTRUCTION AREA. IN ADDITION, JURISDICTIONAL AGENCIES, THE OWNER AND THE PROJECT ENGINEER SHALL NOT BE RESPONSIBLE FOR ENFORCING SAFETY REGULATIONS.

22. CONTRACTOR IS REQUIRED TO PAY FOR ALL COMPACTION TESTING, INCLUDING NUCLEAR DENSITY TESTING OF THE SUBGRADE, SUBBASE, BASE COURSE AND ASPHALT, AND THE COST ASSOCIATED WITH PROCTORS FOR THE BASE COURSE MATERIAL AND ASPHALT PAVEMENT. TESTING SHALL BE CONDUCTED BY AN INDEPENDENT THIRD PARTY.

23. THE SEWER COLLECTION SYSTEM IS THE CITY OF LEWISTON'S ONLY MEANS OF CONVEYING DOMESTIC WASTEWATER FROM INDIVIDUAL PRIVATE RESIDENCE'S TO THE WASTEWATER TREATMENT FACILITY. IMPAIRING THE OPERATIONAL CAPABILITIES OF THIS COLLECTION SYSTEM WILL RESULT IN DISRUPTION OF SEWER DISCHARGE FROM THE INDIVIDUAL SEWER SYSTEM USERS IN THE CITY.

24. CONDUCT WORK IN A MANNER THAT WILL NOT IMPAIR THE OPERATIONAL CAPABILITIES OF ESSENTIAL ELEMENTS OF THE COLLECTION SYSTEM.

25. LIMIT THE DURATION OF COLLECTION SYSTEM DISRUPTION TO INDIVIDUAL USERS TO A SINGLE DAY DURING APPROVED WORK HOURS.

26. THE COLLECTION SYSTEM IS CONSIDERED OPERATIONAL WHEN ALL INDIVIDUAL USERS CAN FLOW SEWAGE FROM THE RESIDENCE TO THE WASTEWATER TREATMENT FACILITY.

27. NO CITY COLLECTION SYSTEM USER WILL BE WITHOUT SEWER SERVICE LONGER THAN PERMITTED WORK HOURS OR 10 HOURS IN ANY GIVEN DAY BETWEEN THE HOURS OF 8:00 AM AND 6:00 PM. IF CONSTRUCTION REQUIRES LONGER DISRUPTION OF SERVICE THE CONTRACTOR WILL COORDINATE WITH THE CITY AND ENGINEER 24 HOURS IN ADVANCE. THE CONTRACTOR WILL INSTALL TEMPORARY FACILITIES TO PROVIDE SEWER SERVICE TO INDIVIDUAL RESIDENCES DURING NON-PERMITTED WORK HOURS.

28. GROUNDWATER MAY BE ENCOUNTERED DURING CONSTRUCTION. IT IS THE CONTRACTORS RESPONSIBILITY TO DEWATER THE TRENCH DURING CONSTRUCTION PER ISPWC SECTION 205.

29. THE CONTRACTOR MUST FOLLOW THE TRAFFIC CONTROL PLAN AT ALL TIMES, INCLUDING IF WORK IS OCCURRING IN MORE THAN ONE LOCATION WITHIN THE PROJECT AREA.

30. LOCAL ACCESS TO INDIVIDUAL DRIVEWAYS CANNOT BE BLOCKED FOR MORE THAN EIGHT (8) CONSECUTIVE HOURS. CONTRACTOR TO COORDINATE BLOCKING OF ACCESS WITH HOMEOWNERS.

31. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH PROPERTY OWNERS AND UTILITY COMPANIES DURING CONSTRUCTION.

32. OWNER TO PROVIDE CONSTRUCTION SURVEY CONSISTING OF ONE (1) TIME PLACEMENT OF STAKES FOR STRUCTURE RIM AND INVERT ELEVATIONS, SUBGRADE AND TOP OF GRAVEL VERIFICATION IN 50-FOOT INTERVALS ALONG THE ALIGNMENT WITH 25-FOOT INTERVALS AT INTERSECTIONS, AS WELL AS REFERENCE AND RESET MONUMENTS AS NECESSARY. CONTRACTOR TO SUPPLY MATERIALS FOR MONUMENTS. ALL OTHER SURVEYING NECESSARY TO COMPLETE THE WORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

EROSION AND SEDIMENT CONTROL NOTES:

1. PRIOR TO START OF CONSTRUCTION, A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) SHALL BE PREPARED BY THE CONTRACTOR. ALL CONTRACTORS WILL BE REQUIRED TO ADOPT AND FOLLOW ALL REQUIREMENTS SET FORTH IN THE SWPPP. THE SWPPP WILL BE SUBMITTED TO THE OWNER AND ENGINEER FOR REVIEW.

2. CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER INSTALLATION AND MAINTENANCE OF ALL EROSION AND SEDIMENT CONTROL MEASURES/STORMWATER BEST MANAGEMENT PRACTICES (BMP'S) IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REQUIREMENTS.

3. THE IMPLEMENTATION OF THESE EROSION AND SEDIMENT CONTROL MEASURES INCLUDING CONSTRUCTION, MAINTENANCE, REPLACEMENT AND UPGRADING OF THIS PLAN IS THE RESPONSIBILITY OF THE CONTRACTOR UNTIL ALL PROJECT CONSTRUCTION IS COMPLETED AND APPROVED BY THE OWNER. THE OWNER SHALL BE RESPONSIBLE FOR ALL MAINTENANCE AFTER THE PROJECT IS APPROVED.

4. ALL EROSION CONTROL BMP'S SHALL BE INSTALLED PRIOR TO THE START OF ANY PROJECT CONSTRUCTION OR EARTH DISTURBING ACTIVITIES AND SHOULD REMAIN IN PLACE UNTIL ALL DISTURBED/EXPOSED AREAS HAVE BEEN STABILIZED AND/OR REVEGETATED.

5. ALL STORMWATER, EROSION AND SEDIMENT CONTROL FACILITIES SHALL BE REGULARLY INSPECTED AND MAINTAINED BY THE CONTRACTOR DURING CONSTRUCTION.

6. WORK ACTIVITIES SHALL TAKE PLACE IN GRADING LIMITS AS SHOWN ON THESE PLANS. CONTRACTOR SHALL PRESERVE NATURAL LANDSCAPE OUTSIDE OF CONSTRUCTION LIMITS.

7. DURING CONSTRUCTION CONTRACTOR SHALL SPRINKLE ALL DISTURBED AREAS AS NECESSARY FOR DUST ABATEMENT.

8. CONTRACTOR SHALL STOCKPILE TOPSOIL REMOVED DURING CONSTRUCTION ONSITE AND REUSE/DISTRIBUTE OVER GRADED AREAS PRIOR TO RESEEDING.

9. ALL SLOPE AND OUTLET PROTECTION SHALL BE INSTALLED IMMEDIATELY AFTER GRADING.

10. TOPSOILING AND RESEEDING OF ALL DISTURBED AREAS TO BE COMPLETED IMMEDIATELY AFTER GRADING USING A NATIVE SEED MIXTURE.

ROCK EXCAVATION:

1. CONTROLLED BLASTING MAY BE CONSIDERED IN UNDEVELOPED AREAS OF THE ALIGNMENT ON A CASE BY CASE BASIS AND MUST BE PERFORMED IN STRICT ACCORDANCE WITH CITY CODE, LEWISTON FIRE DEPARTMENT STANDARDS, AND THE MOST RECENT EDITION OF ISPWC. CONTACT THE LEWISTON FIRE DEPARTMENT FOR BLASTING PERMITTING INFORMATION AT (208) 743-3554. ROCK BLASTING IS ALLOWED FROM MH 4222 TO MH 4253.

2. A PRELIMINARY GEOTECHNICAL INVESTIGATION WAS COMPLETED USING A 1.5-INCH DIAMETER HYDRAULIC HAMMER PROBE TO DETERMINE THE DEPTH TO BEDROCK. THE DEPTH TO WEATHERED ROCK, THE DEPTH TO REFUSAL, AND THE TESTING LOCATIONS ARE INDICATED ON THE DRAWINGS. THE INDICATED DEPTHS ARE CONSIDERED APPROXIMATE AND DO NOT NECESSARILY REPRESENT THE ACTUAL BEDROCK PROFILE.

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CHECKED .
APPROVED .

PROFESSIONAL ENGINEER LICENSED 18884 11-19-19 STATE OF IDAHO RYAN J. REHDER

**RECORD DRAWING**

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111 MAIN ST. SUITE 175
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IDAHO OFFICES
BOISE · LEWISTON · COEUR D'ALENE

# EAST ORCHARDS SEWER EXPANSION

LEWISTON, IDAHO

GENERAL NOTES

VERIFY SCALE
BAR IS ONE INCH ON FULL SIZE DRAWING
0 1"

PROJECT : 181.0020
DATE : 11/19/2019
DRAWING NO.
G-2

## LINE LEGEND

SECTION LINE (SURVEYED)

EXISTING DEED OR LOT LINE (SURVEYED)

CENTERLINE

RIGHT OF WAY

EASEMENT

SILT FENCE — S

EXISTING BUILDING

EXISTING EDGE OF CONCRETE

EXISTING EDGE OF PAVEMENT — EP

EXISTING EDGE OF PAVEMENT — EP

EXISTING EDGE OF GRAVEL — EG

PROPOSED EDGE OF GRAVEL — EG

EXISTING UNDERGROUND GAS LINE — G

EXISTING WATER LINE — W

EXISTING SEWER LINE — SS

EXISTING SERVICE (WATER,GAS)

PROPOSED SEWER LINE — SS

EXISTING STORM DRAIN — SD

EXISTING OVERHEAD POWER — OHP

EXISTING UNDERGROUND POWER — UP

EXISTING UNDERGROUND TELEPHONE — UT

EXISTING FLOW LINE — <

EXISTING PRESSURE IRRIGATION LINE — PIRR

EXISTING GRAVITY IRRIGATION LINE — IRR

EXISTING FIBER OPTIC — UGFO

EXISTING CHAIN LINK FENCE

EXISTING WOOD FENCE

EXISTING VINYL FENCE

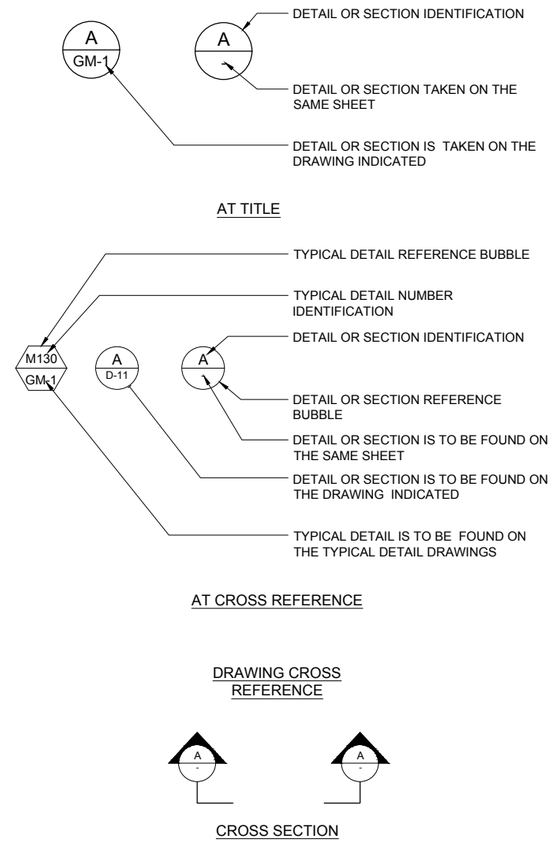
EXISTING WIRE FENCE — X

EXISTING 1' CONTOUR — 2601

EXISTING 5' CONTOUR — 2600

EXISTING DRAINAGE PIPE

EXISTING DRAINAGE PIPE




## EQUIPMENT DESIGNATION LEGEND

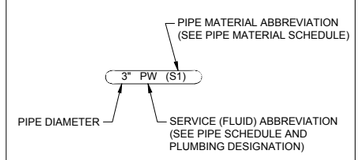
IF-101 — EQUIPMENT NUMBER

EQUIPMENT TAG

## PIPE MATERIAL SCHEDULE

| ABBREV. | SERVICE | FITTINGS |
|---|---|---|
| B1 | BLACK IRON PIPE | BLACK IRON, CLASS 300, ASTM 197, A 197M, NPT |
| C1 | CONCRETE PIPE | NONE |
| C6 | HUBLESS CAST IRON PIPE | CAST IRON, ASTM A 74 |
| C7 | HUB AND SPIGOT CAST IRON SOIL PIPE | CAST IRON, ASTM A 74 |
| CU1 | COPPER, SOFT TEMPERED, TYPE "K" | COPPER, SOLDERED JOINTS |
| CU2 | COPPER, HARD TEMPERED, TYPE "L" | COPPER, SOLDERED JOINTS |
| D1 | DUCTILE IRON, AWWA C150/151, PC150, CEMENT MOTAR LINED, RESTRAINED | DUCTILE IRON, AWWA C110, CL 150 |
| D2 | DUCTILE IRON, AWWA C150/151, PC150, CEMENT MOTAR LINED, UNRESTRAINED | DUCTILE IRON, AWWA C110, CL 150 |
| D3 | DUCTILE IRON, AWWA C150/151, PC 350 | DUCTILE IRON, AWWA C110, CL 350 |
| D4 | DUCTILE IRON, AWWA C150/151, PC150, GLASS LINED | DUCTILE IRON, AWWA C110, CL 150 |
| P1 | POLYVINYL CHLORIDE, SCH. 80 | PVC SCH 80, SOLVENT WELD SOCKET |
| P2 | POLYVINYL CHLORIDE, SCH. 40 | PVC SCH 40, SOLVENT WELD SOCKET |
| P3 | POLYVINYL CHLORIDE, SDR 35, ASTM 3034 (PS46, ASTM F679) | POLYVINYL CHLORIDE, SDR 35 ASTM 3034 |
| P4 | POLYVINYL CHLORIDE, AWWA C900, DR18 | DUCTILE IRON, AWWA C110, CL150 |
| P5 | CHLORINATED POLYVINYL CHLORIDE, SCH. 80 | CPVC, SCH. 80, SOLVENT WELD SOCKET |
| P7 | HIGH DENSITY POLYPROPYLENE, MIN. SDR 7.3 | HDPE |
| P8 | NALGENE 980 BRAIDED VIYNL TUBING, OR EQUAL | |
| P9 | POLYVINYL CHLORIDE, PIP 100 PSI | PVC PIP100 PSI |
| P10 | HDPE IPS SDR 32.5 ASTM D335 PE 3408 | HDPE IPS SDR 32.5 ASTM D3350 P3408 |
| P11 | HDPE SINGLE WALL CORRUGATED PERFORATED PLASTIC DRAIN PIPE ASTM-F-667-"C" | NONE |
| P12 | HDPE, AWWA C901, DR9 | HDPE |
| S1 | STEEL, SCH. 40 GALVANIZED | THREADED OR FLANGED, GALVANIZED |
| S2 | WELDED STEEL, AWWA C200, MORTAR LINED AND COATED | STEEL, AWWA C208, MORTAR LINED |
| S3 | WELDED STEEL, AWWA C200, MORTAR LINED AND EPOXY COATED | STEEL, AWWA C208, MORTAR LINED |
| S4 | STAINLESS STEEL, TYPE 304L OR 316L, SCH. 5 | STAINLESS STEEL |
| S5 | STAINLESS STEEL, TYPE 304L OR 316L, SCH. 10 | STAINLESS STEEL |
| S6 | STAINLESS STEEL, TYPE 304L OR 316L, SCH. 40 | STAINLESS STEEL |
| S7 | STAINLESS STEEL, ALLOY 20 | STAINLESS STEEL, ALLOY 20 |
| S8 | STEEL, ASTM A106 OR 53, SCH. 80, SEAMLESS, BLACK | THREADED, SOCKET, BUTT-WELD OR FLANGED W/ AMMONIA UNIONS |
| S9 | STEEL, ASTM 53, SCH. 40, BLACK, NATURAL GAS | MALLEABLE 150 PSI THRD. 2-INCH OR SMALLER, GREATER THAN 2-INCH WELD |
| S10 | STEEL, ASTM 53, SCH. 10 | THREADED, SOCKET, BUTT-WELD OR FLANGED W/ AMMONIA UNIONS |
| S11 | CORRUGATED METAL PIPE | NONE |

## PIPE DESIGNATION LEGEND




NOTES:
3"-ML-PVC INDICATES PIPE SIZE, SERVICE (FLUID) ABBREVIATION AND PIPE MATERIAL.

## PIPE SCHEDULE

| ABBREV. | SERVICE | TEST METHOD | TEST PRESSURE (PSI) |
|---|---|---|---|
| AS | AIR SCOUR OR AIR AGITATION | AM | 15 |
| CD | CENTRATE DRAIN | GR | 5-6.5 |
| CON | CONDUIT | AM | 5 |
| DR | DRAIN | AM | 5 |
| EFF | EFFLUENT | HH | 150 |
| FE | FILTER EFFLUENT | HH | 150 |
| HWS | HOT WATER SUPPLY | HH | 100 |
| IRR | IRRIGATION WATER | HH | 100 |
| ML | MIXED LIQUOR | HH | 150 |
| OF | OVERFLOW | LH | 20 |
| PA | PLANT AIR | HH | 150 |
| PC | PRESSURE CENTRATE | HH | 150 |
| PR | PRESSURE REUSE | HH | 150 |
| PS | PRESSURE SEWER | HH | 150 |
| PW | POTABLE WATER | HH | 150 |
| RAS | RETURN ACTIVATED SLUDGE | HH | 150 |
| RW | RAW WATER | GR | 6.5 |
| SA | SAMPLE | HH | 100 |
| SC | SUCTION CENTRATE | HH | 150 |
| SD | STORM DRAIN | GR | 6.5 |
| SE | SECONDARY EFFLUENT | HH | 150 |
| SH | SODIUM HYPOCHLORITE | HH | 125 |
| SS | SANITARY SEWER | GR | 5-6.5 |
| ST | SODIUM THIOSULFATE | HH | 125 |
| UW1 | UTILITY WATER TYPE 1 (POTABLE) | HH | 150 |
| UW2 | UTILITY WATER TYPE 2 (NON-POTABLE) | HH | 150 |
| VNT | VENT | AM | 15 |
| WAS | WASTE ACTIVIATED SLUDGE | HH | 150 |

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DESIGN ~
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CHECKED .
APPROVED .

PROFESSIONAL ENGINEER LICENSED 10884 1-22-18 STATE OF IDAHO RYAN J. REINDER

Mountain WATERWORKS


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# EAST ORCHARDS SEWER EXPANSION

LEWISTON, IDAHO

LINE LEGEND / PIPE SCHEDULE

VERIFY SCALE
BAR IS ONE INCH ON FULL SIZE DRAWING
0 1"

PROJECT : 181.0020.00
DATE : 1/22/2018
DRAWING NO.
G-3


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# LEGEND AND SYMBOLS

- BOLLARD
- EXISTING MANHOLE
- OR NEW MANHOLE
- WMH EXISTING WATER MANHOLE
- W EXISTING WATER METER
- W EXISTING WATER SERVICE
- WV EXISTING WATER VALVE
- EXISTING TREE, BUSH
- WATER SURFACE ELEVATION
- CO NEW CLEANOUT
- EXISTING UTILITY POLE
- UTILITY POLE ANCHOR
- EXISTING FIRE HYDRANT
- EXISTING LIGHT POLE
- E EXISTING ELECTRICAL BOX
- G EXISTING GAS METER/RISER
- P EXISTING POWER METER
- D EXISTING STORM MANHOLE
- EXISTING STORM DRAIN CATCH BASIN
- MW EXISTING MONITORING WELL
- T EXISTING TELEPHONE RISER
- TJB EXISTING TELEPHONE JUNCTION BOX
- 2545.00 FINISHED ELEVATION
- (2545.2±) EXISTING ELEVATION
- BREAK LINE
- DRAINAGE FLOW OR PIPE FLOW DIRECTION
- SURVEY MONUMENT
- BENCH MARK (BM)
- REVISION NUMBER
- BOREHOLE
- SURVEY CONTROL POINT
- X KEY NOTE
- XXX COORDINATE NUMBER
- CONCRETE (PLAN AND SECTION)
- EARTH
- GRAVEL/DRAINROCK/AGGREGATE BASE
- AC PAVEMENT
- REVISION CLOUD

| TYPE OF JOINT OR COUPLER | THREE LINE PIPE |
|---|---|
| FLANGED JOINT | |
| MECHANICAL JOINT | |
| WELDED JOINT | |
| PUSH-ON JOINT | |
| RESTRAINED PUSH-ON JOINT | R |
| SCREWED OR GLUED JOINT | |
| CONCRETE OR CLAY PIPE JOINT | |
| GROOVED COUPLING | |
| RESTRAINED FLANGED COUPLING ADAPTER | |
| FLEXIBLE COUPLING | |
| RESTRAINED FLEXIBLE COUPLING FOR STEEL PIPE | |
| RESTRAINED FLEXIBLE COUPLING FOR FLANGED PIPE | |
| DISMANTLING JOINT | |
| EXPANSION JOINT | |
| PIPE SUPPORT (CALL OUT DETAIL) | |

## SCHEMATIC VALVES

- AIR VACUUM AND AIR RELEASE ASSEMBLY
- ANGLE
- BACK-PRESSURE
- BALL
- BALL CHECK
- BUTTERFLY
- CHECK
- DIAPHRAGM
- GATE
- GLOBE
- MULTIPORT - 3 WAY
- NEEDLE
- PLUG
- PRESSURE RELIEF
- S SOLENOID
- PRESSURE REDUCING
- GATE VALVE, BURIED WITH VALVE BOX
- BUTTERFLY VALVE, BURIED WITH VALVE BOX
- ECCENTRIC PLUG VALVE, BURIED WITH VALVE BOX
- PT PRESSURE TRANSDUCER
- PS PRESSURE SWITCH
- CHECK CHANGE IN PIPE MATERIAL
- P MOTOR OPERATOR FOR VALVES (P = PNEUMATIC)
- M MOTOR OPERATOR FOR VALVES (M = ELECTRIC)
- G PRESSURE GAUGE
- FLOW TUBE
- M M MAGNETIC METER
- P M PROPELLER METER
- F M FLOW METER

- ROTAMETER (SIDE)
- ROTAMETER (TOP/BOTTOM)
- INJECTOR OR EDUCATOR
- PIPE SUPPORT (IN PLAN)
- PULSATION DAMPENER
- BACK FLOW PREVENTOR
- FLANGED FITTING
- MECHANICAL-TYPE FITTING (GROOVED)
- SCREWED, WELDED, SOCKET-WELD, BELL AND SPIGOT OR HUBLESS FITTING
- STOP GATE
- SLIDE GATE
- SLUICE GATE
- FH FIRE HYDRANT
- HUB DRAIN
- FLOOR DRAIN
- FLOOR SINK
- YARD HYDRANT
- PIPE END
- SLEEVE TYPE COUPLING
- FLANGED ADAPTER
- MECHANICAL TYPE COUPLING
- FLEXIBLE COUPLING
- UNION
- QUICK DISCONNECT COUPLER
- CAPPED END OR PLUGGED END
- BLIND FLANGE
- REDUCER OR INCREASER
- STRAINER
- DRAIN
- AIRGAP

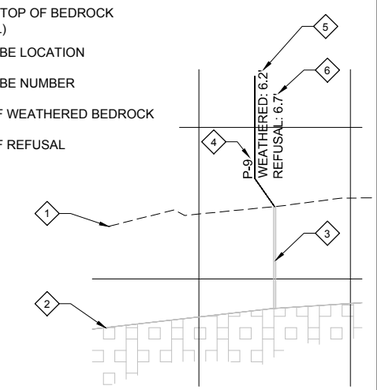
- CENTRIFUGAL OR TURBINE PUMP, OR FAN
- CHEMICAL FEED PUMP
- SUMP PUMP
- M MIXER
- M MAGNETIC FLOW METER
- S SAMPLE TAP

## THREE LINE VALVES

- GATE
- BUTTERFLY
- SILENT GLOBE CHECK
- CHECK
- BALL
- PLUG
- FLANGED JOINT

SOIL PROBE EXPLORATIONS PERFORMED USING A 1.5-INCH DIAMETER SOLID STEM HYDRAULIC-HAMMERED PROBE.

1. GROUND SURFACE
2. APPROX. TOP OF BEDROCK (REFUSAL)
3. SOIL PROBE LOCATION
4. SOIL PROBE NUMBER
5. DEPTH OF WEATHERED BEDROCK
6. DEPTH OF REFUSAL




| NO. | REVISION | BY | DATE |
|---|---|---|---|
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DESIGN ~
DRAWN OTW
CHECKED .
APPROVED .

