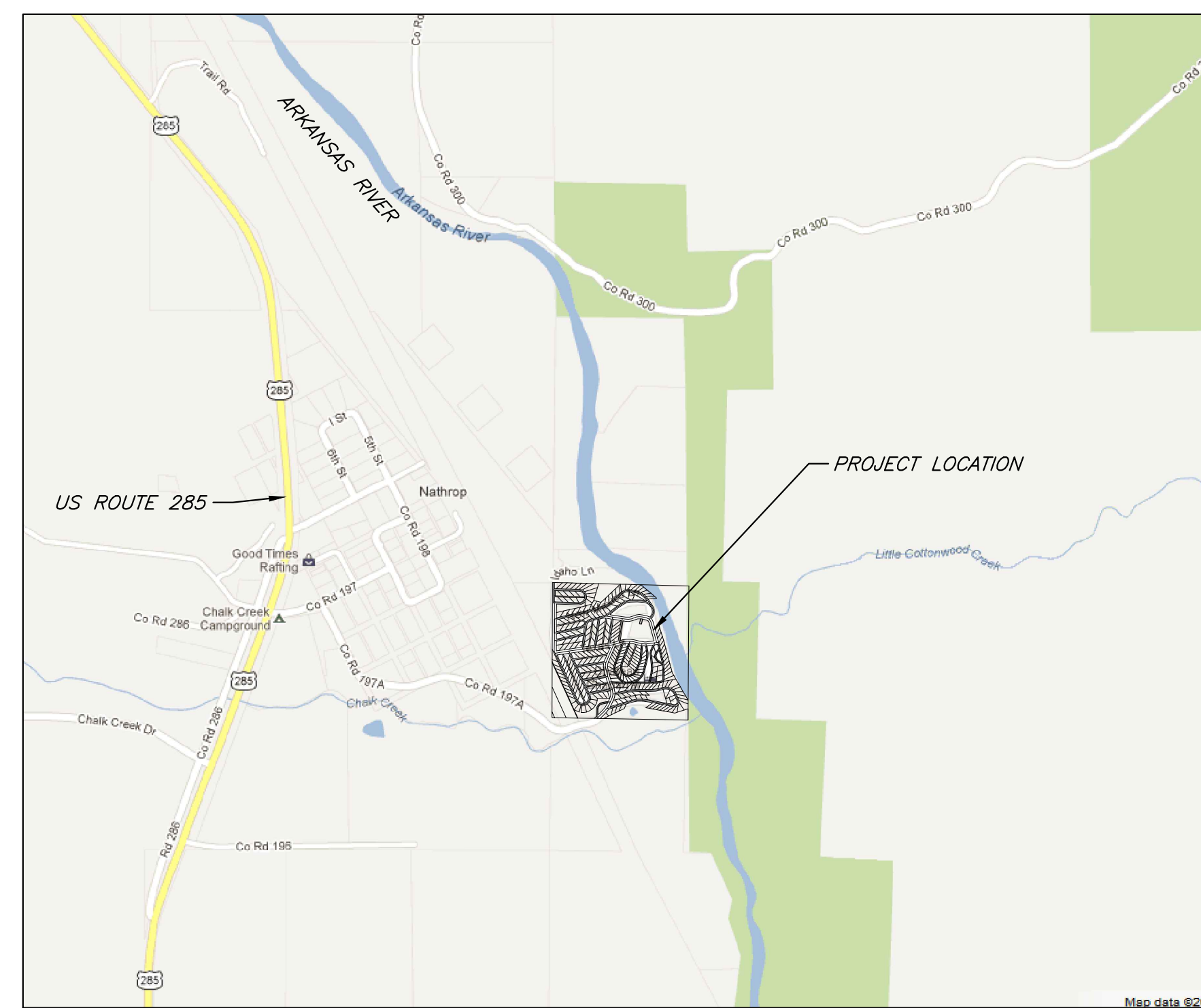


Chateau Chaparral Owners Assoc.