PROFESSIONAL ENGINEER LICENSED 10884 11-19-19 STATE OF IDAHO RYAN J. REHDER

**RECORD DRAWING**

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208.780.3990
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# EAST ORCHARDS SEWER EXPANSION

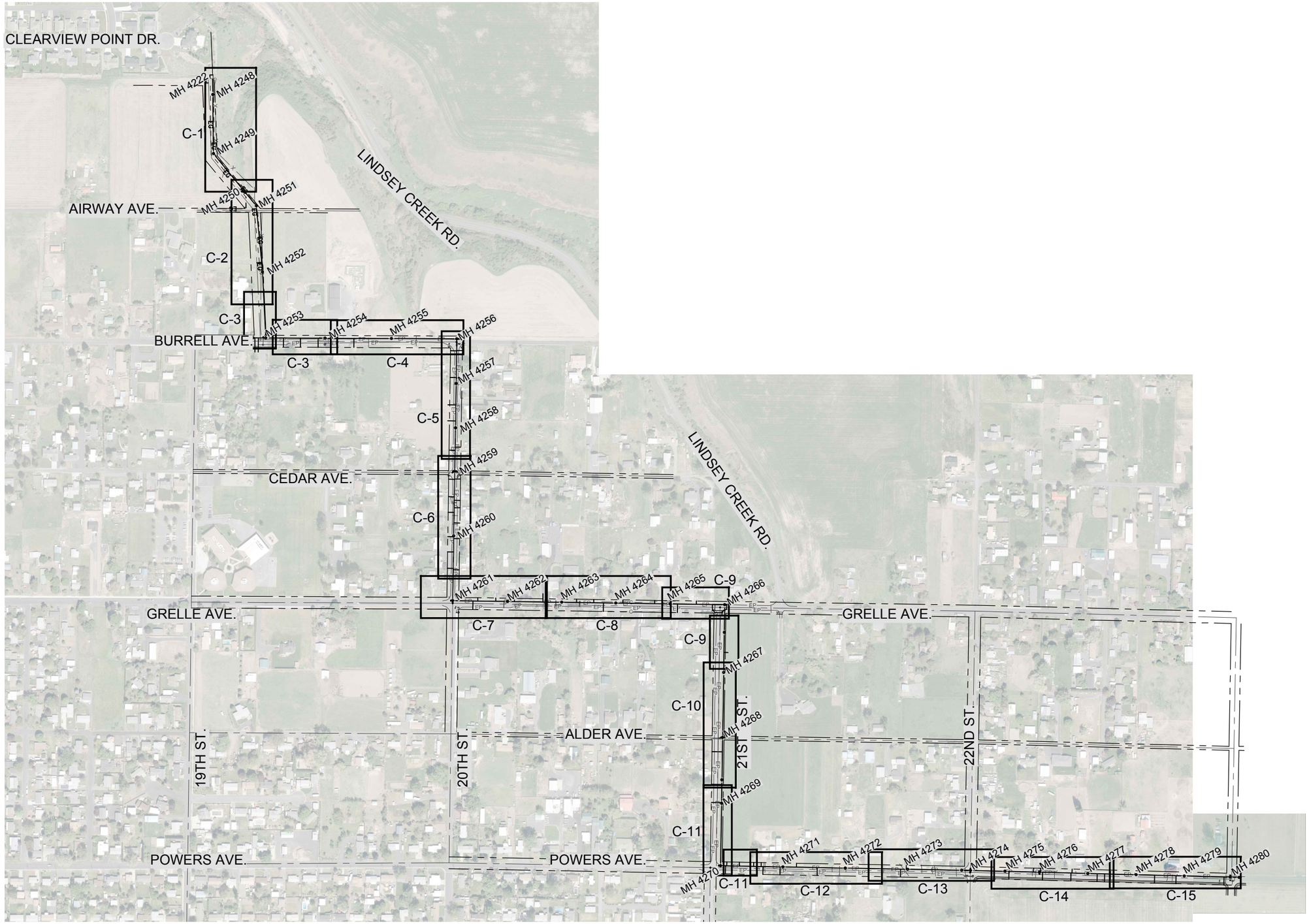
LEWISTON, IDAHO

LEGEND AND SYMBOLS

VERIFY SCALE
BAR IS ONE INCH ON FULL SIZE DRAWING
0 1"

PROJECT : 181.0020
DATE : 11/19/2019
DRAWING NO. G-4


Path: B:\Projects\1-L\Lewiston_181\0020 Phase I\CAB\AB G-4.dwg File Name: AB G-4.dwg Plot Date: 11/20/2019 5:10 PM Duce




NORTH

0' 125' 250' 500' 750'

SCALE: 1" = 250'

| NO. | REVISION | BY | DATE |
|---|---|---|---|
| | | | |

DESIGN LCH
DRAWN OTW
CHECKED LMD
APPROVED

PROFESSIONAL ENGINEER LICENSED 10884 11-19-19 STATE OF IDAHO RYAN J. REHDER

**RECORD DRAWING**

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# EAST ORCHARDS SEWER EXPANSION

LEWISTON, IDAHO

Key Map

VERIFY SCALE
BAR IS ONE INCH ON FULL SIZE DRAWING
0 1"

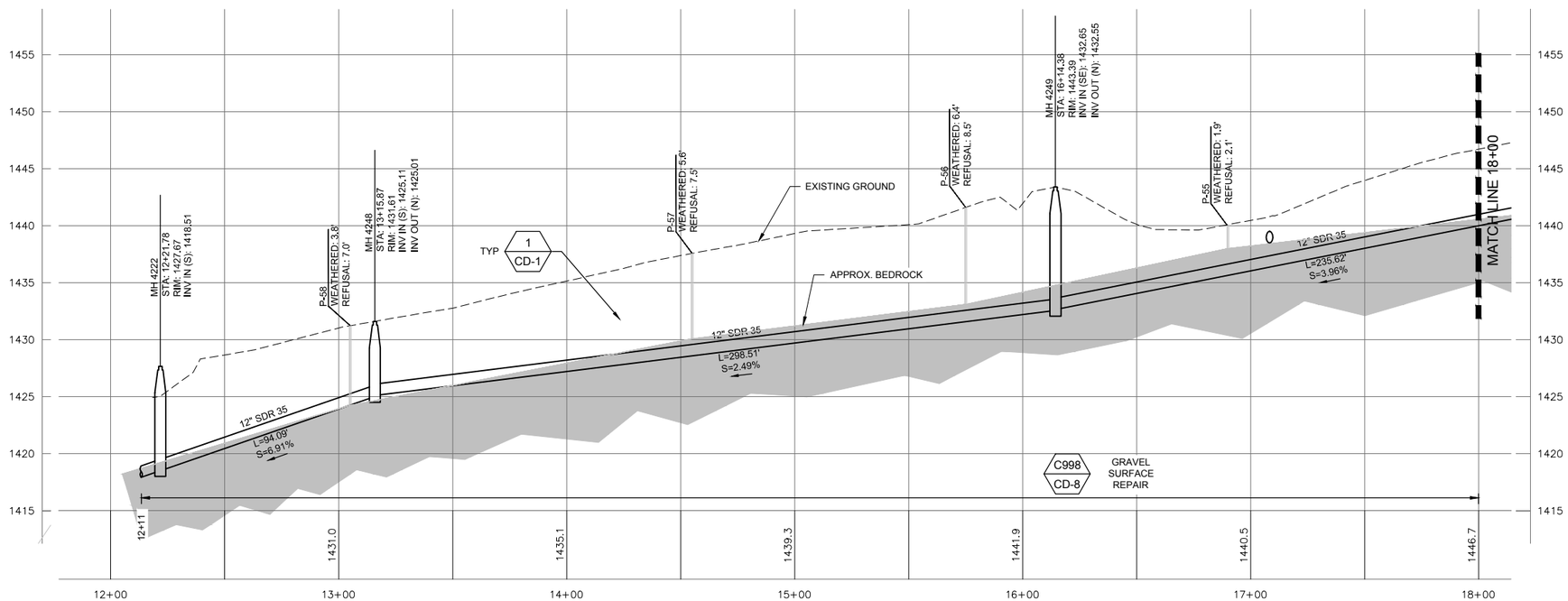
PROJECT : 181.0020
DATE : 11/19/2019
DRAWING NO. K-1

Path: B:\Projects\I-L\Lewiston_181\0020 Phase II\CAB\AB Lewiston Profiles.dwg File Name: AB Lewiston Profiles.dwg Plot Date: 11/20/2019 4:41 PM Duce

NORTH

0' 15' 30' 60' 90'

SCALE: 1" = 30'




PROFILE STA. 12+00 - 18+00

## GENERAL NOTES:

1. GRAVITY SEWER PIPE MATERIAL TYPE SHALL BE MINIMUM PVC SDR-35. PIPE DIAMETER TO BE 12-INCHES UNLESS OTHERWISE SHOWN.
2. CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS, LOCATIONS, AND ELEVATIONS BEFORE STARTING WORK AND PRIOR TO ORDERING MATERIAL.
3. CONTRACTOR TO COMPLY WITH IDAPA 58.01.08.542.07 WHEN WATER MAINS AND POTABLE WATER SERVICE LINES ARE ENCOUNTERED DURING SEWER MAIN AND SERVICE TRENCHING ACTIVITIES.
4. PROPERTY LINES SHOWN ON PLAN SHEETS ARE FOR INFORMATIONAL PURPOSES ONLY AND WERE COMPILED FROM VARIOUS SOURCES. IT IS NOT THE INTENT OF THESE DRAWINGS TO BE USED FOR LOCATION OF PROPERTY LINES. MOUNTAIN WATERWORKS ASSUMES NO LIABILITY FOR PROPERTY LINES WHICH MAY NOT BE ACCURATELY SHOWN.
5. ALL MANHOLES ARE TO BE CONSTRUCTED IN ACCORDANCE WITH WASTEWATER MANHOLE TYPE 1 DETAIL 7 ON SHT CD-4 UNLESS OTHERWISE SHOWN.
6. GEOTECHNICAL BORINGS SHOWN IN APPROXIMATE LOCATIONS FOR INFORMATIONAL PURPOSES.

## KEY NOTES:

1. CONTRACTOR TO REPLACE EXISTING MH 4222 WITH NEW MANHOLE. INSTALL NEW RING AND COVER AT ELEVATION 1427.67 FT. GRADE TO MATCH THE SURROUNDING AREA.
2. EXISTING PIPE IS 10-INCH SDR 35. CONTRACTOR TO STUB OUT PIPE FROM NEW MANHOLE TO CONNECT TO EXISTING PIPE USING ROMAC 501 COUPLING OR EQUAL.
3. CONTRACTOR TO REMOVE SECTION OF EXISTING BARBED WIRE FENCE TO ALLOW ACCESS TO MANHOLE.
4. ROCK BLASTING IS ALLOWED FROM MH 4222 TO 4253.

HORIZ. SCALE: 1" = 30'
VER. SCALE: 1" = 6'
(VERIFY PER SHEET SIZE)

| NO. | REVISION | BY | DATE |
|---|---|---|---|
| | | | |

DESIGN: LCH
DRAWN: OTW
CHECKED: LMD
APPROVED:

PROFESSIONAL ENGINEER LICENSED 10884 11-19-19 STATE OF IDAHO RYAN J. REHDER

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# EAST ORCHARDS SEWER EXPANSION

LEWISTON, IDAHO

STA 12+00 - 18+00

VERIFY SCALE
BAR IS ONE INCH ON FULL SIZE DRAWING
0 1"

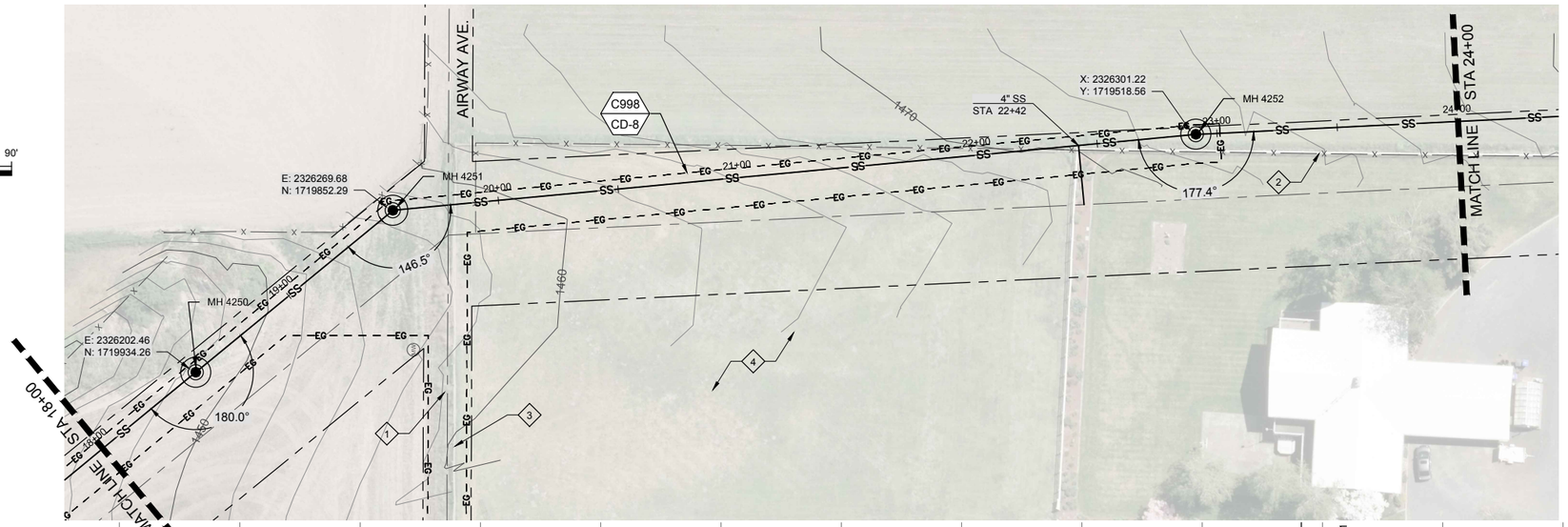
PROJECT : 181.0020
DATE : 11/19/2019
DRAWING NO.
C-1

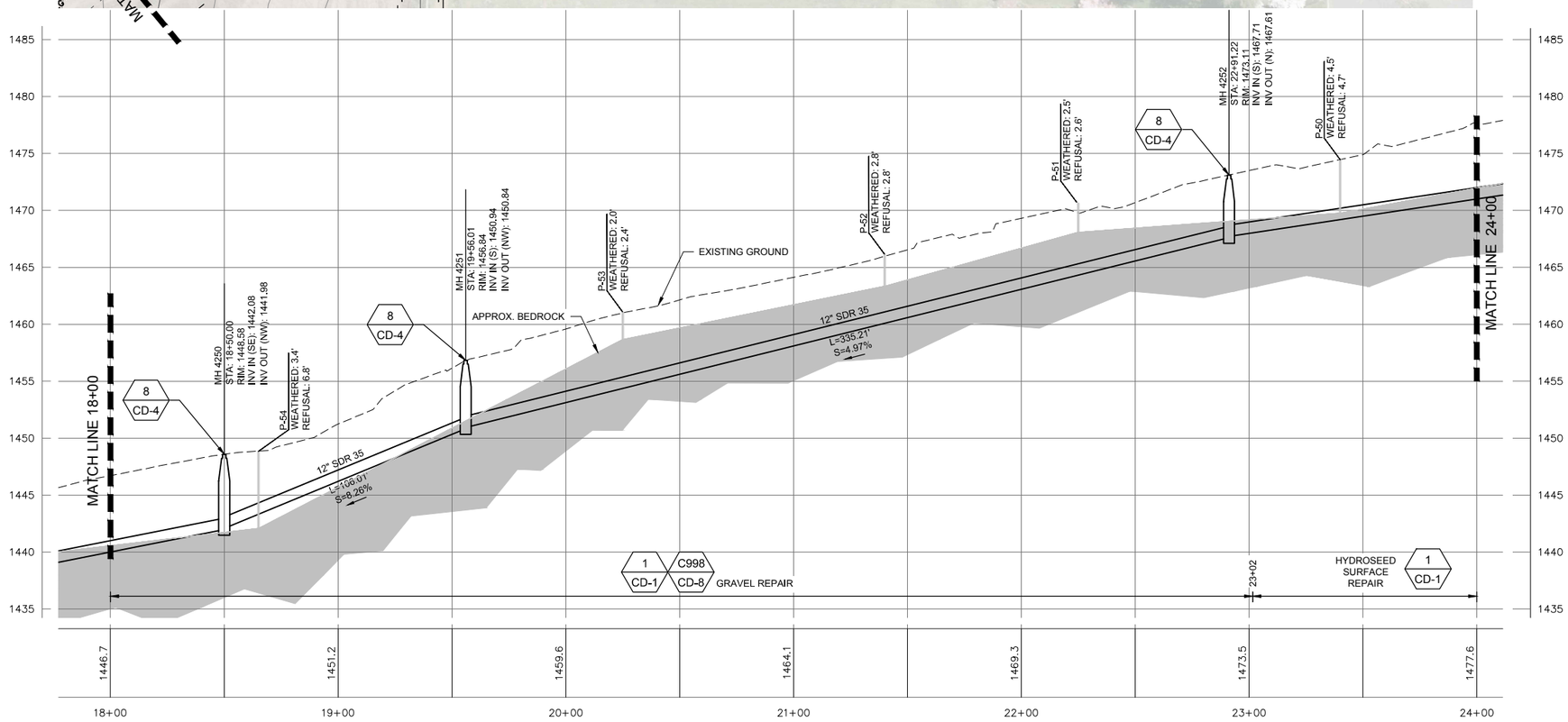

Path: B:\Projects\I-L\Lewiston_181\0020 Phase I\CAB\AB Lewiston Profiles_1_16284_7632.sv5.dwg File Name: AB Lewiston Profiles_1_16284_7632.sv5.dwg Plot Date: 11/20/2019 5:01 PM Duce

NORTH

0' 15' 30' 60' 90'

SCALE: 1" = 30'




PROFILE STA. 18+00 - 24+00

HORIZ. SCALE: 1" = 30'
VER. SCALE: 1" = 6'
(VERIFY PER SHEET SIZE)

## GENERAL NOTES:

1. GRAVITY SEWER PIPE MATERIAL TYPE SHALL BE MINIMUM PVC SDR-35. PIPE DIAMETER TO BE 12-INCHES UNLESS OTHERWISE SHOWN.
2. CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS, LOCATIONS, AND ELEVATIONS BEFORE STARTING WORK AND PRIOR TO ORDERING MATERIAL.
3. CONTRACTOR TO COMPLY WITH IDAPA 58.01.08.542.07 WHEN WATER MAINS AND POTABLE WATER SERVICE LINES ARE ENCOUNTERED DURING SEWER MAIN AND SERVICE TRENCHING ACTIVITIES.
4. PROPERTY LINES SHOWN ON PLAN SHEETS ARE FOR INFORMATIONAL PURPOSES ONLY AND WERE COMPILED FROM VARIOUS SOURCES. IT IS NOT THE INTENT OF THESE DRAWINGS TO BE USED FOR LOCATION OF PROPERTY LINES. MOUNTAIN WATERWORKS ASSUMES NO LIABILITY FOR PROPERTY LINES WHICH MAY NOT BE ACCURATELY SHOWN.
5. ALL MANHOLES ARE TO BE CONSTRUCTED IN ACCORDANCE WITH WASTEWATER MANHOLE TYPE 1 DETAIL 7 ON SHT CD-4 UNLESS OTHERWISE SHOWN.
6. GEOTECHNICAL BORINGS SHOWN IN APPROXIMATE LOCATIONS FOR INFORMATIONAL PURPOSES.

## KEY NOTES:

1. CONTRACTOR TO LEVEL THE GROUND SURFACE OF AIRWAY AVE. FROM THE END OF ASPHALT TO THE 19TH STREET RIGHT-OF-WAY, APPROXIMATELY 370-FEET. PROVIDE PIT RUN BASE AND GRAVEL OVERLAY IN ACCORDANCE WITH DETAIL C998 ON SHT CD-8
2. EXISTING FENCE TO BE RELOCATED BY HOMEOWNER PRIOR TO CONSTRUCTION.
3. EXISTING FENCE WITHIN RIGHT-OF-WAY TO BE RELOCATED PRIOR TO CONSTRUCTION.
4. POTENTIAL STAGING AREA. CONTACT PROPERTY OWNER ROBERT PRASIL AT (208) 791-2605.
5. ROCK BLASTING IS ALLOWED FROM MH 4222 TO MH 4253.

| NO. | REVISION | BY | DATE |
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DESIGN: LCH
DRAWN: OTW
CHECKED: LMD
APPROVED:

PROFESSIONAL ENGINEER LICENSED 10884 11-19-19 STATE OF IDAHO RYAN J. REHDER

**RECORD DRAWING**

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# EAST ORCHARDS SEWER EXPANSION

LEWISTON, IDAHO

STA 18+00 - 24+00

VERIFY SCALE
BAR IS ONE INCH ON FULL SIZE DRAWING
0 1"

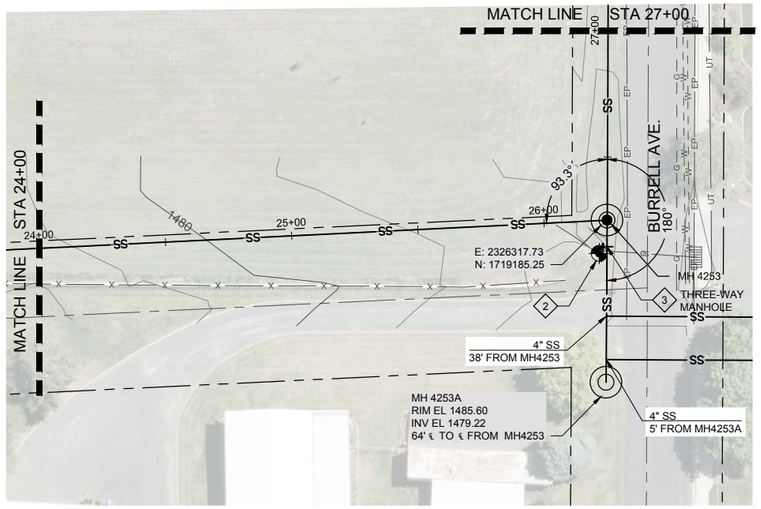
PROJECT : 181.0020
DATE : 11/19/2019
DRAWING NO. C-2

Path: B:\Projects\I-L\Lewiston_181\0020 Phase I\CAB\AB Lewiston Profiles.dwg File Name: AB Lewiston Profiles.dwg Plot Date: 11/20/2019 5:02 PM Duce

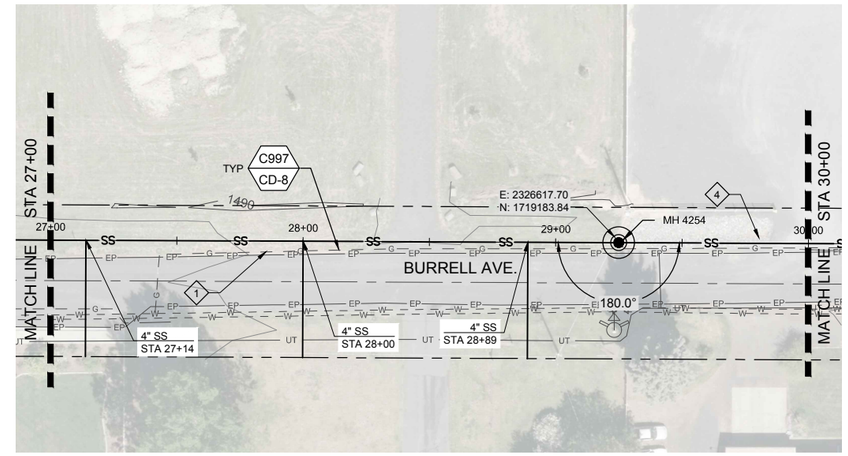
NORTH

0' 15' 30' 60' 90'

SCALE: 1" = 30'




NORTH

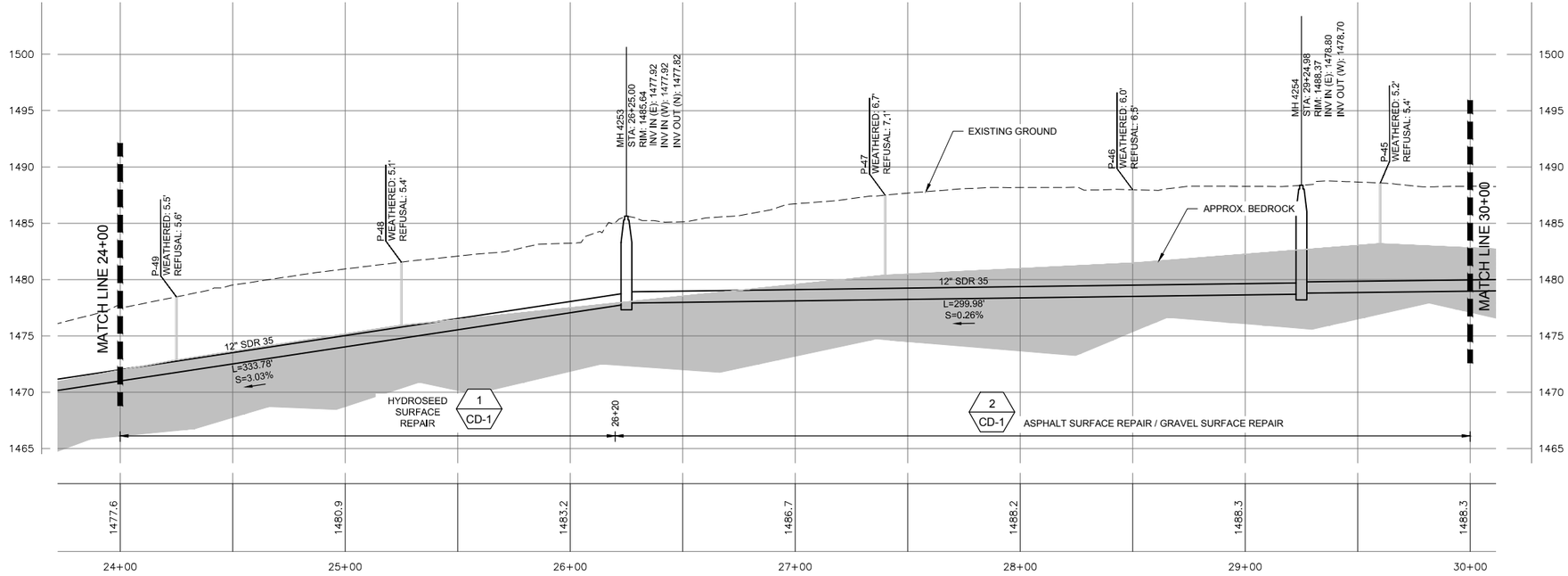



## GENERAL NOTES:

1. GRAVITY SEWER PIPE MATERIAL TYPE SHALL BE MINIMUM PVC SDR-35. PIPE DIAMETER TO BE 12-INCHES UNLESS OTHERWISE SHOWN.
2. CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS, LOCATIONS, AND ELEVATIONS BEFORE STARTING WORK AND PRIOR TO ORDERING MATERIAL.
3. CONTRACTOR TO COMPLY WITH IDAPA 58.01.08.542.07 WHEN WATER MAINS AND POTABLE WATER SERVICE LINES ARE ENCOUNTERED DURING SEWER MAIN AND SERVICE TRENCHING ACTIVITIES.
4. PROPERTY LINES SHOWN ON PLAN SHEETS ARE FOR INFORMATIONAL PURPOSES ONLY AND WERE COMPILED FROM VARIOUS SOURCES. IT IS NOT THE INTENT OF THESE DRAWINGS TO BE USED FOR LOCATION OF PROPERTY LINES. MOUNTAIN WATERWORKS ASSUMES NO LIABILITY FOR PROPERTY LINES WHICH MAY NOT BE ACCURATELY SHOWN.
5. ALL MANHOLES ARE TO BE CONSTRUCTED IN ACCORDANCE WITH WASTEWATER MANHOLE TYPE 1 DETAIL 7 ON SHT CD-4 UNLESS OTHERWISE SHOWN.
6. GEOTECHNICAL BORINGS SHOWN IN APPROXIMATE LOCATIONS FOR INFORMATIONAL PURPOSES.

## KEY NOTES:

1. GAS MAIN TO BE RELOCATED BY UTILITY COMPANY PRIOR TO CONSTRUCTION.
2. PROVIDE DRAIN ROCK AROUND STORM DRAIN OUTLET AND DRAINAGE ROUTE TO ALLOW FLOW TO EXIT THE STORM DRAIN WITHOUT IMPEDING VEHICLE TRAFFIC.
3. PROVIDE PIPE STUB-OUT WITH CAP FOR FUTURE LATERAL CONNECTION INTO MANHOLE.
4. RESTORE EXISTING RIP-RAP TO PRECONSTRUCTION CONDITIONS.
5. ROCK BLASTING IS ALLOWED FROM MH 4222 TO MH 4253.




PROFILE STA. 24+00 - 30+00

HORIZ. SCALE: 1" = 30'
VER. SCALE: 1" = 6'
(VERIFY PER SHEET SIZE)

| NO. | REVISION | BY | DATE |
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|---|---|
| DESIGN | LCH |
| DRAWN | OTW |
| CHECKED | LMD |
| APPROVED | |

PROFESSIONAL ENGINEER LICENSED 10884 11-19-19 STATE OF IDAHO RYAN J. REHDER

**RECORD DRAWING**

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# EAST ORCHARDS SEWER EXPANSION

LEWISTON, IDAHO

STA 24+00 -320+00

VERIFY SCALE
BAR IS ONE INCH ON FULL SIZE DRAWING
0 1"

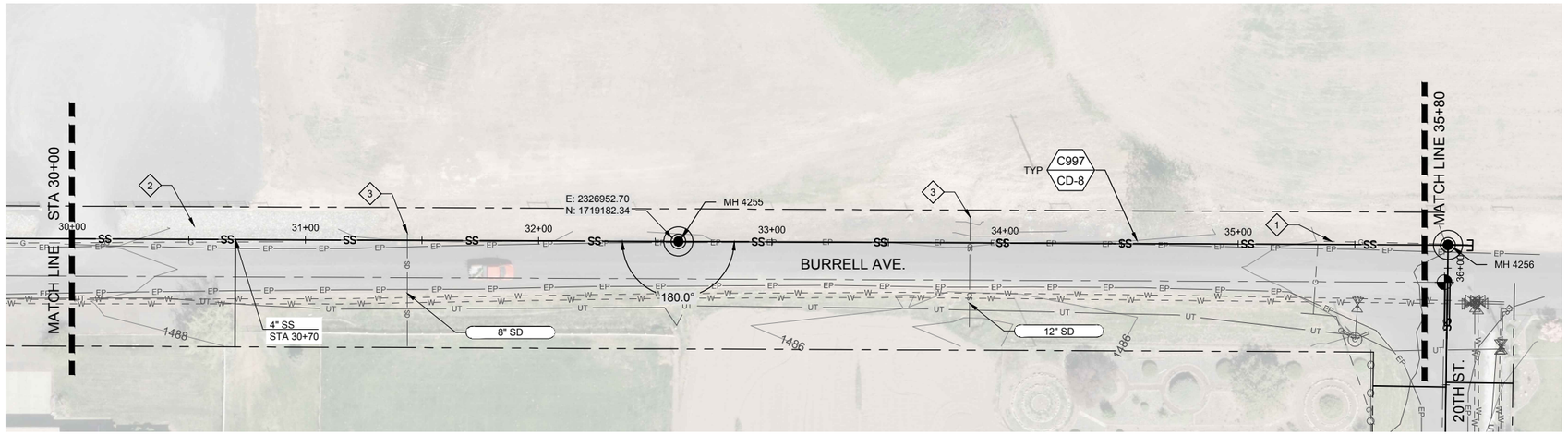
| | |
|---|---|
| PROJECT : | 181.0020 |
| DATE : | 11/19/2019 |
| DRAWING NO. | C-3 |


Path: B:\Projects\I-L\Lewiston_1810020 Phase II\CAB\AB Lewiston Profiles.dwg File Name: AB Lewiston Profiles.dwg Plot Date: 11/20/2019 5:03 PM Duce

NORTH

0' 15' 30' 60' 90'

SCALE: 1" = 30'




## GENERAL NOTES:

1. GRAVITY SEWER PIPE MATERIAL TYPE SHALL BE MINIMUM PVC SDR-35. PIPE DIAMETER TO BE 12-INCHES UNLESS OTHERWISE SHOWN.
2. CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS, LOCATIONS, AND ELEVATIONS BEFORE STARTING WORK AND PRIOR TO ORDERING MATERIAL.
3. CONTRACTOR TO COMPLY WITH IDAPA 58.01.08.542.07 WHEN WATER MAINS AND POTABLE WATER SERVICE LINES ARE ENCOUNTERED DURING SEWER MAIN AND SERVICE TRENCHING ACTIVITIES.
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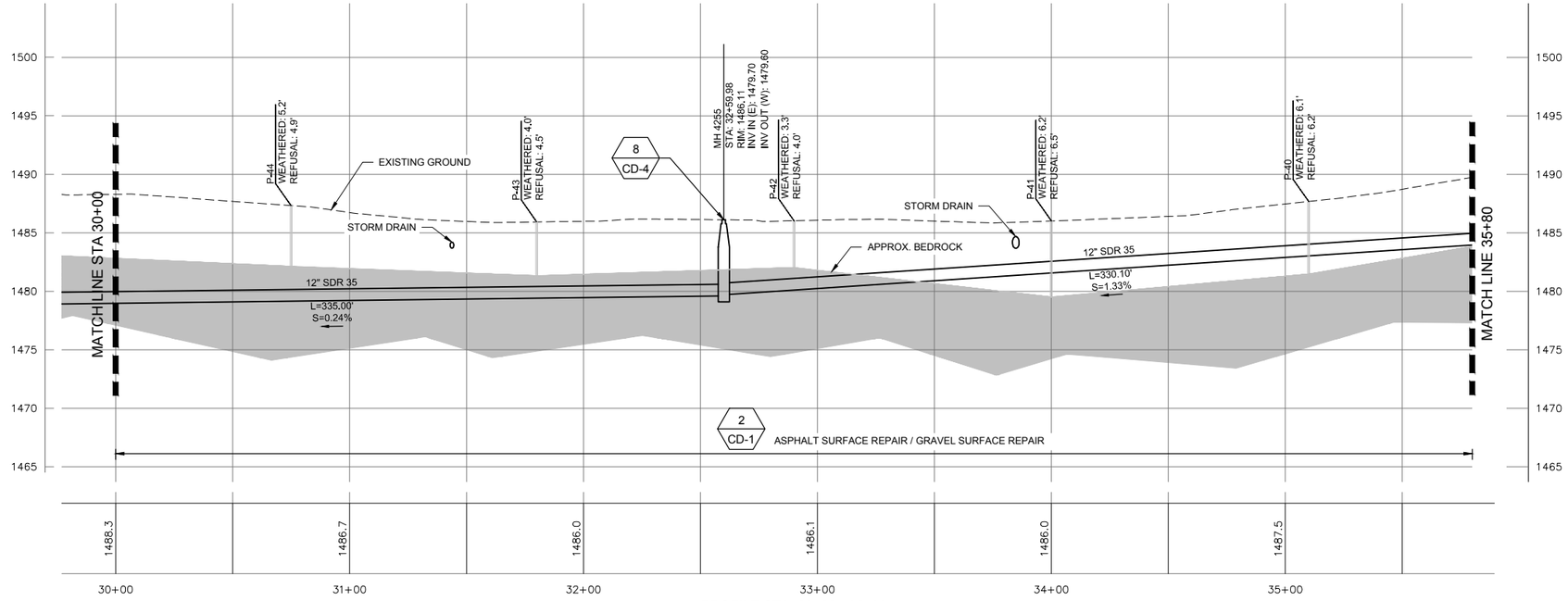
5. ALL MANHOLES ARE TO BE CONSTRUCTED IN ACCORDANCE WITH WASTEWATER MANHOLE TYPE 1 DETAIL 7 ON SHT CD-4 UNLESS OTHERWISE SHOWN.
6. GEOTECHNICAL BORINGS SHOWN IN APPROXIMATE LOCATIONS FOR INFORMATIONAL PURPOSES.

## KEY NOTES:

1. GAS MAIN TO BE RELOCATED BY UTILITY COMPANY PRIOR TO CONSTRUCTION.
2. RESTORE EXISTING RIP-RAP TO PRECONSTRUCTION CONDITIONS.
3. REMOVE AND REPLACE EXISTING STORM DRAINS AS NEEDED TO INSTALL SEWER PIPE AT NO ADDITIONAL COST TO THE OWNER.




PROFILE STA. 30+00 - 35+80

HORIZ. SCALE: 1" = 30'
VER. SCALE: 1" = 6'
(VERIFY PER SHEET SIZE)

| NO. | REVISION | BY | DATE |
|---|---|---|---|
| | | | |

DESIGN: LCH
DRAWN: OTW
CHECKED: LMD
APPROVED:

PROFESSIONAL ENGINEER LICENSED 15884 11-19-19 STATE OF IDAHO RYAN J. REHDER

**RECORD DRAWING**

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# EAST ORCHARDS SEWER EXPANSION

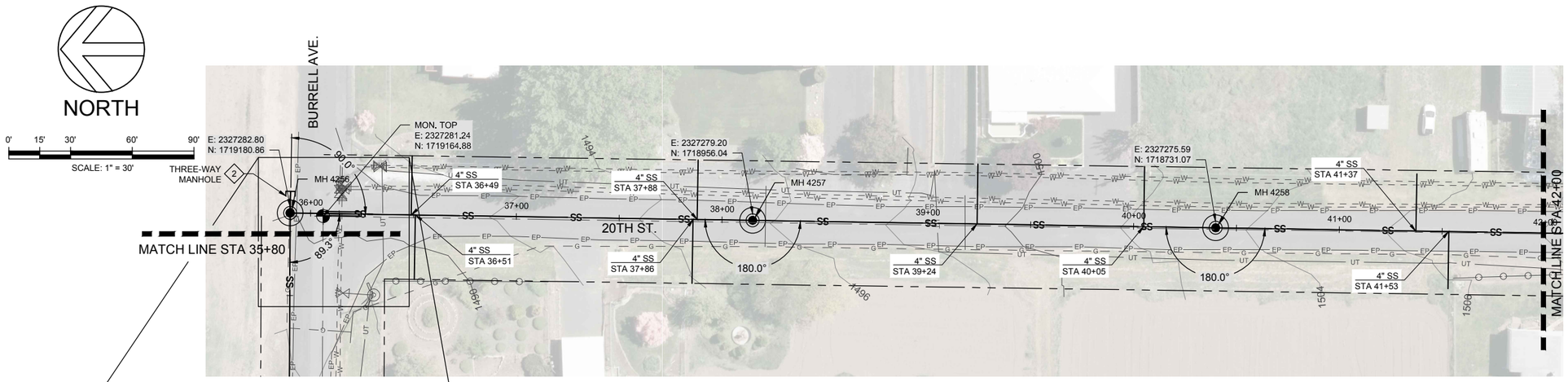
LEWISTON, IDAHO

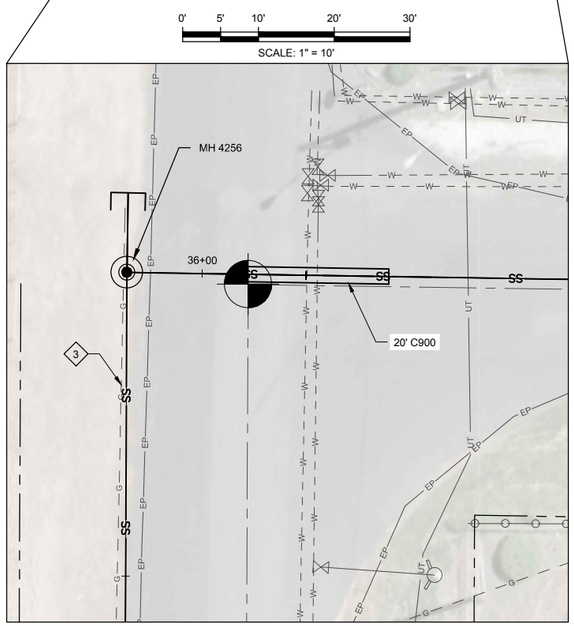
STA 30+00 - 35+80

VERIFY SCALE
BAR IS ONE INCH ON FULL SIZE DRAWING
0 1"

PROJECT : 181.0020
DATE : 11/19/2019
DRAWING NO. C-4

Path: B:\Projects\I-L\Lewiston_1810020 Phase I\CAB\AB Lewiston Profiles.dwg File Name: AB Lewiston Profiles.dwg Plot Date: 11/20/2019 5:03 PM Duce




## GENERAL NOTES:

1. GRAVITY SEWER PIPE MATERIAL TYPE SHALL BE MINIMUM PVC SDR-35. PIPE DIAMETER TO BE 12-INCHES UNLESS OTHERWISE SHOWN.
2. CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS, LOCATIONS, AND ELEVATIONS BEFORE STARTING WORK AND PRIOR TO ORDERING MATERIAL.
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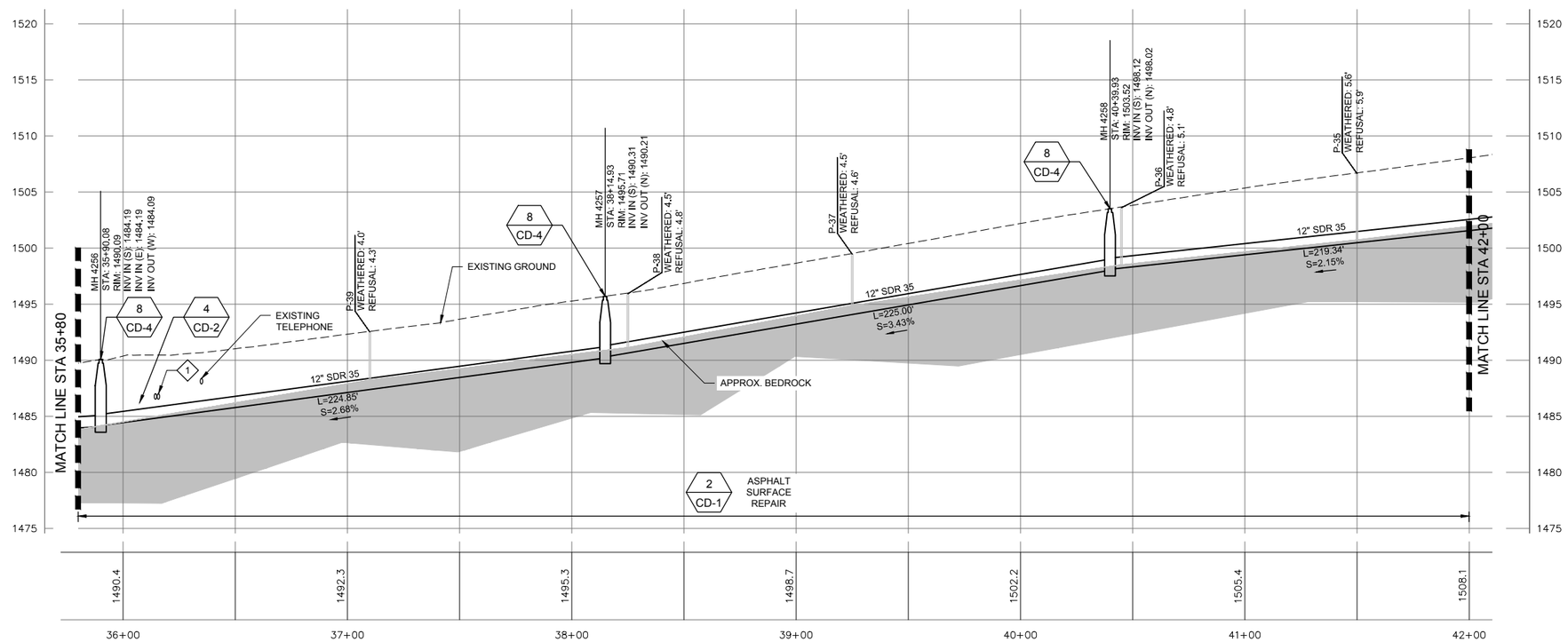
5. ALL MANHOLES ARE TO BE CONSTRUCTED IN ACCORDANCE WITH WASTEWATER MANHOLE TYPE 1 DETAIL 7 ON SHT CD-4 UNLESS OTHERWISE SHOWN.
6. GEOTECHNICAL BORINGS SHOWN IN APPROXIMATE LOCATIONS FOR INFORMATIONAL PURPOSES.

## KEY NOTES:

1. WATER MAIN UTILITY CROSSINGS (APPROX. DEPTHS).
2. PROVIDE AND INSTALL PIPE STUB-OUT FOR FUTURE LATERAL CONNECTION INTO MANHOLE IN ACCORDANCE WITH C999 ON SHT CD-8.
3. GAS MAIN TO BE RELOCATED BY UTILITY COMPANY PRIOR TO CONSTRUCTION.




PROFILE STA. 35+80 - 42+00

HORIZ. SCALE: 1" = 30'
VER. SCALE: 1" = 6'
(VERIFY PER SHEET SIZE)

| NO. | REVISION | BY | DATE |
|---|---|---|---|
| | | | |

DESIGN: LCH
DRAWN: OTW
CHECKED: LMD
APPROVED:

PROFESSIONAL ENGINEER LICENSED 15884 11-19-19 STATE OF IDAHO RYAN J. REHDER

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Mountain WATERWORKS

ENGINEERING AND ENVIRONMENTAL SOLUTIONS
111 MAIN ST. SUITE 175
LEWISTON, IDAHO 83501
208.780.3990
IDAHO OFFICES
BOISE · LEWISTON · COEUR D'ALENE

# EAST ORCHARDS SEWER EXPANSION

LEWISTON, IDAHO

STA 35+80 - 42+00

VERIFY SCALE
BAR IS ONE INCH ON FULL SIZE DRAWING
0 1"

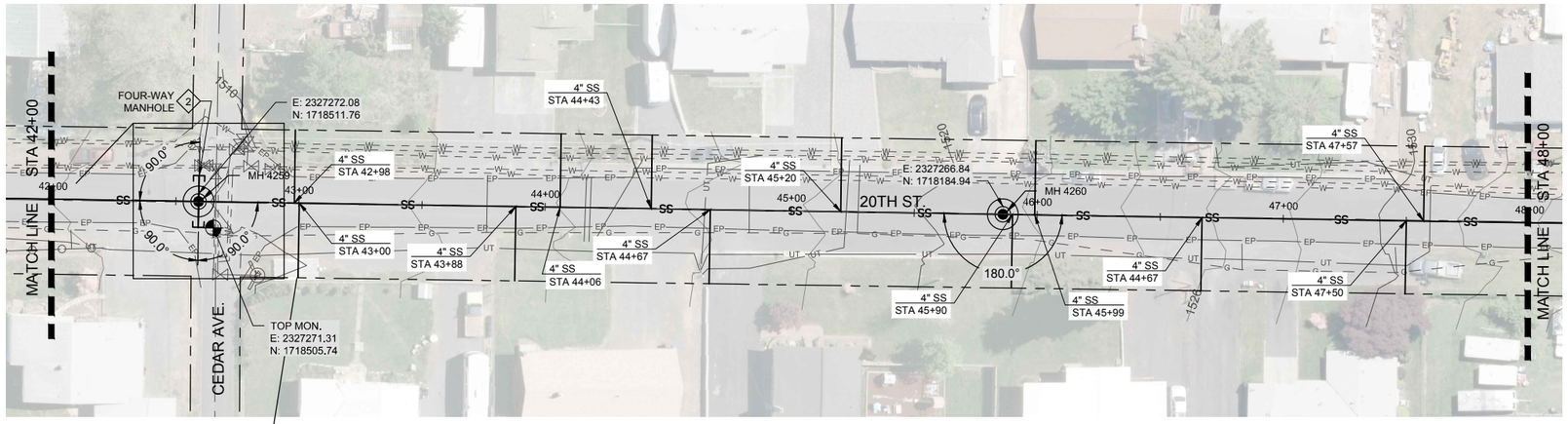
PROJECT : 181.0020
DATE : 11/19/2019
DRAWING NO. C-5

Path: B:\Projects\1-LLewiston_1810\020 Phase II\OA\BAB Lewiston Profiles.dwg File Name: AB Lewiston Profiles.dwg Plot Date: 12/2/2019 10:30 AM Duce

NORTH

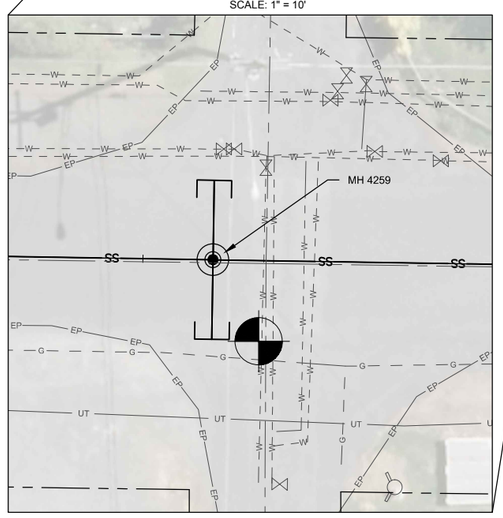
0' 15' 30' 60' 90'

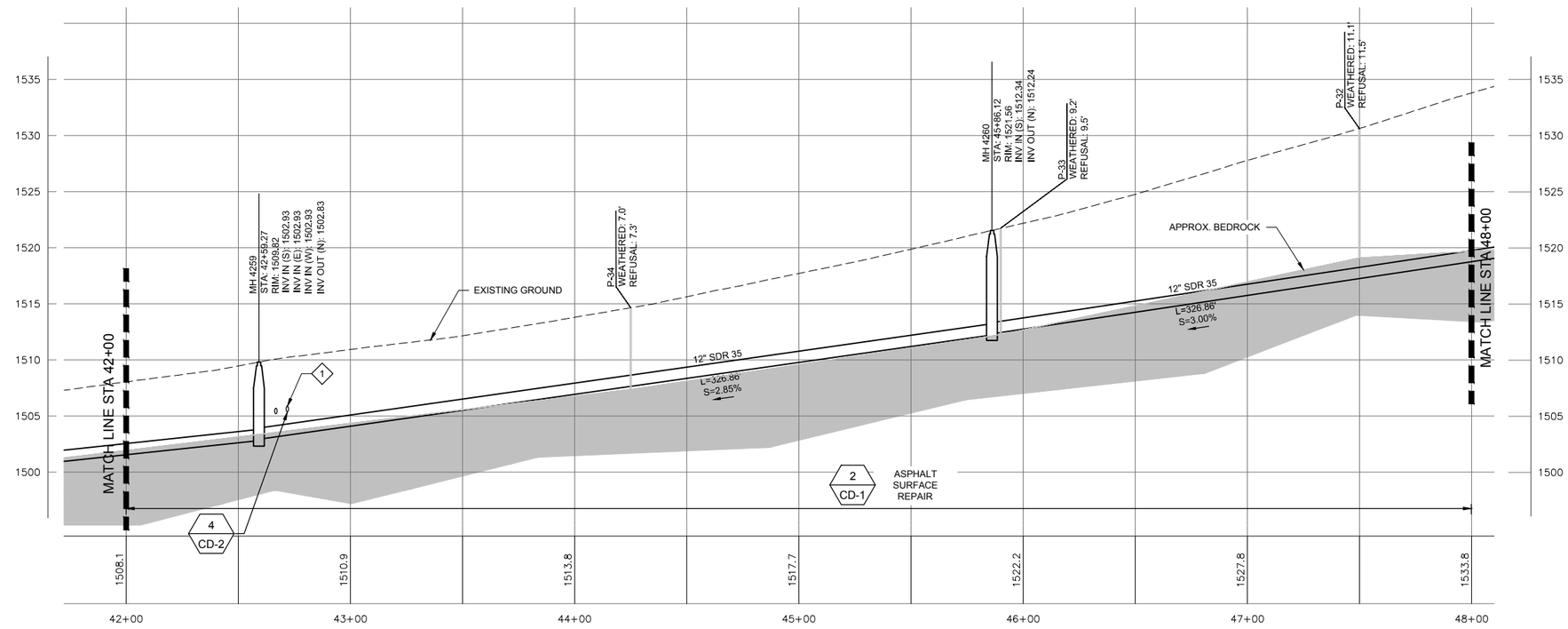
SCALE: 1" = 30'




0' 5' 10' 20' 30'

SCALE: 1" = 10'




PROFILE STA. 42+00 - 48+00

## GENERAL NOTES:

1. GRAVITY SEWER PIPE MATERIAL TYPE SHALL BE MINIMUM PVC SDR-35. PIPE DIAMETER TO BE 12-INCHES UNLESS OTHERWISE SHOWN.
2. CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS, LOCATIONS, AND ELEVATIONS BEFORE STARTING WORK AND PRIOR TO ORDERING MATERIAL.
3. CONTRACTOR TO COMPLY WITH IDAPA 58.01.08.542.07 WHEN WATER MAINS AND POTABLE WATER SERVICE LINES ARE ENCOUNTERED DURING SEWER MAIN AND SERVICE TRENCHING ACTIVITIES.
4. PROPERTY LINES SHOWN ON PLAN SHEETS ARE FOR INFORMATIONAL PURPOSES ONLY AND WERE COMPILED FROM VARIOUS SOURCES. IT IS NOT THE INTENT OF THESE DRAWINGS TO BE USED FOR LOCATION OF PROPERTY LINES. MOUNTAIN WATERWORKS ASSUMES NO LIABILITY FOR PROPERTY LINES WHICH MAY NOT BE ACCURATELY SHOWN.
5. ALL MANHOLES ARE TO BE CONSTRUCTED IN ACCORDANCE WITH WASTEWATER MANHOLE TYPE 1 DETAIL 7 ON SHT CD-4 UNLESS OTHERWISE SHOWN.
6. GEOTECHNICAL BORINGS SHOWN IN APPROXIMATE LOCATIONS FOR INFORMATIONAL PURPOSES.

## KEY NOTES:

1. WATER MAIN UTILITY CROSSINGS (APPROX. DEPTHS).
2. PROVIDE PIPE STUB-OUTS FOR FUTURE LATERAL CONNECTIONS INTO MANHOLE IN ACCORDANCE WITH C999 ON SHT CD-8.

HORIZ. SCALE: 1" = 30'
VER. SCALE: 1" = 6'
(VERIFY PER SHEET SIZE)

| NO. | REVISION | BY | DATE |
|---|---|---|---|
| | | | |

DESIGN LCH
DRAWN OTW
CHECKED LMD
APPROVED

PROFESSIONAL ENGINEER LICENSED 10884 11-19-19 STATE OF IDAHO RYAN J. REHDER

**RECORD DRAWING**

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Mountain WATERWORKS


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LEWISTON, IDAHO 83501
208.780.3990

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# EAST ORCHARDS SEWER EXPANSION

LEWISTON, IDAHO

STA 42+00 - 48+00

VERIFY SCALE
BAR IS ONE INCH ON FULL SIZE DRAWING
0 1"

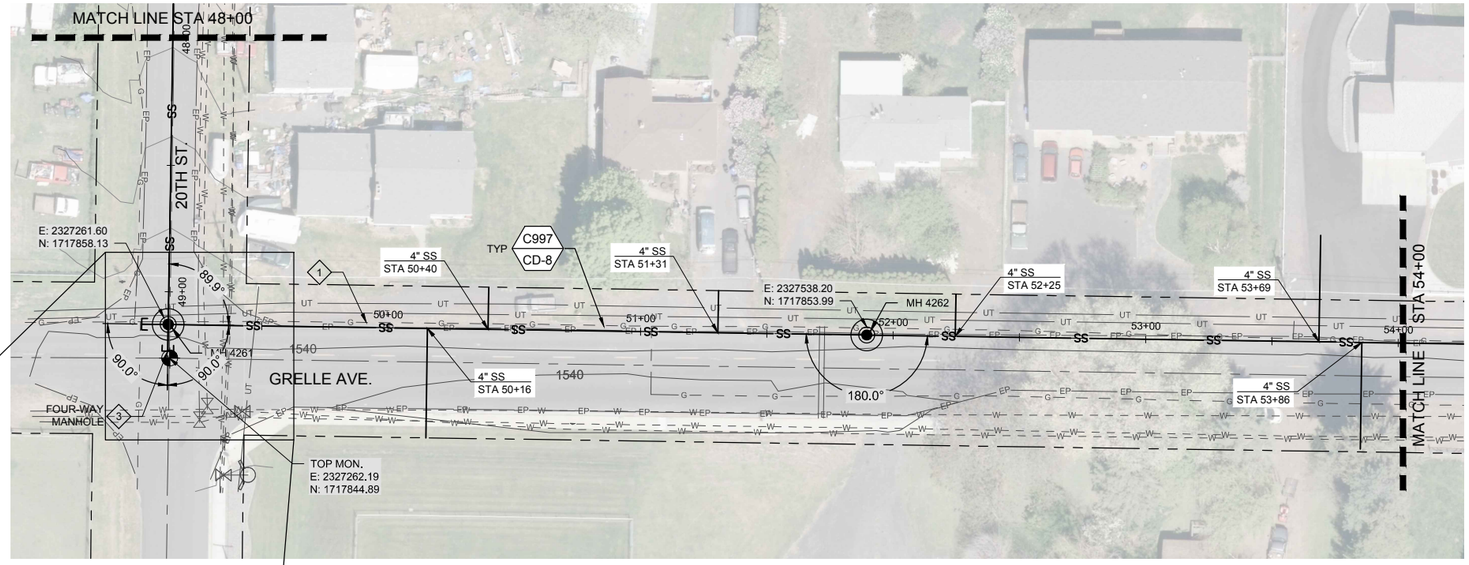
PROJECT : 181.0020
DATE : 11/19/2019
DRAWING NO. C-6


Path: B:\Projects\I-L\Lewiston_181\0020 Phase II\CAB\AB Lewiston Profiles.dwg File Name: AB Lewiston Profiles.dwg Plot Date: 11/20/2019 5:03 PM Duce

NORTH

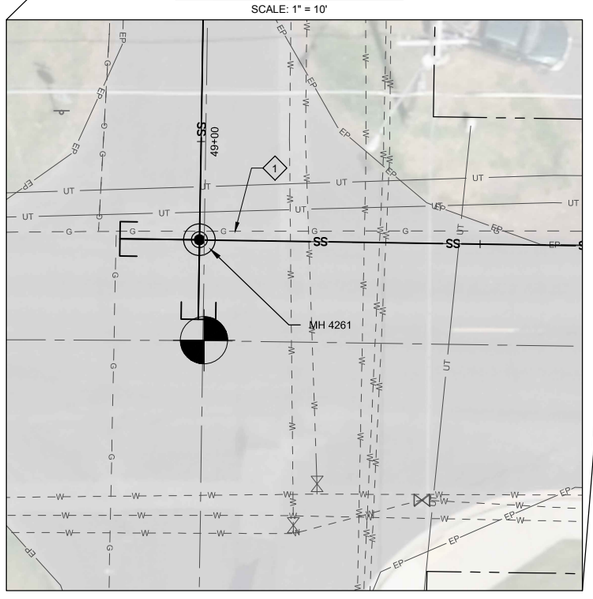
0' 15' 30' 60' 90'

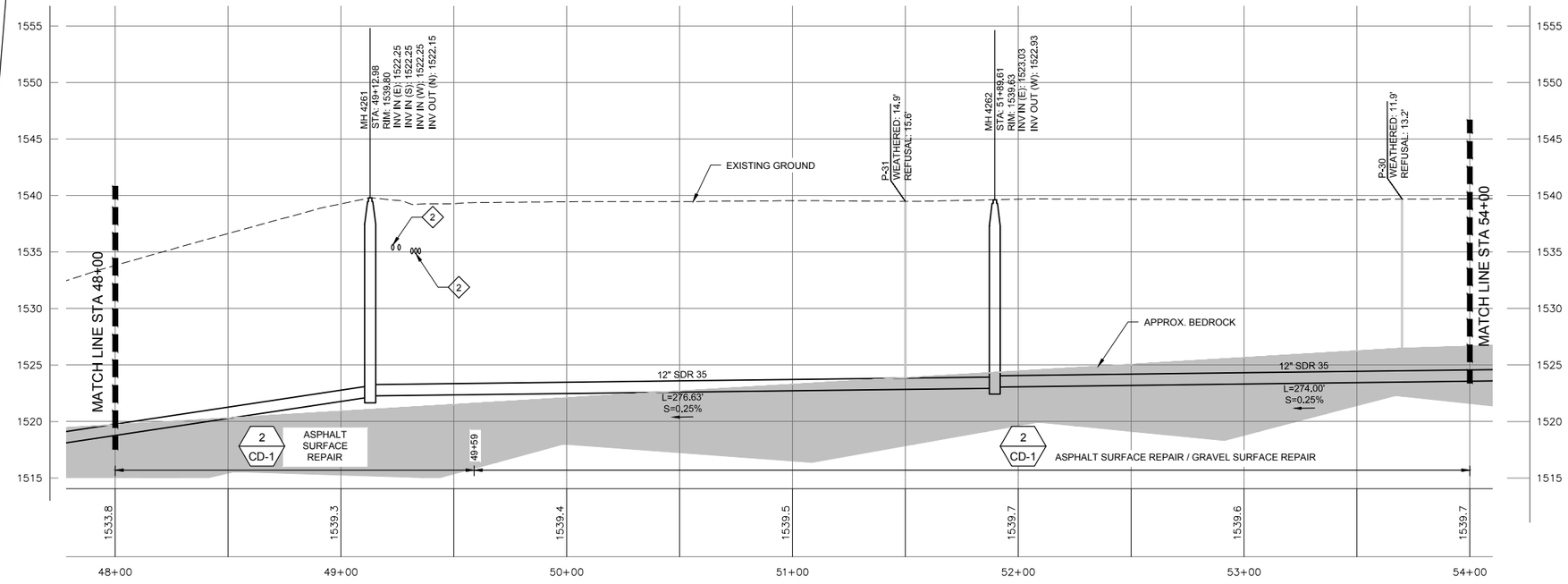
SCALE: 1" = 30'




0' 5' 10' 20' 30'

SCALE: 1" = 10'




PROFILE STA. 48+00 - 54+00

## GENERAL NOTES:

1. GRAVITY SEWER PIPE MATERIAL TYPE SHALL BE MINIMUM PVC SDR-35. PIPE DIAMETER TO BE 12-INCHES UNLESS OTHERWISE SHOWN.
2. CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS, LOCATIONS, AND ELEVATIONS BEFORE STARTING WORK AND PRIOR TO ORDERING MATERIAL.
3. CONTRACTOR TO COMPLY WITH IDAPA 58.01.08.542.07 WHEN WATER MAINS AND POTABLE WATER SERVICE LINES ARE ENCOUNTERED DURING SEWER MAIN AND SERVICE TRENCHING ACTIVITIES.
4. PROPERTY LINES SHOWN ON PLAN SHEETS ARE FOR INFORMATIONAL PURPOSES ONLY AND WERE COMPILED FROM VARIOUS SOURCES. IT IS NOT THE INTENT OF THESE DRAWINGS TO BE USED FOR LOCATION OF PROPERTY LINES. MOUNTAIN WATERWORKS ASSUMES NO LIABILITY FOR PROPERTY LINES WHICH MAY NOT BE ACCURATELY SHOWN.
5. ALL MANHOLES ARE TO BE CONSTRUCTED IN ACCORDANCE WITH WASTEWATER MANHOLE TYPE 1 DETAIL 7 ON SHT CD-4 UNLESS OTHERWISE SHOWN.
6. GEOTECHNICAL BORINGS SHOWN IN APPROXIMATE LOCATIONS FOR INFORMATIONAL PURPOSES.

## KEY NOTES:

1. EXISTING GAS MAIN TO BE RELOCATED BY UTILITY COMPANY PRIOR TO CONSTRUCTION.
2. WATER MAIN UTILITY CROSSINGS (APPROX. DEPTHS).
3. PROVIDE PIPE STUB-OUTS FOR FUTURE LATERAL CONNECTIONS INTO MANHOLE IN ACCORDANCE WITH C999 ON SHT CD-8.

HORIZ. SCALE: 1" = 30'
VER. SCALE: 1" = 6'
(VERIFY PER SHEET SIZE)

| NO. | REVISION | BY | DATE |
|---|---|---|---|
| | | | |

DESIGN: LCH
DRAWN: OTW
CHECKED: LMD
APPROVED:

PROFESSIONAL ENGINEER LICENSED 15884 11-19-19 STATE OF IDAHO RYAN J. REIDER

**RECORD DRAWING**

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Mountain WATERWORKS

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# EAST ORCHARDS SEWER EXPANSION

LEWISTON, IDAHO

STA 48+00 - 54+00

VERIFY SCALE
BAR IS ONE INCH ON FULL SIZE DRAWING
0 1"

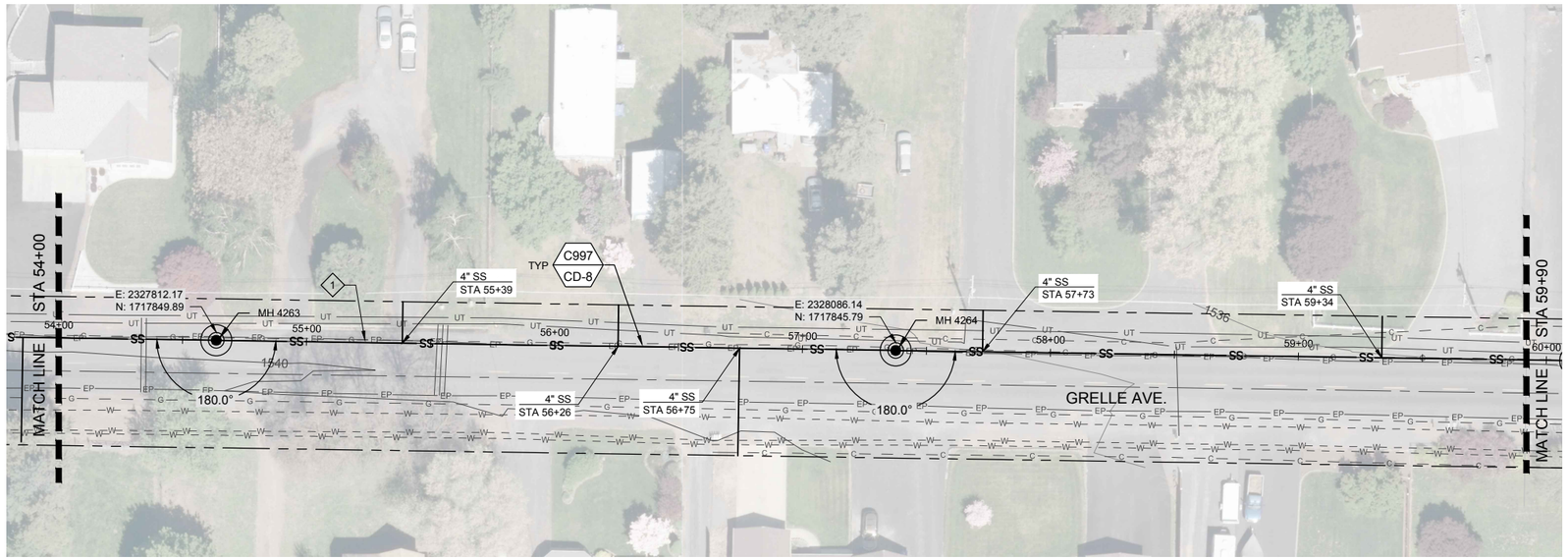
PROJECT : 181.0020
DATE : 11/19/2019
DRAWING NO. C-7

Path: B:\Projects\I-L\Lewiston_181\0020 Phase II\CAB\AB Lewiston Profiles.dwg File Name: AB Lewiston Profiles.dwg Plot Date: 11/20/2019 5:04 PM Duce

NORTH

0' 15' 30' 60' 90'

SCALE: 1" = 30'

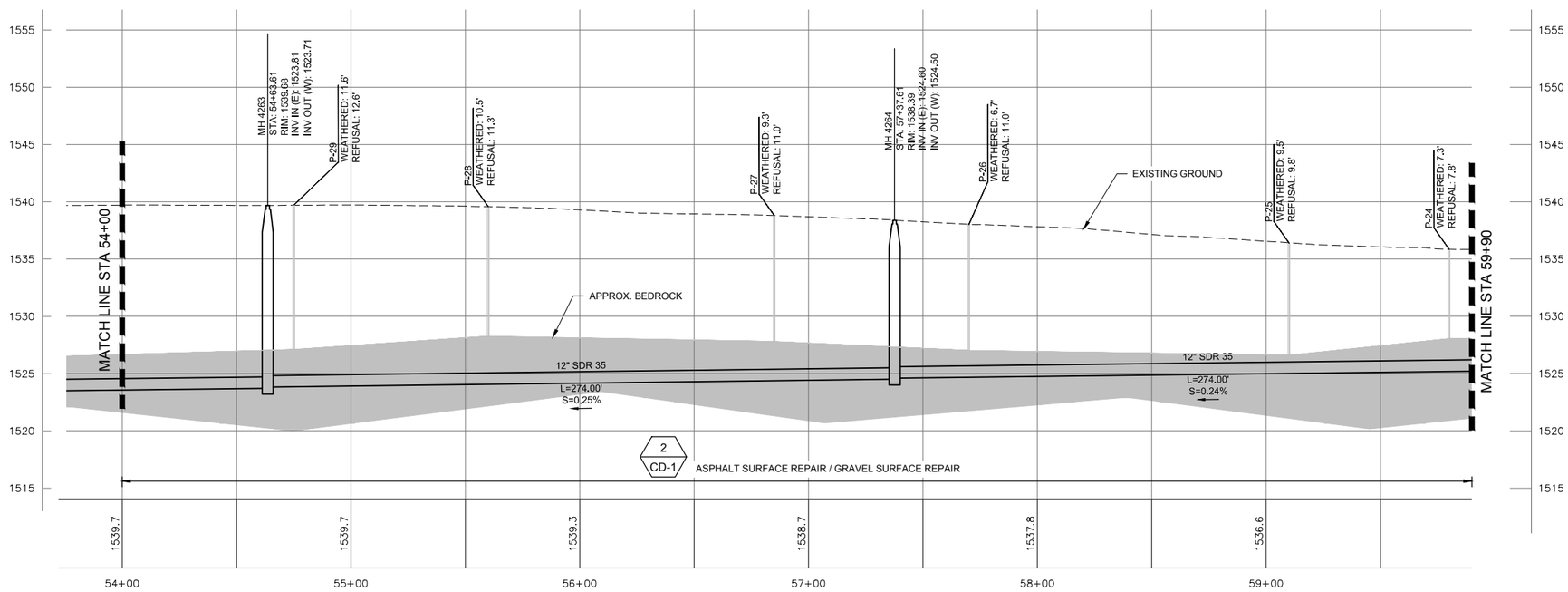



## GENERAL NOTES:

1. GRAVITY SEWER PIPE MATERIAL TYPE SHALL BE MINIMUM PVC SDR-35. PIPE DIAMETER TO BE 12-INCHES UNLESS OTHERWISE SHOWN.
2. CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS, LOCATIONS, AND ELEVATIONS BEFORE STARTING WORK AND PRIOR TO ORDERING MATERIAL.
3. CONTRACTOR TO COMPLY WITH IDAPA 58.01.08.542.07 WHEN WATER MAINS AND POTABLE WATER SERVICE LINES ARE ENCOUNTERED DURING SEWER MAIN AND SERVICE TRENCHING ACTIVITIES.
4. PROPERTY LINES SHOWN ON PLAN SHEETS ARE FOR INFORMATIONAL PURPOSES ONLY AND WERE COMPILED FROM VARIOUS SOURCES. IT IS NOT THE INTENT OF THESE DRAWINGS TO BE USED FOR LOCATION OF PROPERTY LINES. MOUNTAIN WATERWORKS ASSUMES NO LIABILITY FOR PROPERTY LINES WHICH MAY NOT BE ACCURATELY SHOWN.
5. ALL MANHOLES ARE TO BE CONSTRUCTED IN ACCORDANCE WITH WASTEWATER MANHOLE TYPE 1 DETAIL 7 ON SHT CD-4 UNLESS OTHERWISE SHOWN.
6. GEOTECHNICAL BORINGS SHOWN IN APPROXIMATE LOCATIONS FOR INFORMATIONAL PURPOSES.

## KEY NOTES:

1. GAS MAIN TO BE RELOCATED BY UTILITY COMPANY PRIOR TO CONSTRUCTION.




PROFILE STA. 54+00 - 59+90

HORIZ. SCALE: 1" = 30'
VER. SCALE: 1" = 6'
(VERIFY PER SHEET SIZE)

| NO. | REVISION | BY | DATE |
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| | |
|---|---|
| DESIGN | LCH |
| DRAWN | OTW |
| CHECKED | LMD |
| APPROVED | |

PROFESSIONAL ENGINEER LICENSED 10884 STATE OF IDAHO RYAN J. REHDER 11-19-19

**RECORD DRAWING**

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# EAST ORCHARDS SEWER EXPANSION

LEWISTON, IDAHO

STA 54+00 - 59+90

VERIFY SCALE
BAR IS ONE INCH ON FULL SIZE DRAWING
0 1"

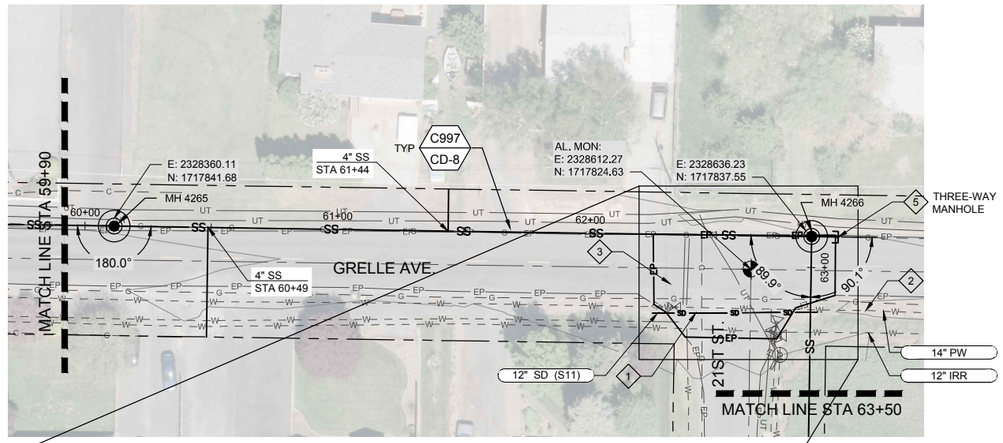
| | |
|---|---|
| PROJECT : | 181.0020 |
| DATE : | 11/19/2019 |
| DRAWING NO. | C-8 |

Path: B:\Projects\I-L\Lewiston_1810020 Phase II\CAB\AB Lewiston Profiles.dwg File Name: AB Lewiston Profiles.dwg Plot Date: 11/20/2019 5:04 PM Duce

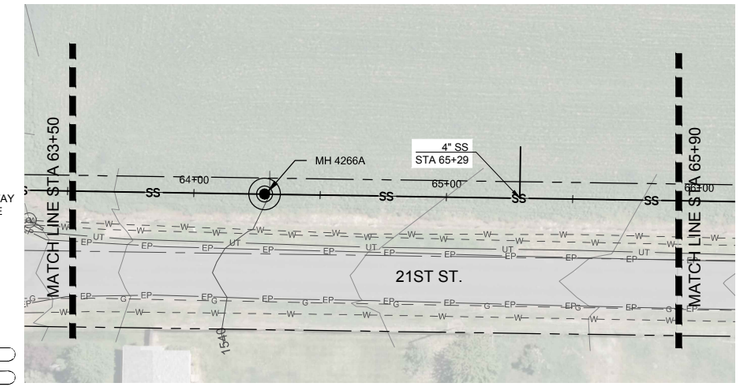
NORTH

0' 15' 30' 60' 90'

SCALE: 1" = 30'

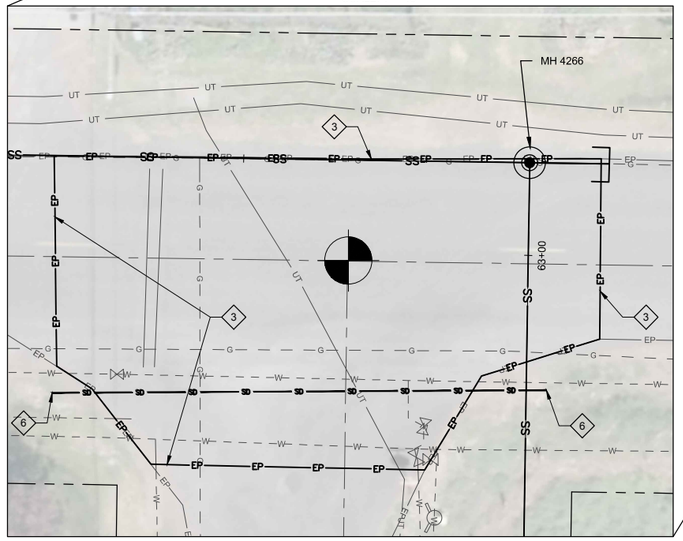


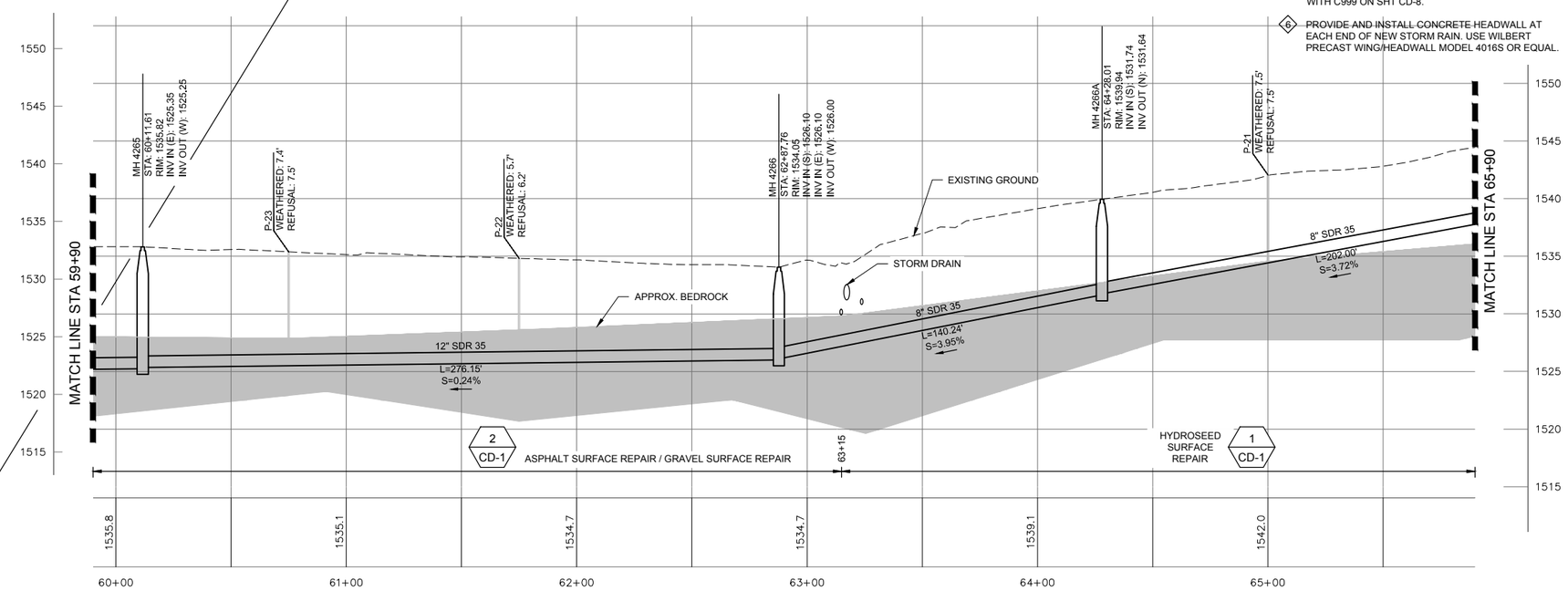

NORTH




0' 5' 10' 20' 30'

SCALE: 1" = 10'




PROFILE STA. 59+90 - 65+90

HORIZ. SCALE: 1" = 30'
VER. SCALE: 1" = 6'
(VERIFY PER SHEET SIZE)

## GENERAL NOTES:

1. GRAVITY SEWER PIPE MATERIAL TYPE SHALL BE MINIMUM PVC SDR-35. PIPE DIAMETER TO BE 12-INCHES UNLESS OTHERWISE SHOWN.
2. CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS, LOCATIONS, AND ELEVATIONS BEFORE STARTING WORK AND PRIOR TO ORDERING MATERIAL.
3. CONTRACTOR TO COMPLY WITH IDAPA 58.01.08.542.07 WHEN WATER MAINS AND POTABLE WATER SERVICE LINES ARE ENCOUNTERED DURING SEWER MAIN AND SERVICE TRENCHING ACTIVITIES.
4. PROPERTY LINES SHOWN ON PLAN SHEETS ARE FOR INFORMATIONAL PURPOSES ONLY AND WERE COMPILED FROM VARIOUS SOURCES. IT IS NOT THE INTENT OF THESE DRAWINGS TO BE USED FOR LOCATION OF PROPERTY LINES. MOUNTAIN WATERWORKS ASSUMES NO LIABILITY FOR PROPERTY LINES WHICH MAY NOT BE ACCURATELY SHOWN.
5. ALL MANHOLES ARE TO BE CONSTRUCTED IN ACCORDANCE WITH WASTEWATER MANHOLE TYPE 1 DETAIL 7 ON SHT CD-4 UNLESS OTHERWISE SHOWN.
6. GEOTECHNICAL BORINGS SHOWN IN APPROXIMATE LOCATIONS FOR INFORMATIONAL PURPOSES.

## KEY NOTES:

1. CONTRACTOR TO REPLACE STORM DRAIN AS PART OF THE PROJECT. MATCH SIZE, SLOPE, AND INVERT ELEVATION OF EXISTING STORM DRAIN.
2. CONVERSATIONS WITH LOID INDICATES THAT THE EXISTING WATER LINE IS 14-INCH ASBESTOS CEMENT. A LIMITED POTHOLING INVESTIGATION INDICATES THAT THE PIPE WAS PLACED DIRECTLY ON BEDROCK. THIS LINE HAS LIMITED VALVING CAPABILITIES. CONTRACTOR TO COORDINATE WITH LOID TO PROTECT PIPE PRIOR TO EXCAVATION.
3. REMOVE EXISTING ASPHALT AND REPAVE ENTIRE INTERSECTION WITHIN LIMITS SHOWN. APPROXIMATE AREA AS SHOWN IS 2,565 SQUARE FEET.
4. GAS MAIN TO BE RELOCATED BY UTILITY COMPANY PRIOR TO CONSTRUCTION.
5. PROVIDE PIPE STUB-OUTS FOR FUTURE LATERAL CONNECTIONS INTO MANHOLE IN ACCORDANCE WITH C999 ON SHT CD-8.
6. PROVIDE AND INSTALL CONCRETE HEADWALL AT EACH END OF NEW STORM RAIN. USE WILBERT PRECAST WING/HEADWALL MODEL 4016S OR EQUAL.

| NO. | REVISION | BY | DATE |
|---|---|---|---|
| | | | |

DESIGN: LCH
DRAWN: OTW
CHECKED: LMD
APPROVED:

PROFESSIONAL ENGINEER LICENSED 16884 11-19-19 STATE OF IDAHO RYAN J. REHDER

**RECORD DRAWING**

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111 MAIN ST. SUITE 175
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# EAST ORCHARDS SEWER EXPANSION

LEWISTON, IDAHO

STA 59+90 - 65+90

VERIFY SCALE
BAR IS ONE INCH ON FULL SIZE DRAWING
0 1"

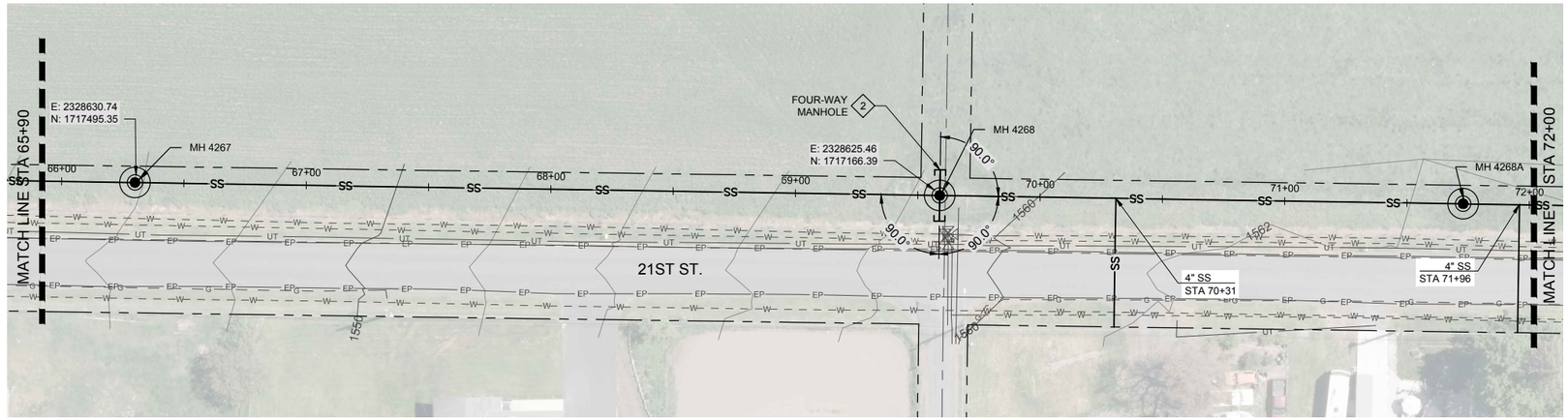
PROJECT : 181.0020
DATE : 11/19/2019
DRAWING NO. C-9


Path: B:\Projects\I-L\Lewiston_1810020 Phase II\CAB\AB Lewiston Profiles.dwg File Name: AB Lewiston Profiles.dwg Plot Date: 11/20/2019 5:04 PM Duce

NORTH

0' 15' 30' 60' 90'

SCALE: 1" = 30'




## GENERAL NOTES:

1. GRAVITY SEWER PIPE MATERIAL TYPE SHALL BE MINIMUM PVC SDR-35. PIPE DIAMETER TO BE 12-INCHES UNLESS OTHERWISE SHOWN.
2. CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS, LOCATIONS, AND ELEVATIONS BEFORE STARTING WORK AND PRIOR TO ORDERING MATERIAL.
3. CONTRACTOR TO COMPLY WITH IDAPA 58.01.08.542.07 WHEN WATER MAINS AND POTABLE WATER SERVICE LINES ARE ENCOUNTERED DURING SEWER MAIN AND SERVICE TRENCHING ACTIVITIES.
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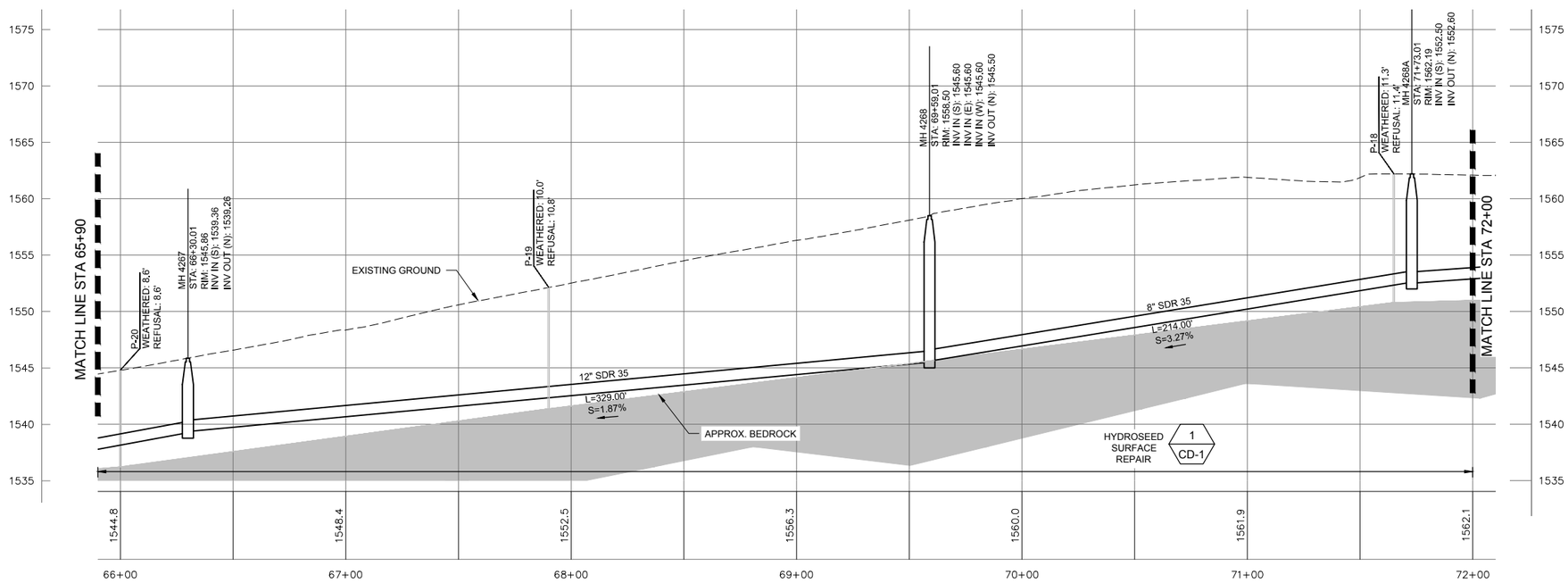
6. GEOTECHNICAL BORINGS SHOWN IN APPROXIMATE LOCATIONS FOR INFORMATIONAL PURPOSES.

## KEY NOTES:

1. PROVIDE PIPE STUB-OUTS FOR FUTURE LATERAL CONNECTIONS INTO MANHOLE IN ACCORDANCE WITH C999 ON SHT CD-8.




PROFILE STA. 65+90 - 72+00

HORIZ. SCALE: 1" = 30'
VER. SCALE: 1" = 6'
(VERIFY PER SHEET SIZE)

| NO. | REVISION | BY | DATE |
|---|---|---|---|
| | | | |

DESIGN: LCH
DRAWN: OTW
CHECKED: LMD
APPROVED:

PROFESSIONAL ENGINEER LICENSED 15884 11-19-19 STATE OF IDAHO RYAN J. REHDER

**RECORD DRAWING**

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# EAST ORCHARDS SEWER EXPANSION

LEWISTON, IDAHO

STA 65+90 - 72+00

VERIFY SCALE
BAR IS ONE INCH ON FULL SIZE DRAWING
0 1"

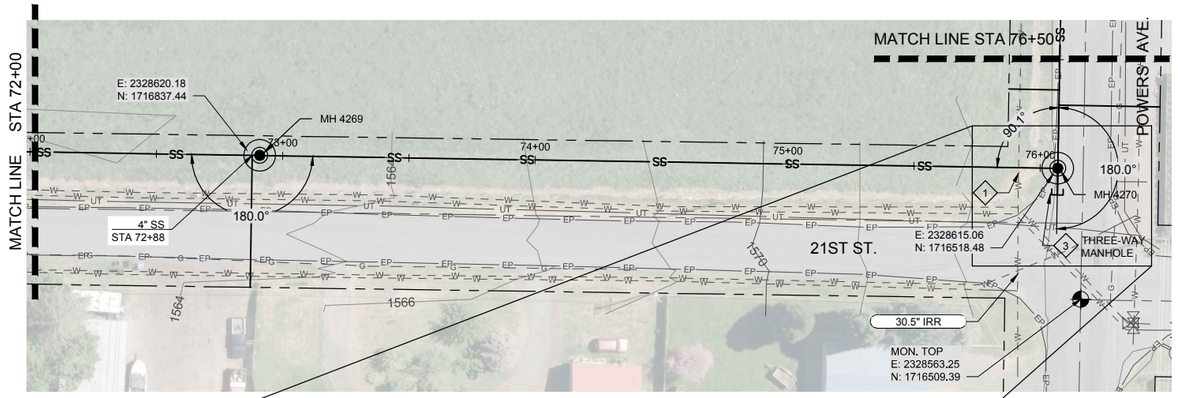
PROJECT : 181.0020
DATE : 11/19/2019
DRAWING NO.
C-10

Path: B:\Projects\I-L\Lewiston_1810020 Phase I\CAB\AB Lewiston Profiles.dwg File Name: AB Lewiston Profiles.dwg Plot Date: 11/20/2019 5:05 PM Duce

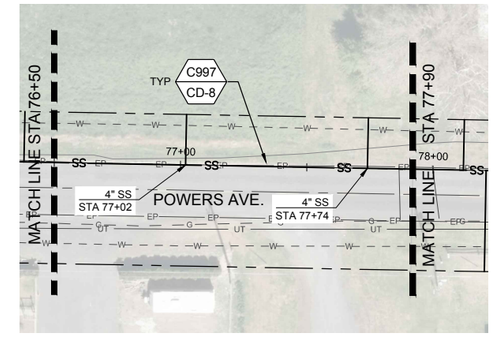
NORTH

0' 15' 30' 60' 90'

SCALE: 1" = 30'




NORTH




## GENERAL NOTES:

1. GRAVITY SEWER PIPE MATERIAL TYPE SHALL BE MINIMUM PVC SDR-35. PIPE DIAMETER TO BE 12-INCHES UNLESS OTHERWISE SHOWN.
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5. ALL MANHOLES ARE TO BE CONSTRUCTED IN ACCORDANCE WITH WASTEWATER MANHOLE TYPE 1 DETAIL 7 ON SHT CD-4 UNLESS OTHERWISE SHOWN.
6. GEOTECHNICAL BORINGS SHOWN IN APPROXIMATE LOCATIONS FOR INFORMATIONAL PURPOSES.

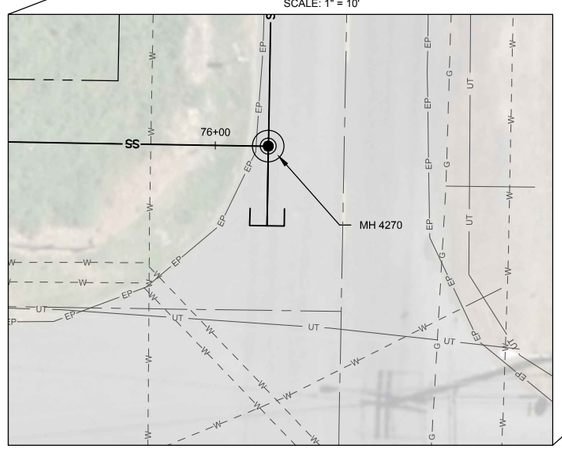
## KEY NOTES:

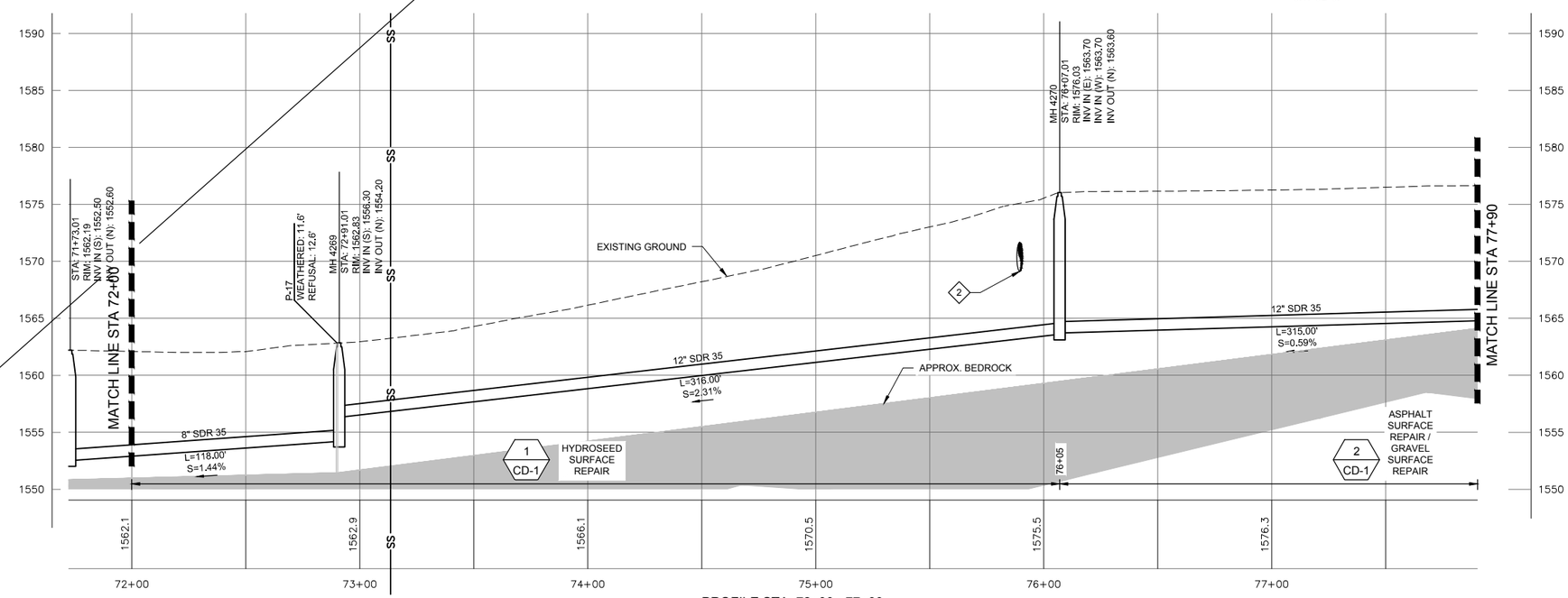
1. EXISTING WATER LINE IS NON-POTABLE 30.5-INCH EPOXY COATED STEEL. CONTRACTOR TO COORDINATE WITH LOID BEFORE PERFORMING WORK WITHIN APPROXIMATELY 5-FEET OF WATER LINE CROSSING. CONTACT CHRIS WOODY, 208.790.2287.

   IF THE EPOXY COATING IS DAMAGED NOTIFY LOID AND MAKE THE APPROPRIATE REPAIRS. CONTRACTOR SHALL REQUEST AN INSPECTION FROM LOID PRIOR TO BACKFILL. IF THE 30.5-INCH PIPE IS DAMAGED IN ANY WAY THE CONTRACTOR SHALL PAY FOR THE NECESSARY REPAIRS, AS DETERMINED BY THE ENGINEER.
2. WATER MAIN CROSSING.
3. PROVIDE PIPE STUB-OUTS FOR FUTURE LATERAL CONNECTIONS INTO MANHOLE IN ACCORDANCE WITH C999 ON SHT CD-8.

0' 5' 10' 20' 30'

SCALE: 1" = 10'




PROFILE STA. 72+00 - 77+90

HORIZ. SCALE: 1" = 30'
VER. SCALE: 1" = 6'
(VERIFY PER SHEET SIZE)

| NO. | REVISION | BY | DATE |
|---|---|---|---|
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|---|---|
| DESIGN | LCH |
| DRAWN | OTW |
| CHECKED | LMD |
| APPROVED | |

PROFESSIONAL ENGINEER LICENSED 10884 11-19-19 STATE OF IDAHO RYAN J. REHDER

**RECORD DRAWING**

THESE RECORD DRAWINGS HAVE BEEN PREPARED BASED IN PART ON INFORMATION PROVIDED BY OTHERS

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Mountain WATERWORKS


ENGINEERING AND ENVIRONMENTAL SOLUTIONS
111 MAIN ST. SUITE 175
LEWISTON, IDAHO 83501
208.780.3990

IDAHO OFFICES
BOISE · LEWISTON · COEUR D'ALENE


# EAST ORCHARDS SEWER EXPANSION

LEWISTON, IDAHO

STA 72+00 - 77+90

VERIFY SCALE
BAR IS ONE INCH ON FULL SIZE DRAWING
0 1"

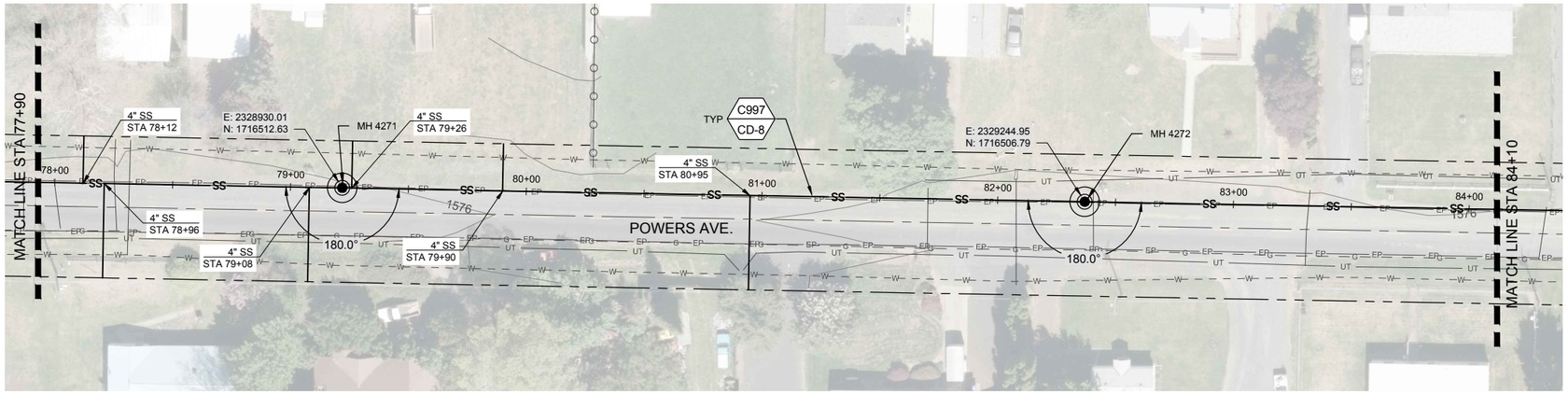
| | |
|---|---|
| PROJECT : | 181.0020 |
| DATE : | 11/19/2019 |
| DRAWING NO. | C-11 |


Path: B:\Projects\I-L\Lewiston_1810020 Phase II\OA\BA\B Lewiston Profiles.dwg File Name: AB Lewiston Profiles.dwg Plot Date: 11/20/2019 5:05 PM Duce

NORTH

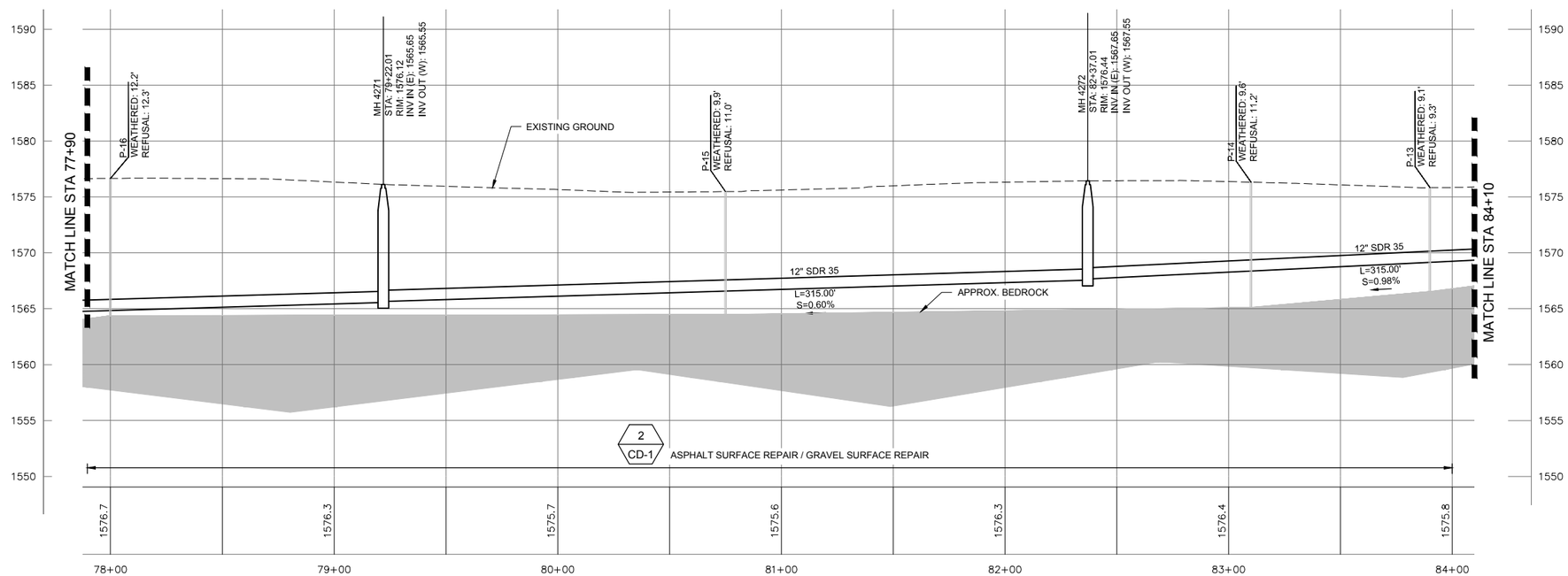
0' 15' 30' 60' 90'

SCALE: 1" = 30'




## GENERAL NOTES:

1. GRAVITY SEWER PIPE MATERIAL TYPE SHALL BE MINIMUM PVC SDR-35. PIPE DIAMETER TO BE 12-INCHES UNLESS OTHERWISE SHOWN.
2. CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS, LOCATIONS, AND ELEVATIONS BEFORE STARTING WORK AND PRIOR TO ORDERING MATERIAL.
3. CONTRACTOR TO COMPLY WITH IDAPA 58.01.08.542.07 WHEN WATER MAINS AND POTABLE WATER SERVICE LINES ARE ENCOUNTERED DURING SEWER MAIN AND SERVICE TRENCHING ACTIVITIES.
4. PROPERTY LINES SHOWN ON PLAN SHEETS ARE FOR INFORMATIONAL PURPOSES ONLY AND WERE COMPILED FROM VARIOUS SOURCES. IT IS NOT THE INTENT OF THESE DRAWINGS TO BE USED FOR LOCATION OF PROPERTY LINES. MOUNTAIN WATERWORKS ASSUMES NO LIABILITY FOR PROPERTY LINES WHICH MAY NOT BE ACCURATELY SHOWN.
5. ALL MANHOLES ARE TO BE CONSTRUCTED IN ACCORDANCE WITH WASTEWATER MANHOLE TYPE 1 DETAIL 7 ON SHT CD-4 UNLESS OTHERWISE SHOWN.
6. GEOTECHNICAL BORINGS SHOWN IN APPROXIMATE LOCATIONS FOR INFORMATIONAL PURPOSES.




PROFILE STA. 77+90 - 84+10

HORIZ. SCALE: 1" = 30'
VER. SCALE: 1" = 6'
(VERIFY PER SHEET SIZE)

| NO. | REVISION | BY | DATE |
|---|---|---|---|
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| | |
|---|---|
| DESIGN | LCH |
| DRAWN | OTW |
| CHECKED | LMD |
| APPROVED | |

PROFESSIONAL ENGINEER LICENSED 10884 11-19-19 STATE OF IDAHO RYAN J. REHDER

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208.780.3990

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# EAST ORCHARDS SEWER EXPANSION

LEWISTON, IDAHO

STA 77+90 - 84+10

VERIFY SCALE
BAR IS ONE INCH ON FULL SIZE DRAWING
0 1"

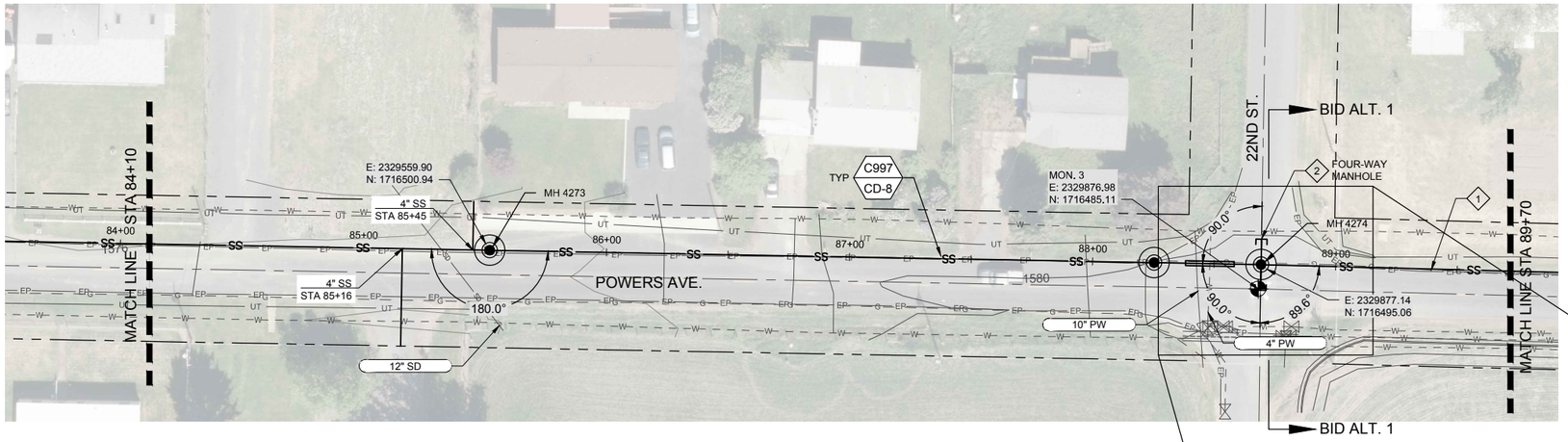
| | |
|---|---|
| PROJECT : | 181.0020 |
| DATE : | 11/19/2019 |
| DRAWING NO. | C-12 |


Path: B:\Projects\I-L\Lewiston_1810020 Phase II\OA\BA\B Lewiston Profiles.dwg File Name: AB Lewiston Profiles.dwg Plot Date: 12/2/2019 10:28 AM Duce

NORTH

0' 15' 30' 60' 90'

SCALE: 1" = 30'




## GENERAL NOTES:

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2. CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS, LOCATIONS, AND ELEVATIONS BEFORE STARTING WORK AND PRIOR TO ORDERING MATERIAL.
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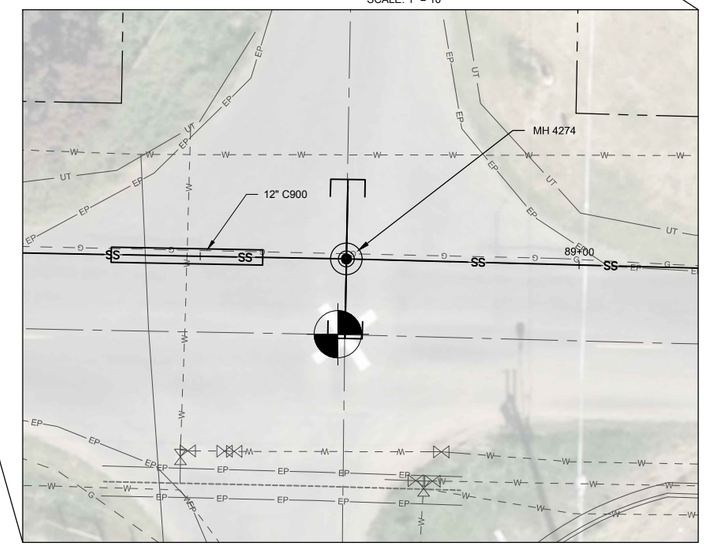
5. ALL MANHOLES ARE TO BE CONSTRUCTED IN ACCORDANCE WITH WASTEWATER MANHOLE TYPE 1 DETAIL 7 ON SHT CD-4 UNLESS OTHERWISE SHOWN.
6. GEOTECHNICAL BORINGS SHOWN IN APPROXIMATE LOCATIONS FOR INFORMATIONAL PURPOSES.

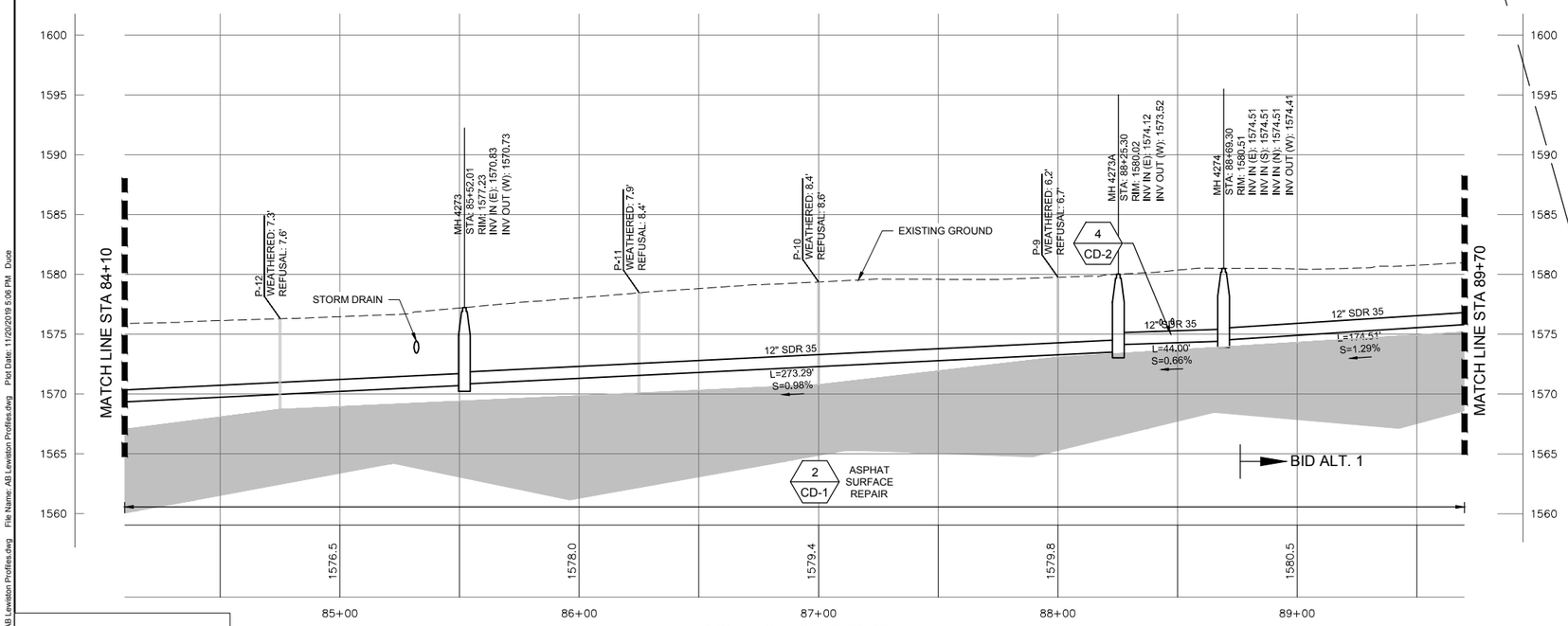
## KEY NOTES:

1. GAS MAIN TO BE RELOCATED BY UTILITY COMPANY PRIOR TO CONSTRUCTION.
2. PROVIDE PIPE STUB-OUTS FOR FUTURE LATERAL CONNECTIONS INTO MANHOLE IN ACCORDANCE WITH C999 ON SHT TD-8.

0' 5' 10' 20' 30'

SCALE: 1" = 10'




PROFILE STA. 84+10 -89+70

HORIZ. SCALE: 1" = 30'
VER. SCALE: 1" = 6'
(VERIFY PER SHEET SIZE)

| NO. | REVISION | BY | DATE |
|---|---|---|---|
| | | | |

DESIGN LCH
DRAWN OTW
CHECKED LMD
APPROVED

PROFESSIONAL ENGINEER LICENSED 10884 11-19-19 STATE OF IDAHO RYAN J. REHDER

**RECORD DRAWING**

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# EAST ORCHARDS SEWER EXPANSION

LEWISTON, IDAHO

STA 84+10 - 89+70

VERIFY SCALE
BAR IS ONE INCH ON FULL SIZE DRAWING
0 1"

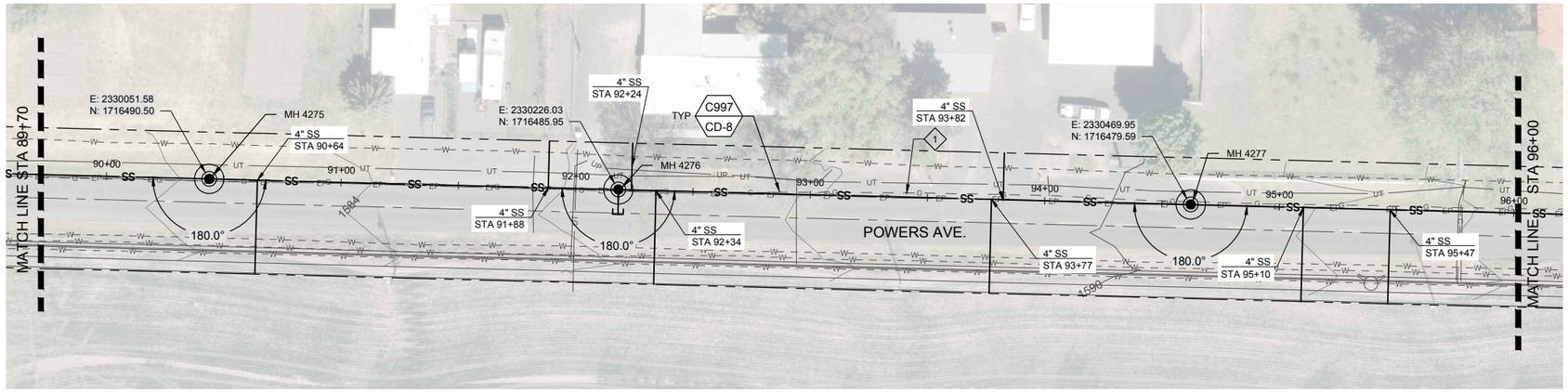
PROJECT : 181.0020
DATE : 11/19/2019
DRAWING NO. C-13


Path: B:\Projects\I-L\Lewiston_1810020 Phase II\CAB\AB Lewiston Profiles.dwg File Name: AB Lewiston Profiles.dwg Plot Date: 11/20/2019 5:06 PM Duce

NORTH

0' 15' 30' 60' 90'

SCALE: 1" = 30'




## GENERAL NOTES:

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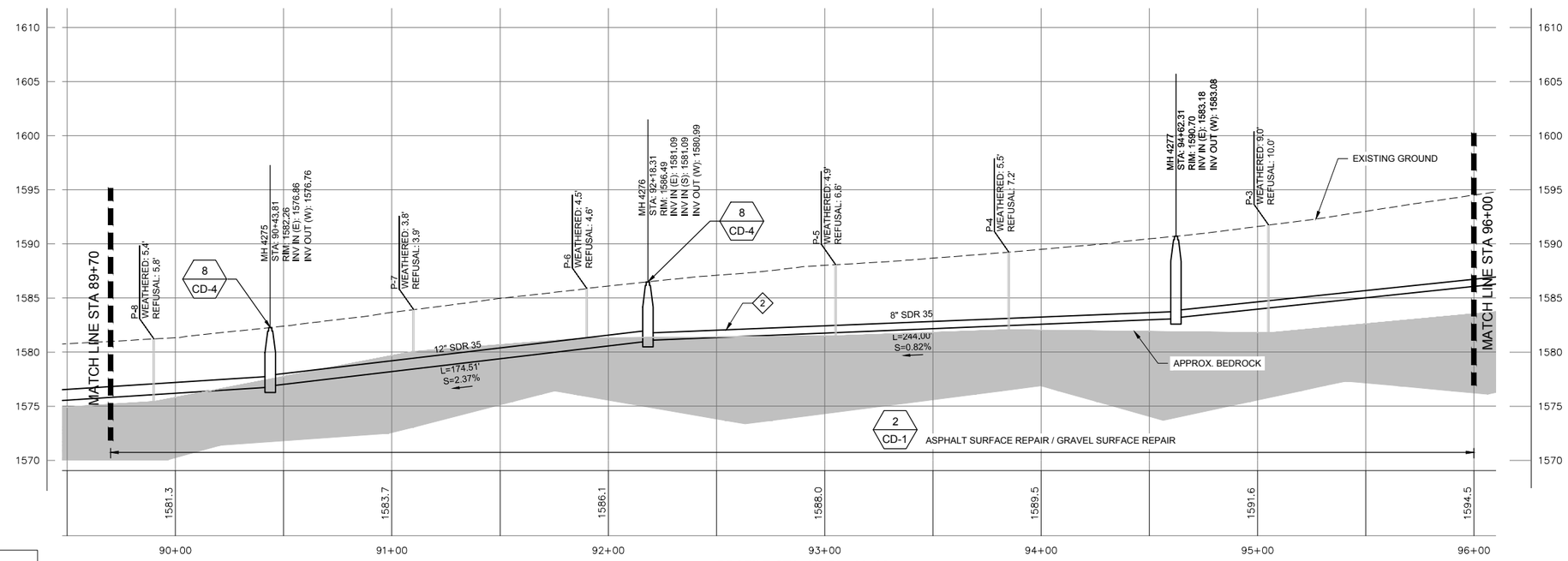
## KEY NOTES:

1. GAS MAIN TO BE RELOCATED BY UTILITY COMPANY PRIOR TO CONSTRUCTION.
2. GRAVITY SEWER PIPE MATERIAL TYPE SHALL BE MINIMUM PVC SDR 35. PIPE DIAMETER TO BE 8-INCHES.




PROFILE STA. 89+70 - 96+00

HORIZ. SCALE: 1" = 30'
VER. SCALE: 1" = 6'
(VERIFY PER SHEET SIZE)

| NO. | REVISION | BY | DATE |
|---|---|---|---|
| | | | |

DESIGN: LCH
DRAWN: OTW
CHECKED: LMD
APPROVED:

PROFESSIONAL ENGINEER LICENSED 15884 11-19-19 STATE OF IDAHO RYAN J. REHDER

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# EAST ORCHARDS SEWER EXPANSION

LEWISTON, IDAHO

STA 89+70 - 96+00

VERIFY SCALE
BAR IS ONE INCH ON FULL SIZE DRAWING
0 1"

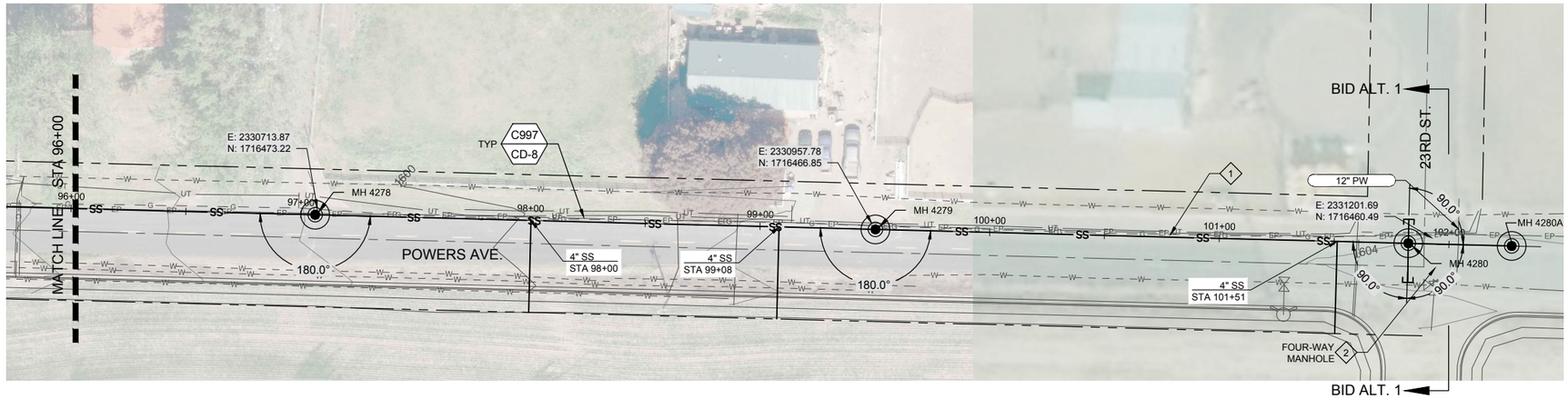
PROJECT : 181.0020
DATE : 11/19/2019
DRAWING NO. C-14

Path: B:\Projects\I-L\Lewiston_1810020 Phase I\CAB\AB Lewiston Profiles.dwg File Name: AB Lewiston Profiles.dwg Plot Date: 11/20/2019 5:07 PM Duce

NORTH

0' 15' 30' 60' 90'

SCALE: 1" = 30'




## GENERAL NOTES:

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## KEY NOTES:

1. GAS MAIN TO BE RELOCATED BY UTILITY COMPANY PRIOR TO CONSTRUCTION.
2. PROVIDE AND INSTALL PIPE STUB-OUT FOR FUTURE LATERAL CONNECTION INTO MANHOLE IN ACCORDANCE WITH C999 ON SHT CD-8.
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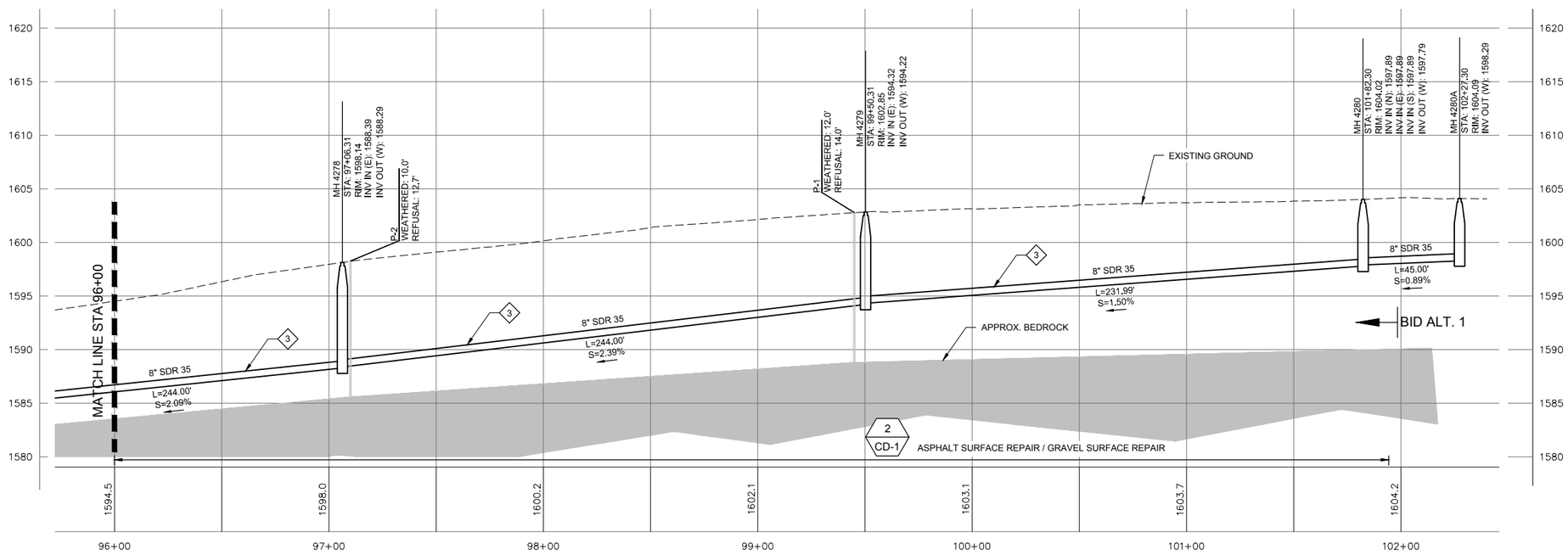


PROFILE STA. 96+00 - 102+00

HORIZ. SCALE: 1" = 30'
VER. SCALE: 1" = 10'
(VERIFY PER SHEET SIZE)

| NO. | REVISION | BY | DATE |
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| DESIGN | LCH |
| DRAWN | OTW |
| CHECKED | LMD |
| APPROVED | |

PROFESSIONAL ENGINEER LICENSED 15884 11-19-19 STATE OF IDAHO RYAN J. REHDER

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208.780.3990

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# EAST ORCHARDS SEWER EXPANSION

LEWISTON, IDAHO

STA 96+00 - 101+92.34

VERIFY SCALE
BAR IS ONE INCH ON FULL SIZE DRAWING
0 1"

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|---|---|
| PROJECT : | 181.0020 |
| DATE : | 11/19/2019 |
| DRAWING NO. | C-15 |

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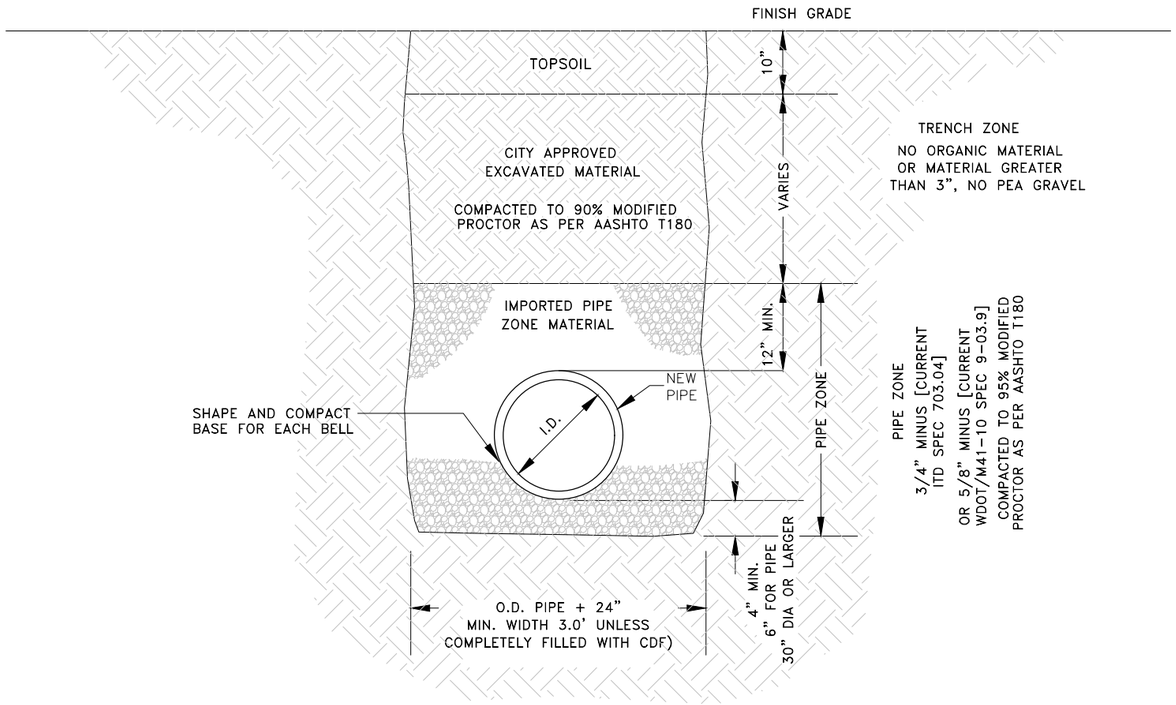


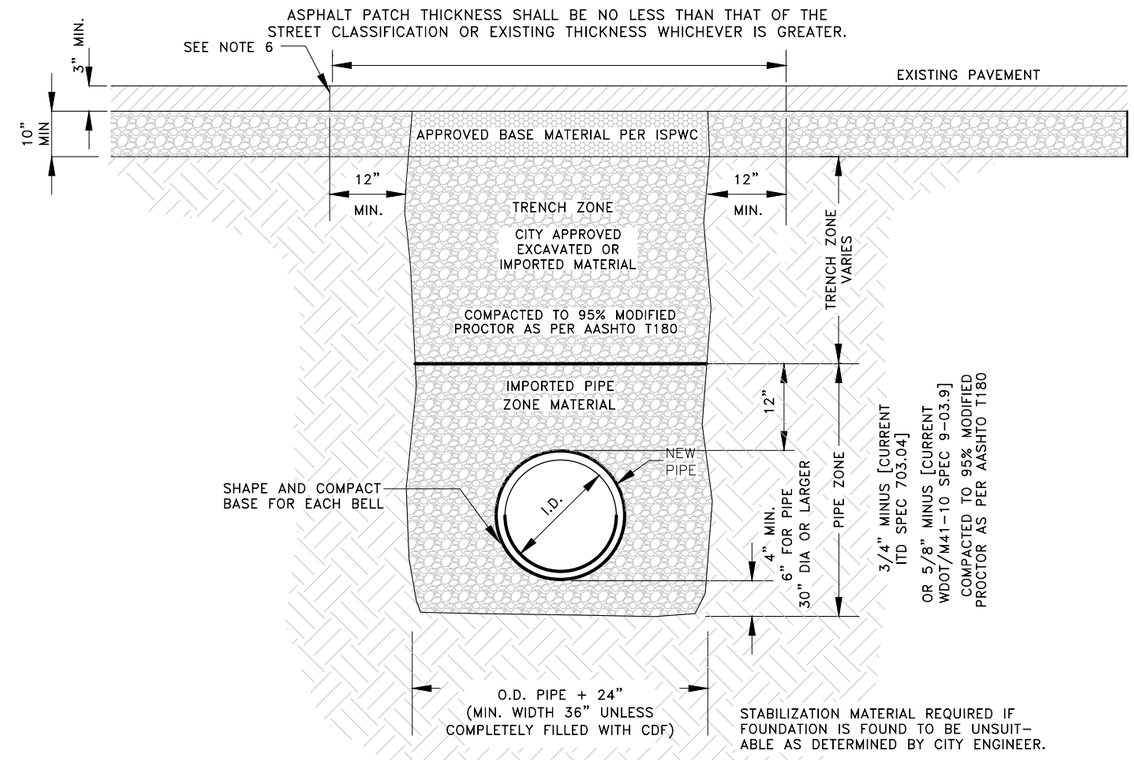

STABILIZATION MATERIAL REQUIRED IF FOUNDATION IS FOUND TO BE UNSUITABLE AS DETERMINED BY CITY ENGINEER.

CLASS 'A' BACKFILL SHALL BE USED IN AREAS NOT CURRENTLY BENEATH ASPHALT PAVEMENT.

NOTES:

1. CONTRACTOR SHALL COMPLY WITH THE MOST CURRENT OSHA REQUIREMENTS FOR EXCAVATIONS.
2. CLASS 'A' BACKFILL SHALL COMPLY WITH THE REQUIREMENTS OF THE CITY'S STANDARD CONSTRUCTION SPECIFICATIONS.
3. TRENCH MATERIAL SHALL BE PLACED IN MAX. 6" LIFTS.
4. ANY ALTERATIONS TO THIS STANDARD MUST HAVE WRITTEN APPROVAL BY CITY ENGINEER.

1 - BACKFILL - CLASS 'A'
NOT TO SCALE




NOTES:

1. CONTRACTOR SHALL COMPLY WITH THE MOST CURRENT OSHA REQUIREMENTS FOR EXCAVATIONS.
2. ALL TRENCHES EXCAVATED WITHIN EXISTING PAVED STREETS SHALL BE BACKFILLED AND SURFACED THE SAME DAY WITH AN APPROVED BASE MATERIAL – TO BE REPLACED WITH THE CITY'S STANDARD HOT MIX ASPHALT SURFACING AS SOON AS SCHEDULING ALLOWS; UNLESS SPECIFICALLY APPROVED OTHERWISE BY THE CITY ENGINEER.
3. THE NEW ASPHALT PATCH SHALL MATCH THE EXISTING PAVEMENT GRADE. ACROSS THE WIDTH OF THE TRENCH THE NEW SURFACE SHALL BE FLUSH OR UP TO 1/4" ABOVE THE EXISTING PAVEMENT GRADE.
4. EXISTING PAVEMENT SHALL BE SAWCUT FULL DEPTH AND IN CONTINUOUS, STRAIGHT LINES. BROKEN EDGES WILL NOT BE ALLOWED. PAVEMENT CUTS SHALL BE 'TACKED' IMMEDIATELY PRIOR TO INSTALLATION OF THE HOT MIX PATCH.
5. AFTER BACKFILLING TRENCH REMOVE ALL BROKEN OR LOOSE ASPHALT OR CONCRETE BEYOND THE INITIAL TRENCH.
6. PATCH CANNOT OVERLAP ANOTHER PARALLEL PATCH AND CANNOT LEAVE EXISTING ASPHALT LESS THAN 36" WIDE.
7. JOINTS TO BE TACKED AND SANDED WITH EMULSIFIED TACK.
8. ANY ALTERATIONS TO THIS STANDARD MUST HAVE WRITTEN APPROVAL BY CITY ENGINEER.

CLASS 'F' 'EXISTING STREETS BACKFILL SHALL BE USED IN AREAS WHERE ASPHALT PAVEMENT CONCRETE CURB, SIDEWALK, DRIVEWAY, GRAVEL SURFACING WILL BE REPLACED.

2 - BACKFILL - CLASS 'F'
NOT TO SCALE

| NO. | REVISION | BY | DATE |
|---|---|---|---|
| | | | |

DESIGN
DRAWN
MWW
CHECKED
APPROVED

PROFESSIONAL ENGINEER LICENSED 10884 1-22-18 STATE OF IDAHO RYAN J. REHDER

Mountain WATERWORKS

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IDAHO OFFICES
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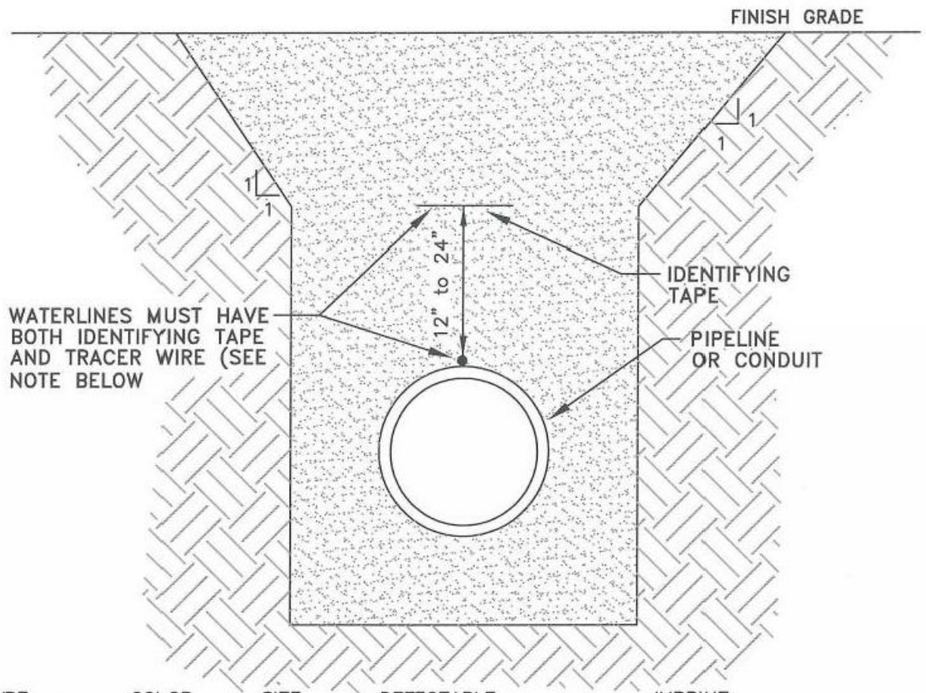
# EAST ORCHARDS SEWER EXPANSION
## LEWISTON, IDAHO

CIVIL DETAILS

VERIFY SCALE
BAR IS ONE INCH ON FULL SIZE DRAWING
0 1"

PROJECT : 181.0020.00
DATE : 1/22/2018
DRAWING NO.
CD-1

Path: B:\Projects\I-L\Lewiston_18\0020 Phase I\CDD\Lewiston_City Dets.dwg File Name: Lewiston_City Dets.dwg Plot Date: 2/14/2018 2:13 PM Duce



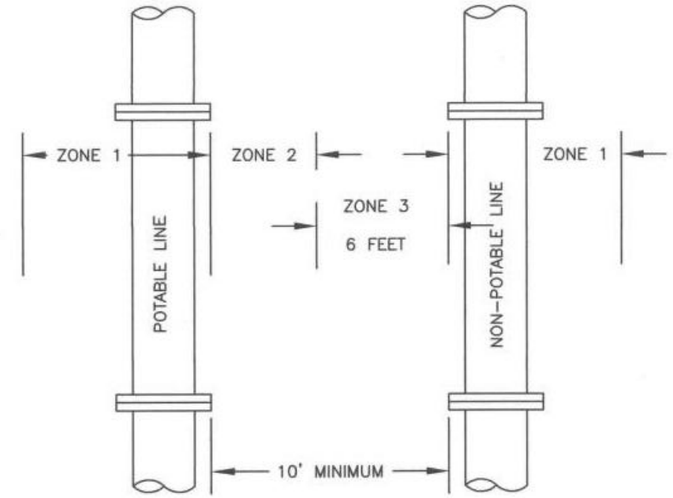

| TYPE | COLOR | SIZE | DETECTABLE | IMPRINT |
|---|---|---|---|---|
| WATER | BLUE | 3" | NO | CAUTION BURIED WATER LINE BELOW |

NO. 12 AWG. COPPER TRACER WIRE INSULATED WITH 30 MIL OF HIGH DENSITY POLYETHYLENE (HDPE) CLASSIFIED AS HIGH MOLECULAR WEIGHT POLYETHYLENE (HMWPE) IN 500 FT REELS. WIRE SHALL BE ATTACHED TO WATERLINE AT INTERVALS NOT TO EXCEED 15 FT SEPARATION.

ALL SPLICES SHALL BE 3M DIRECT BURY SPLICE KIT DBR/Y-6 AND CONTRACTOR SHALL CONDUCT A CONDUCTIVITY TEST ON ALL LOCATING WIRE SPLICES.

| TYPE | COLOR | SIZE | DETECTABLE | IMPRINT |
|---|---|---|---|---|
| STORM SEWER | GREEN | 3" | NO | CAUTION BURIED STORM SEWER LINE BELOW |
| SANITARY SEWER | GREEN | 3" | NO | CAUTION BURIED SEWER LINE BELOW |
| GAS | YELLOW | 3" | NO | CAUTION BURIED GAS LINE BELOW |
| CABLE | ORANGE | 3" | NO | CAUTION BURIED CABLE LINE BELOW |
| ELECTRICAL | RED | 3" | NO | CAUTION BURIED ELECTRIC LINE BELOW |

3 / - IDENTIFYING TAPE DETAIL
NOT TO SCALE




HORIZONTAL REQUIREMENTS:

ZONE 1: MORE THAN 10 FEET APART

NO SPECIAL REQIUREMENTS

ZONE 2: FROM 6 TO 10 FEET APART

A. No special requirements for service lines.
B. Potable and non-potable mains separated by at least 6 feet at outside walls and
i. Potable mains higher in elevation than the non-potable mains and
ii. Non-potable mains constructed to with potable water class pipe and pressure tested for water tightness.

ZONE 3: CLOSER THAN 6 FEET APART

NOT ALLOWED

VERTICAL REQUIREMENTS:

ZONE 1: POTABLE LINE 18" OVER NON-POTABLE LINE

Potable water and non-potable mains and service lines must be separated by at least 18 inches and
One full, uncut length of non-potable pipe must be centered on the crossing so that the joints are as far as possible from the crossing.

ZONE 2: POTABLE LINE < 18" OVER NON-POTABLE LINE

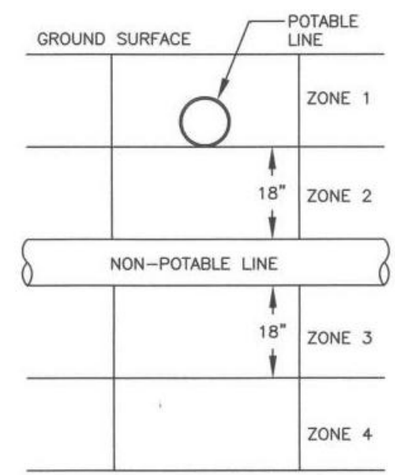
One full, uncut length of non-potable pipe must be centered on the crossing so that the joints are as far as possible from the non-potable line and either a or b
a) Non-potable line must be constructed to potable water pipe standards and pressure tested for water tightness for a horizontal distance of ten feet on both sides of the crossing.
b) Non-potable or potable line must be cased in a larger diameter carrier pipe for a horizontal distance of ten feet on both sides of the crossing, with no joints.

ZONE 3: POTABLE WATER < 18" UNDER NON-POTABLE LINE

Same requirements as Zone 2 except the non-potable line must also be supported above the crossing to prevent settling.

ZONE 4: POTABLE WATER 18" UNDER NON-POTABLE LINE

Same requirements as Zone 1 except the non-potable line must also be supported above the crossing to prevent settling.




GENERAL NOTES:

1. Sewage force mains shall have at least ten feet of horizontal separation and eighteen inches of clearance from potable water mains. Zone 2 and 3 placements are prohibited.
2. Separation requirements also apply to potable and non-potable service lines controlled by the system owner and extending the main line to the property line, service meter, or cleanout.

4 / - POTABLE & NON-POTABLE WATERLINE SEPARATION
NOT TO SCALE

| NO. | REVISION | BY | DATE |
|---|---|---|---|
| | | | |

DESIGN
DRAWN MWW
CHECKED
APPROVED

PROFESSIONAL ENGINEER LICENSED 10884 1-22-18 STATE OF IDAHO RYAN J. REHDER

Mountain WATERWORKS

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# EAST ORCHARDS SEWER EXPANSION
LEWISTON, IDAHO

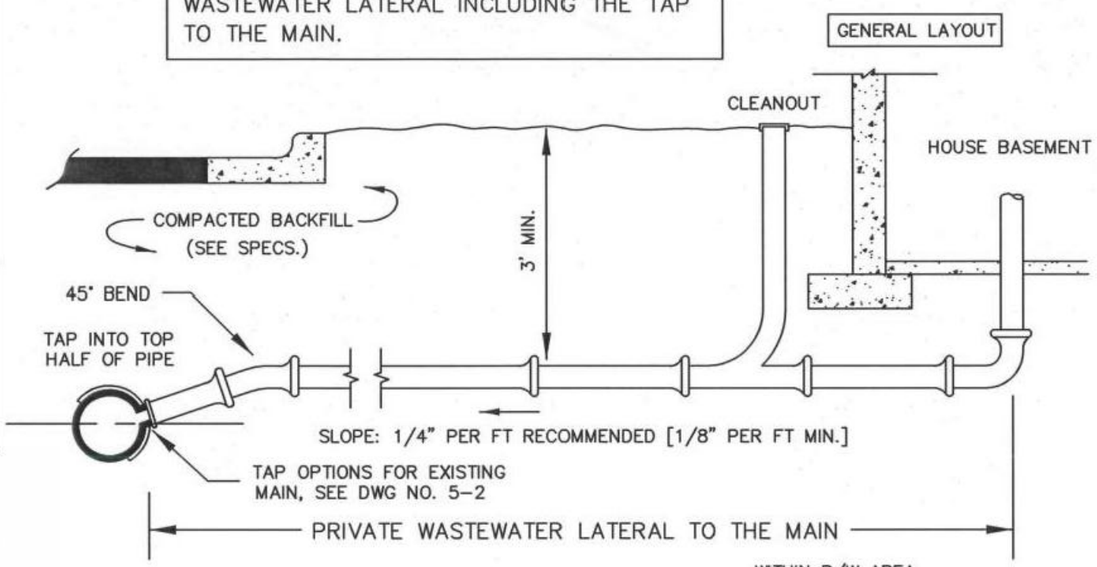
CIVIL DETAILS

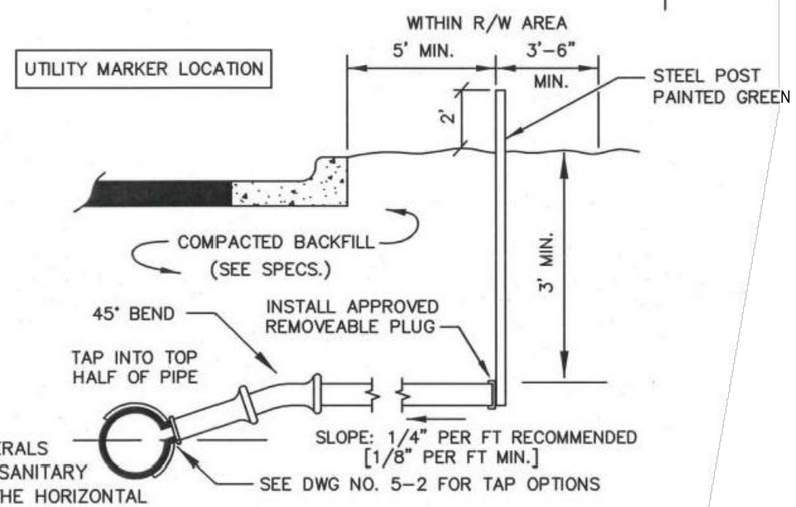
VERIFY SCALE
BAR IS ONE INCH ON FULL SIZE DRAWING
0 1"

PROJECT : 181.0020.00
DATE : 1/22/2018
DRAWING NO. CD-2

Path: B:\Projects\1-L\Lewiston_181\0020 Phase I\ODD\Lewiston_City Dets.dwg File Name: Lewiston_City Dets.dwg Plot Date: 2/14/2018 2:13 PM Duce

PROPERTY OWNER IS RESPONSIBLE FOR THE WASTEWATER LATERAL INCLUDING THE TAP TO THE MAIN.

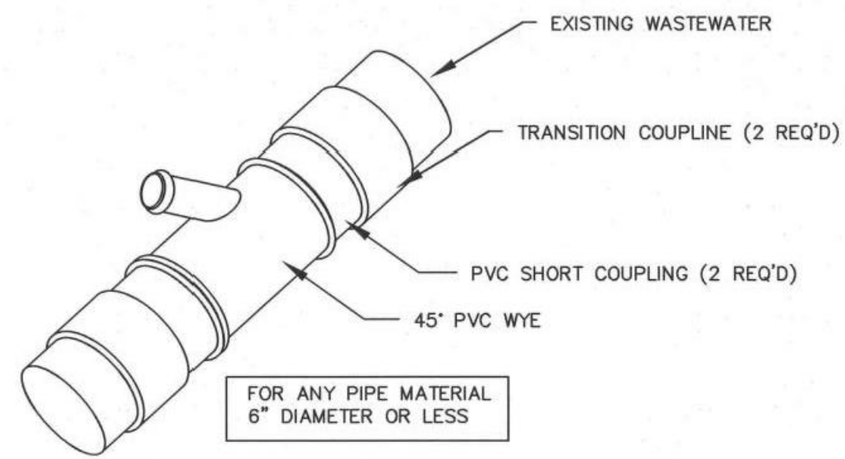


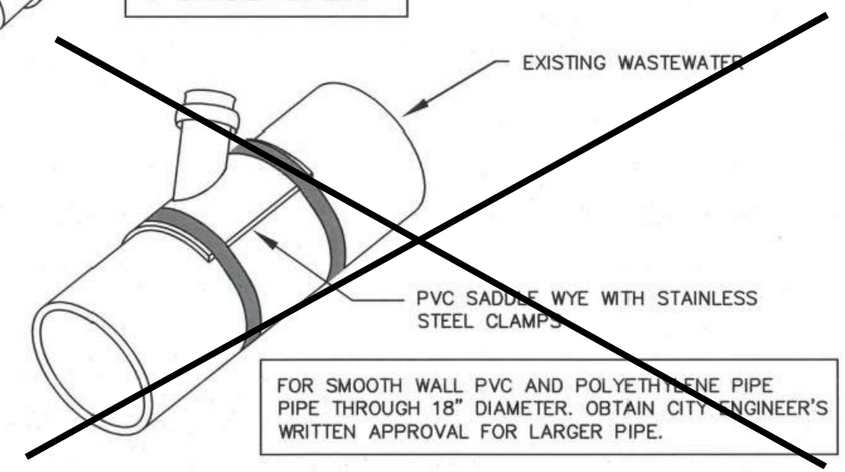




NOTE:

1. WASTEWATER SERVICE LATERALS SHALL BE CONNECTED TO SANITARY MAIN AT A POINT ABOVE THE HORIZONTAL CENTERLINE OF THE PIPE BUT NOT DIRECTLY TO THE TOP OF THE MAIN.
2. ALL CONNECTIONS AND WASTEWATER LINES CONNECTING WITH THE PUBLIC SYSTEM SHALL BE WATERTIGHT AND NO LESS THAN 4" IN DIAMETER FOR ALL NEW CONNECTIONS EXCEPT FOR 2" DIAMETER PRESSURE CONNECTIONS TO GRAVITY MAINS.
3. FLOOR DRAINS SUBJECT TO BACK PRESSURE OR BASEMENT DRAINS LESS THAN 1' ABOVE THE NEAREST ADJACENT SEWER MANHOLE SHALL BE EQUIPPED WITH AN APPROVED BACKWATER VALVE (SEE CITY SEC. 36-43).

5 / - WASTEWATER PRIVATE SERVICE CONNECTION
NOT TO SCALE




NOTES

1. WASTEWATER SERVICE LATERALS SHALL BE CONNECTED TO SANITARY MAIN AT A POINT ABOVE THE HORIZONTAL CENTERLINE OF THE PIPE BUT NOT DIRECTLY TO THE TOP OF THE MAIN.
2. FOR SANITARY MAIN PIPE OF 6" DIAMETER AND LARGER USE ROMAC STYLE 'CB' WASTEWATER SADDLE.

6 / - WASTEWATER SERVICE TAP OPTIONS DETAIL
NOT TO SCALE

| NO. | REVISION | BY | DATE |
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DESIGN
DRAWN MWW
CHECKED
APPROVED

PROFESSIONAL ENGINEER LICENSED 10884 1-22-18 STATE OF IDAHO RYAN J. REINDER

Mountain WATERWORKS


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111 MAIN ST. SUITE 175
LEWISTON, IDAHO 83501
208.780.3990
IDAHO OFFICES
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# EAST ORCHARDS SEWER EXPANSION

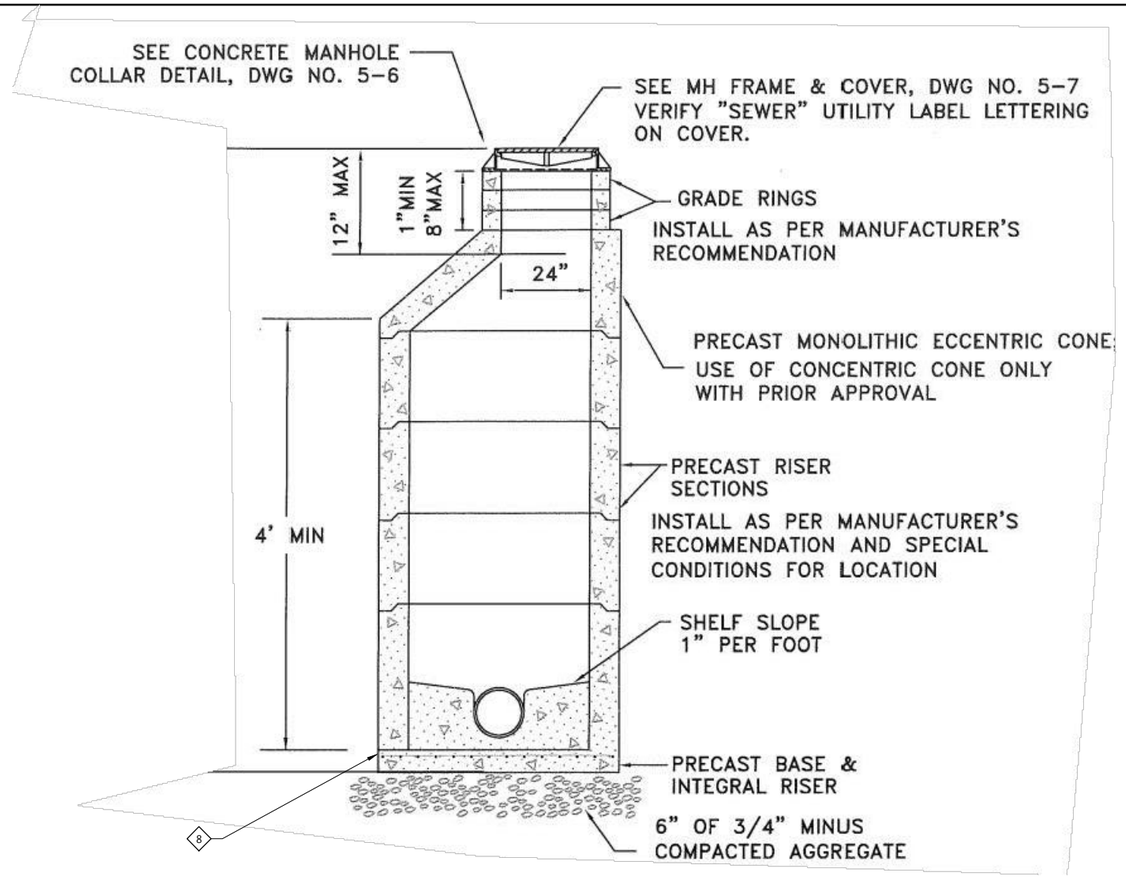
LEWISTON, IDAHO

CIVIL DETAILS

VERIFY SCALE
BAR IS ONE INCH ON FULL SIZE DRAWING
0 1"

PROJECT : 181.0020.00
DATE : 1/22/2018
DRAWING NO. CD-3

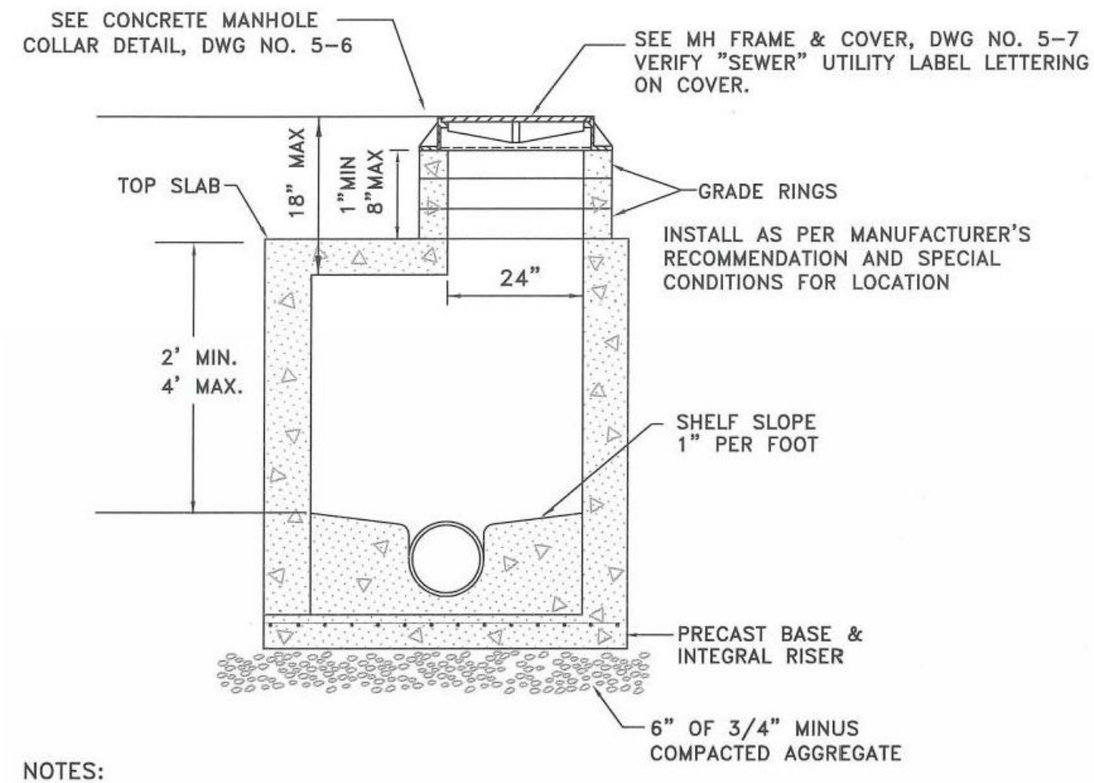

Path: B:\Projects\1-L\Lewiston_18\0020 Phase I\CDD\Lewiston_City Dets.dwg File Name: Lewiston_City Dets.dwg Plot Date: 2/14/2018 2:14 PM Duce




NOTES:

1. ALL UNITS TO MEET OR EXCEED THE REQUIREMENTS OF ASTM C478/AASHTO M199. JOINTS SHALL BE RUBBER GASKET CONFORMING TO ASTM C443 AND SHALL BE GROUTED FROM THE INSIDE. LIFT HOLES SHALL BE GROUTED FROM THE OUTSIDE AND INSIDE OF THE MANHOLE.
2. PRECAST BASES SHALL BE FURNISHED WITH CUTOUTS OR KNOCKOUTS. KNOCKOUTS SHALL HAVE A WALL THICKNESS OF 2" MINIMUM.
3. CONNECTION TO MANHOLE SHALL BE MADE USING RESILIENT CONNECTOR CONFORMING TO ASTM C-923 SUCH AS KOR-N-SEAL, A-LOK OR APPROVED EQUAL.
4. RISERS, UNIT SECTIONS AND THE FRAME SHALL NOT BE MORE THAN ONE INCH OUT OF ALIGNMENT WITH INSIDE EDGE OF MANHOLE.
5. PRESSURE TESTING IS REQUIRED FOR ALL INSTALLATIONS.
6. SEE DWG NO 5-6 FOR CONCRETE MANHOLE COLLAR.
7. MAXIMUM SPACING BETWEEN MANHOLES IS 400 FEET.
8. PROVIDE ANTI-FLOATATION FOOT BASE FOR ALL MANHOLES WITH RIM TO INVERT ELEVATION DISTANCES GREATER THAN TEN(10)FEET.

7 / - WASTEWATER TYPE 1 MANHOLE
NOT TO SCALE




NOTES:

1. INSTALLATION OF FLAT TOP SLABS MUST HAVE WRITTEN APPROVAL FROM CITY ENGINEER.
2. ALL UNITS TO MEET OR EXCEED THE REQUIREMENTS OF ASTM C478/AASHTO M199. JOINTS SHALL BE RUBBER GASKET CONFORMING TO ASTM C443 AND SHALL BE GROUTED FROM THE INSIDE. LIFT HOLES BE GROUTED FROM THE OUTSIDE AND INSIDE OF THE MANHOLE.
3. PRECAST BASES SHALL BE FURNISHED WITH CUTOUTS OR KNOCKOUTS. KNOCKOUTS SHALL HAVE A WALL THICKNESS OF 2" MINIMUM.
4. CONNECTION TO MANHOLE SHALL BE MADE USING RESILIENT CONNECTOR CONFORMING TO ASTM C-923 SUCH AS KOR-N-SEAL, A-LOK OR APPROVED EQUAL.
5. RISERS, UNIT SECTIONS AND THE FRAME SHALL NOT BE MORE THAN ONE INCH OUT OF ALIGNMENT WITH THE MANHOLE BASE; PIPES SHALL BE FLUSH WITH INSIDE EDGE OF MANHOLE.
6. PRESSURE TESTING IS REQUIRED FOR ALL INSTALLATIONS.
7. SEE DWG NO 5-6 FOR CONCRETE MANHOLE COLLAR.

8 / - WASTEWATER TYPE 1A MANHOLE (SHALLOW MANHOLE)
NOT TO SCALE

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DESIGN
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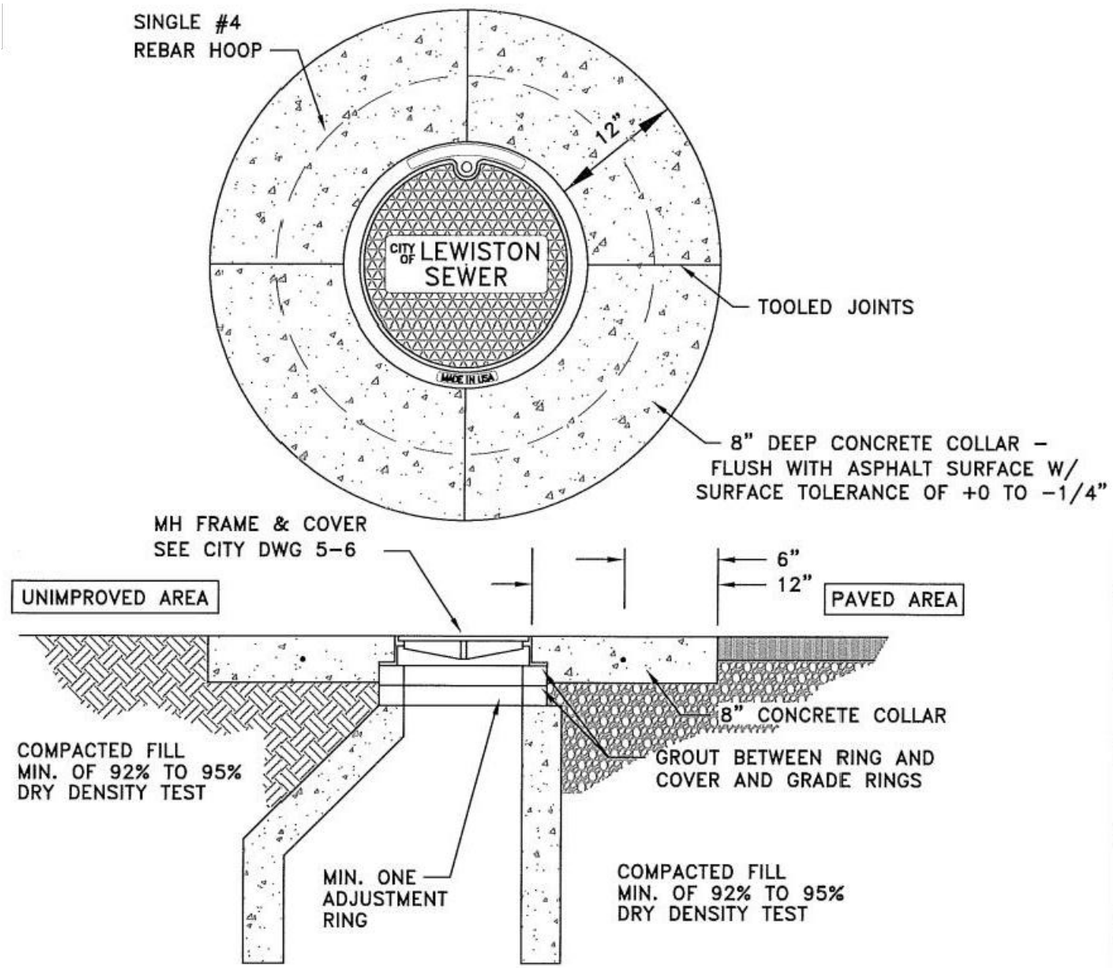
# EAST ORCHARDS SEWER EXPANSION
LEWISTON, IDAHO

CIVIL DETAILS

VERIFY SCALE
BAR IS ONE INCH ON FULL SIZE DRAWING
0 1"

PROJECT : 181.0020.00
DATE : 1/22/2018
DRAWING NO. CD-4

Path: B:\Projects\1-LLewiston_181\0020 Phase II\CD\Lewiston_City Dets.dwg File Name: Lewiston_City Dets.dwg Plot Date: 2/14/2018 2:14 PM Duce

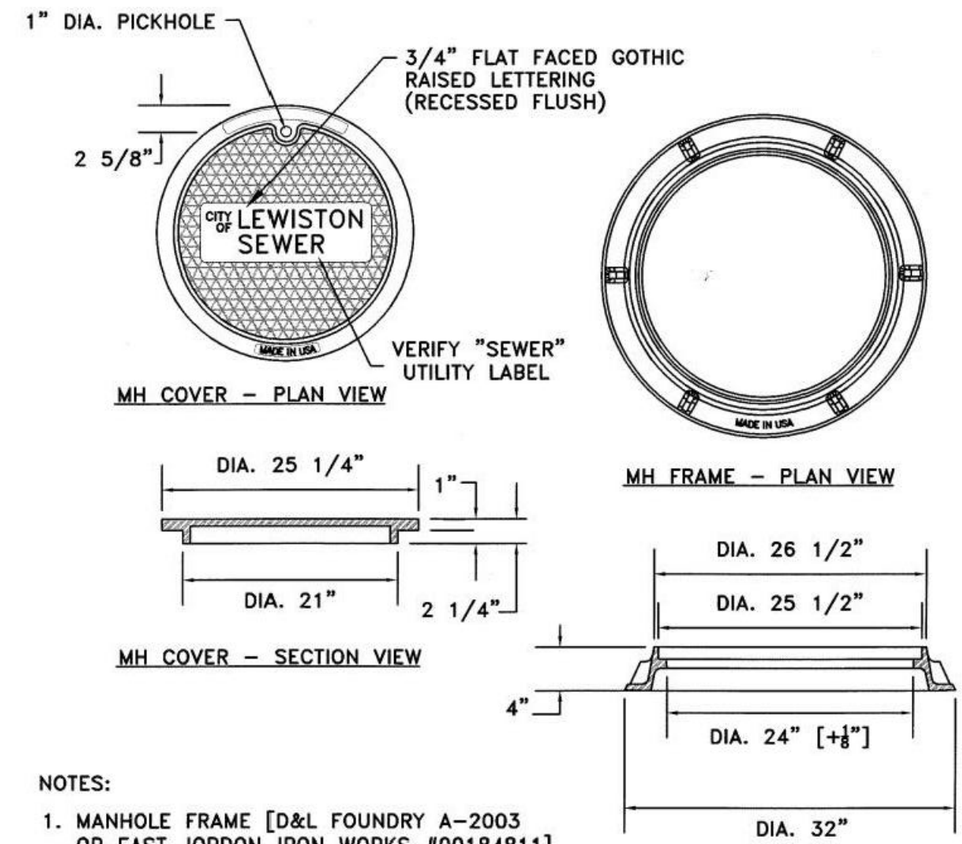



NOTES:

1. A CIRCULAR–SHAPED CONCRETE COLLAR IS REQUIRED ON ALL INSTALLATIONS; IN BOTH PAVED OR UNIMPROVED AREAS. INSTALL A 8" THICK CONCRETE COLLAR THAT SHALL BE FLUSH WITH THE ASPHALT SURFACE WITH A SURFACE TOLERANCE OF +0 TO –1/4".
2. CONCRETE SHALL BE 3,000 PSI MIN. AT 28 DAYS, WATER/CEMENT RATIO SHALL BE 0.5, 3" MAX. SLUMP AND 3% TO 6% ENTRAINED AIR WITH ONE #4 REBAR HOOP. FIBER–REINFORCED CONCRETE (ADDED PER MANUFACTURER'S RECOMMENDATIONS) MAY BE USED IN LIEU OF #4 REBAR.
3. ALL EDGES WILL BE SEALED WITH CSSI OR APPROVED EQUAL; ALL TOP EDGES WILL BE TACKED AND SAND SEALED.
4. UTILITY FRAMES AND LIDS ARE PREFERRED OUTSIDE OF WHEEL PATH, WHERE POSSIBLE.

SIMILAR TO CITY STD NO. 6-4

9 / - WASTEWATER CONCRETE MANHOLE COLLAR
NOT TO SCALE




NOTES:

1. MANHOLE FRAME [D&L FOUNDRY A–2003 OR EAST JORDON IRON WORKS #00184811] AND COVER [EJIW #00184849 OR D&L A–2010–01] OR BY OTHER MANUFACTURER WILL BE ACCEPTABLE ONLY WITH WRITTEN APPROVAL FROM PUBLIC WORKS DEPT.; VERIFY "SEWER" UTILITY LABEL LETTERING ON COVER.
2. COVER MATERIAL SPECIFICATION GRAY IRON (ASTM A48 CL35B)
3. IN AREAS OF HIGH STORMWATER INFILTATION, LIDS SHALL HAVE GASKETED AND BOLTED.

10 / - WASTEWATER MANHOLE FRAME AND COVER
NOT TO SCALE

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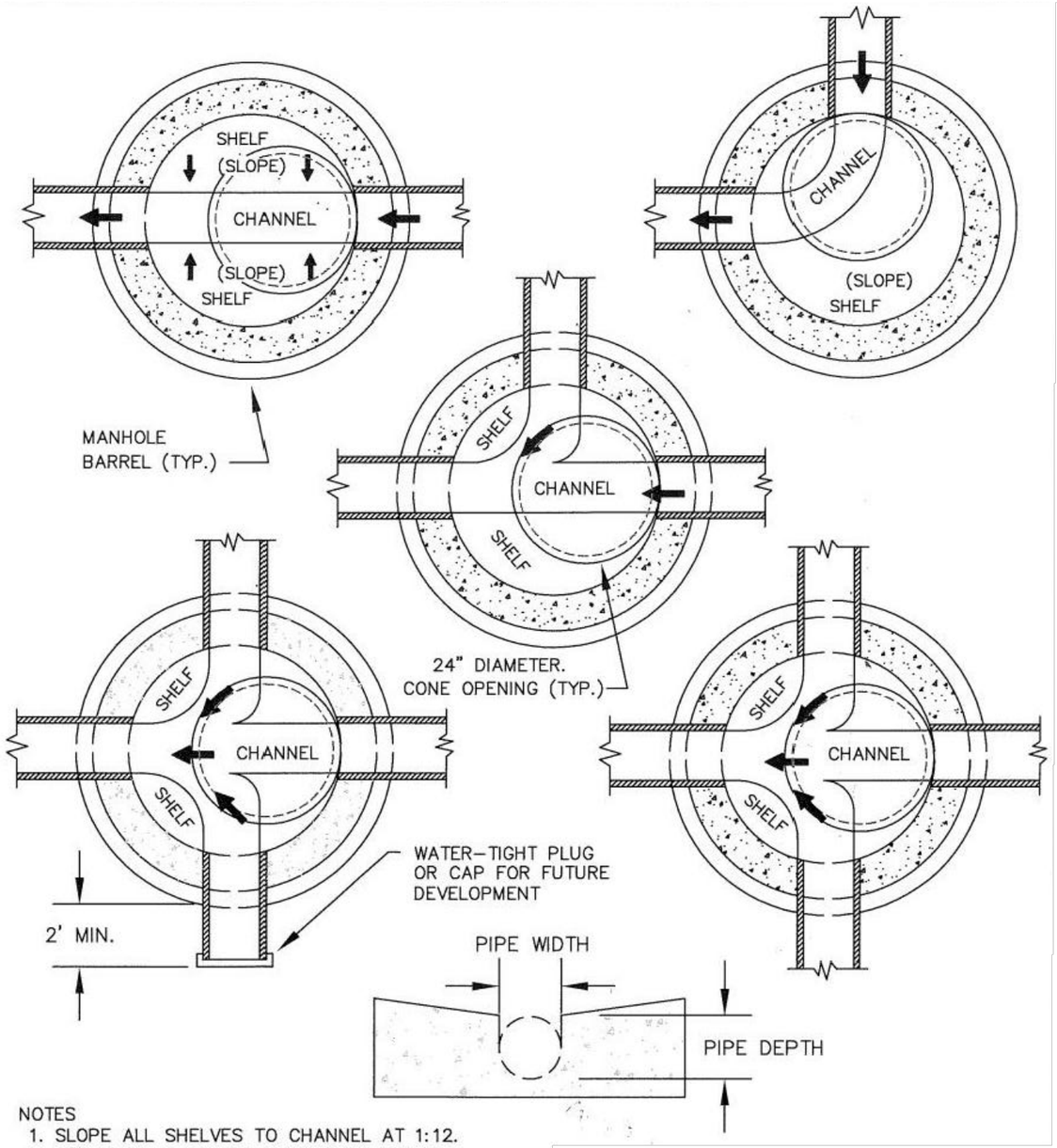
EAST ORCHARDS SEWER EXPANSION
LEWISTON, IDAHO
CIVIL DETAILS

VERIFY SCALE
BAR IS ONE INCH ON FULL SIZE DRAWING
0 1"
PROJECT : 181.0020.00
DATE : 1/22/2018
DRAWING NO. CD-5

Path: B:\Projects\I-L\Lewiston_1810020 Phase I\CADD\Lewiston_City Dets.dwg File Name: Lewiston_City Dets.dwg Plot Date: 2/14/2018 2:14 PM Duce




NOTES
1. SLOPE ALL SHELVES TO CHANNEL AT 1:12.
2. SEE PLAN & PROFILE SHEETS FOR SLOPE OF CHANNEL.
3. FOR PIPES OF DIFFERENT SIZES, THE TOP OF PIPE (CROWN) SHALL BE AT THE SAME ELEVATION.
4. OFFSET CONE 24" DIAMETER OPENING CENTERED OVER UPSTREAM PIPE INVERT.

11 / - WASTEWATER MANHOLE CHANNEL DETAIL
NOT TO SCALE

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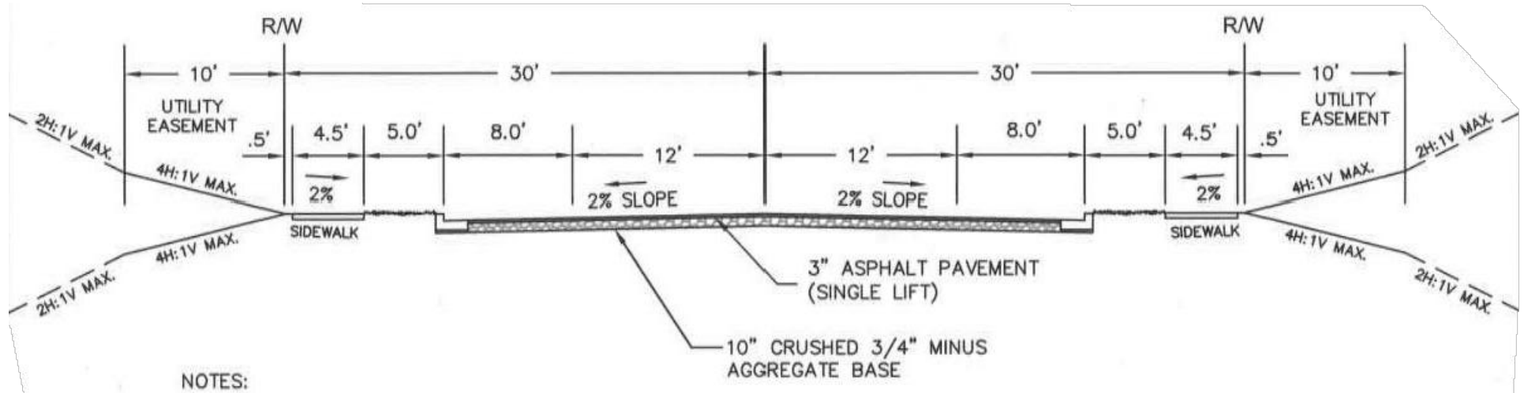
# EAST ORCHARDS SEWER EXPANSION
LEWISTON, IDAHO

CIVIL DETAILS

VERIFY SCALE
BAR IS ONE INCH ON FULL SIZE DRAWING
0 1"

PROJECT : 181.0020.00
DATE : 1/22/2018
DRAWING NO. CD-6

Path: B:\Projects\I-L\Lewiston_181\0020 Phase I\CDD\Lewiston_City Detls.dwg File Name: Lewiston_City Detls.dwg Plot Date: 2/14/2018 2:14 PM Duce




NOTES:

1. 60' RIGHT OF WAY WIDTH
2. 8% GRADE MAX
3. 200' CENTERLINE RADIUS (MIN.) – SMALLER RADIUS MAY BE ALLOWED IF CURVE IS SUPERELEVATED (REFER TO AASHTO)
4. HIGH BACK CURB ONLY
5. THE PLANTING STRIP SHALL BE MAINTAINED BY THE ADJACENT PROPERTY OWNERS.
6. CITY ENGINEER MAY REQUIRE SOIL TEST AND/OR GEOTECHNICAL ENGINEERING EVALUATION TO VERIFY LOAD BEARING CAPACITY OF SUBGRADE.
7. ADD 10' OF PAVEMENT WIDTH & RIGHT-OF-WAY WIDTH (5' EACH SIDE OF CENTERLINE WHEN BIKE LANES ARE REQUIRED)
8. TRAFFIC CALMING AND ENTRANCE FEATURES SHALL BE EVALUATED ON A CASE BY CASE BASIS; FINAL APPROVAL SHALL BE BY CITY ENGINEER.
9. ASPHALT PAVEMENT MAYBE WATER TESTED FOR PROPER DRAINAGE PRIOR TO FINAL APPROVAL.
10. CITY ENGINEER MAY REQUIRE CORING OF THE ASPHALT PAVEMENT TO VERIFY PAVEMENT THICKNESS OR DENSITY.
11. ANY VARIATION TO PROPOSED ROAD CROSS-SECTION MUST HAVE WRITTEN APPROVAL FROM CITY ENGINEER.
12. ALL TREE AND UTILITY PLACEMENT MUST MEET DWG NO. 1-1.
13. A 0.5' STRIP TO BE LOCATED BEHIND THE SIDEWALK FOR PLACEMENT OF PROPERTY PINS.

12 / - RESIDENTIAL COLLECTOR
NOT TO SCALE

| NO. | REVISION | BY | DATE |
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APPROVED

PROFESSIONAL ENGINEER LICENSED 10884 1-22-18 STATE OF IDAHO RYAN J. REHDER

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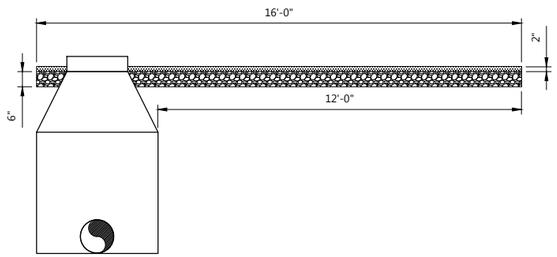
# EAST ORCHARDS SEWER EXPANSION
LEWISTON, IDAHO

CIVIL DETAILS

VERIFY SCALE
BAR IS ONE INCH ON FULL SIZE DRAWING
0 1"

PROJECT : 181.0020.00
DATE : 1/22/2018
DRAWING NO.
CD-7

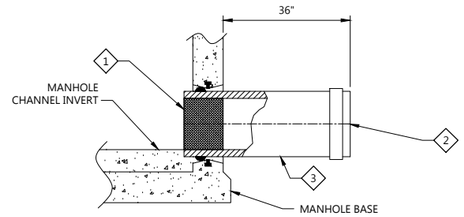
Path: B:\Projects\H-L\Lewiston_1810020 Phase II\CDD\Lewiston_City Dets.dwg File Name: Lewiston_City Dets.dwg Plot Date: 2/14/2018 2:14 PM Duce




KEY NOTES #

1. PROVIDE APPROXIMATELY 6 INCHES OF PIT RUN OR OTHER STRUCTURAL MATERIAL TO PROVIDE A ROAD BASE. OFFSET FROM OUTSIDE EDGE OF MANHOLE TO PROVIDE APPROXIMATELY 12 FEET OF CLEARANCE ALONG ONE SIDE OF MANHOLE AS SHOWN IN THE DRAWINGS TO ALLOW MAINTENANCE VEHICLES TO DRIVE PAST THE MANHOLE.
2. OVERLAY PIT RUN WITH APPROXIMATELY 2 INCHES OF WELL-GRADED 3-INCH MINUS GRAVEL TO CREATE A SURFACE SUITABLE FOR DRIVING.
3. EXTEND MANHOLE FRAME AND COVER ABOVE THE SURFACE IF THE FINISHED GRAVEL ROAD. DO NOT EXTEND HIGHER THAN 6 INCHES.
4. CONTRACTOR TO SUBMIT SIEVE ANALYSES FOR PROPOSED PIT RUN AND 3-INCH MINUS MATERIALS TO ENGINEER FOR APPROVAL PRIOR TO INSTALLATION.

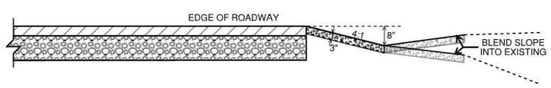
C998 TYP — OFFROAD GRAVEL ACCESSWAY
NOT TO SCALE




KEY NOTES #

1. INSTALL A RUBBER RING OR GASKET COLLAR WHERE THE PIPE IS IN CONTACT WITH MANHOLE BASE AND/OR MANHOLE CHANNEL TO PROVIDE A WATERTIGHT SEAL. USE KOR-N-SEAL OR EQUAL.
2. INSTALL FACTORY GASKETED SDR 35 END CAP TO PROVIDE A WATERTIGHT SEAL. MUST PASS THE TESTING PROCEDURES DETAILED IN SPECIFICATION SECTION 15956 PIPING SYSTEMS TESTING.
3. STUB-OUT PIPING TO BE 8-INCH SDR 35 PVC.
4. INSTALL STUB-OUT PIPING AT MINIMUM 0.4% SLOPE TO MANHOLE.

C999 TYP — MANHOLE STUB-OUT FOR FUTURE CONNECTION
NOT TO SCALE




KEY NOTES #

1. SURFACE RESTORATION SHALL INCLUDE DRAINAGE SWALE ALONG ROADWAY SHOULDER IN THE LOCATIONS PROVIDED.
2. PROVIDE 3-INCHES MINIMUM 3/4-MINUS GRAVEL TO FORM THE SWALE.
3. DEPTH TO FROM BOTTOM OF SWALE TO TOP OF ASPHALT TO BE 8-INCHES MINIMUM WITH A MINIMUM 4:1 SLOPE FROM THE EDGE OF ASPHALT TO THE BOTTOM OF THE SWALE.
4. MATCH SLOPE OF SWALE PARALLEL TO ROADWAY WITH THE EDGE OF ASPHALT TO PROMOTE THE FLOW OF RUNOFF. CLEAR SWALE OF DEBRIS OR RIDGES THAT MAY IMPEDE FLOW.

| Shoulder Drainage Locations | |
|---|---|
| From Station | To Station |
| 26+25 | 35+90.08 |
| 49+59 | 62+87.76 |
| 72+88.01 | 88+69.30 |
| 88+69.30 | 101+94.30 |

C997 TYP — ROADWAY SHOULDER DRAINAGE
NOT TO SCALE

| NO. | REVISION | BY | DATE |
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# EAST ORCHARDS SEWER EXPANSION
## LEWISTON, IDAHO
TYPICAL DETAILS

VERIFY SCALE
BAR IS ONE INCH ON FULL SIZE DRAWING
0 1"

PROJECT : 181.0020.00
DATE : 1/22/2018
DRAWING NO. CD-8

Path: B:\Projects\LL\Lewiston_18\0020 Phase I\CD\CD-8.dwg File Name: CD-8.dwg Plot Date: 2/15/2018 11:49 AM Duce