2014 Sewer System Upgrades, Nathorp, CO



Vicinity Map

| Legend | | Abbreviations | |
|-------------|------------------------------------|---------------|---|
| — T — | EXIST. TELEPHONE LINE | ☐ | TELEPHONE RISER |
| — G — | EXIST. GAS LINE | ☐ | CABLE RISER |
| — C — | EXIST. CABLE TELEVISION LINE | ⊕ | ELECTRIC TRANSFORMER |
| — E — | EXIST. UNDERGROUND ELECTRICAL LINE | ⊕ | EXIST. ELECTRIC MANHOLE/METER |
| — OE — | EXIST. OVERHEAD ELECTRICAL LINE | ⊕ | EXIST. STORM DRAIN INLET |
| — 8"W — | EXIST. WATER LINE & SIZE | ⊕ | EXIST. SEWER MANHOLE |
| — 8"S — | EXIST. SEWER LINE & SIZE | ⊕ | EXIST. WATER SPIGOT |
| — 4"SS — | EXIST. SEWER SERVICE & SIZE | ⊕ | EXIST. FIRE HYDRANT |
| — 4"SA — | EX. SEWER ASSUMED LOCATION & SIZE | ⊕ | WATER CURB STOP |
| — 3"SSA — | EXIST. SEWER SERVICE ASSUMED | ⊕ | EXIST. POWER POLE |
| — 4"S — | NEW SEWER LINE & SIZE | ⊕ | STREETLIGHT POLE |
| — SS — | NEW SEWER SERVICE | ⊕ | SIGN |
| — FM — | EXIST. FORCE MAIN | ⊕ | GAS VALVE |
| — 18" CMP — | EXIST. CULVERT & SIZE | ⊕ | NEW SEWER/STORM DRAIN MANHOLE W/ RIM LOCATION |
| — SWALE — | SWALE FLOWLINE | ⊕ | EXIST. SEWER CLEANOUT |
| — x — | FENCE LINE | ⊕ | EXIST. GAS FEED LINE |
| — ○ — | ROCK WALL | ⊕ | ASPH ASPHALT |
| — — — | EXIST. EDGE OF PAVEMENT | ⊕ | DW DRIVEWAY |
| — — — | PROPERTY LINE | ⊕ | EG EXISTING GRADE |
| — ○ — | DECIDUOUS TREE | ⊕ | EX EXISTING |
| — ○ — | EVERGREEN TREE | ⊕ | FG FINISHED GRADE |
| — ○ — | MONUMENT MARKER | ⊕ | INV INVERT |
| | | ⊕ | L LEFT |
| | | ⊕ | LF LINEAL FEET |
| | | ⊕ | MAX MAXIMUM |
| | | ⊕ | MIN MINIMUM |
| | | ⊕ | O/S OFFSET |
| | | ⊕ | PNT POINT |
| | | ⊕ | R RIGHT |
| | | ⊕ | ROW RIGHT-OF-WAY |
| | | ⊕ | SMH SEWER MANHOLE |
| | | ⊕ | STA STATION |
| | | ⊕ | TP TOP OF PIPE |
| | | ⊕ | FM FORCE MAIN |
| | | ⊕ | APS #145 APPROXIMATE SEWER SERVICE & LOT NUMBER |



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Project Engineer

Tyler Harpel, P.E. 44306

Owner / Applicant

Chateau Chaparral Owners Assoc.

10795 CR 197A
Nathorp, CO 81236

Gary Meier - President

THESE PROJECT RECORD DRAWINGS WERE CREATED BY SGM BASED OFF SITE DRAWING MARKUPS TO THE ORIGINAL CONSTRUCTION DRAWINGS BASED ON SGM'S ONSITE RESIDENT PROJECT REPRESENTATIVES FIELD NOTES. THEY DO NOT SHOW ALL UNDERGROUND UTILITIES AND LOCATIONS SHOWN ARE PRIMARILY BASED ON SWING TIES. THESE RECORD DRAWINGS WERE PRODUCED WITH LIMITED INPUT FROM THE CONSTRUCTION CONTRACTOR DUE TO THEIR STAFF TURNOVER AND LOST DOCUMENTATION.

Record Set
October 2017

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| 23 | Structural Notes |
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SCOPE OF WORK

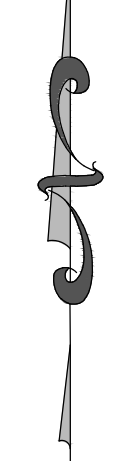
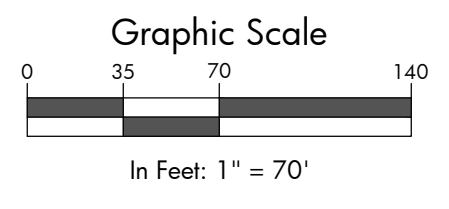
THE SCOPE OF WORK FOR THIS PROJECT IS TWO FOLD:
 • REPLACING THE EXISTING LAGOON WASTEWATER TREATMENT FACILITY WITH A NEW SEQUENCING BATCH REACTOR (SBR)
 • REPLACING THE EXISTING GRAVITY SEWER COLLECTION SYSTEM WITH A NEW GRAVITY SEWER COLLECTION SYSTEM

SBR WORK WILL INCLUDE ALL WORK REQUIRED TO PROVIDE A FULLY FUNCTIONING TREATMENT FACILITY. SEWER COLLECTION SYSTEM WORK WILL INCLUDE RECONNECTING ALL EXISTING SEWER SERVICES INTO THE NEW COLLECTION SYSTEM. WORK ON BOTH PORTIONS INCLUDE ALL WORK THAT IS REQUIRED FOR THE CONTRACTOR TO MAINTAIN SEWER SERVICE AND TREATMENT TO ALL LOTS THROUGHOUT CONSTRUCTION PROCESS.

GENERAL NOTES:

- ALL REQUIRED WORK (WITH EXCEPTION NOTED BELOW) WILL TAKE PLACE WITHIN EXISTING OWNERS ASSOCIATION OWNED TRACTS, RIGHT OF WAYS AND EASEMENTS. IN ADDITION TO THE RIGHT OF WAYS SHOWN ON THE DRAWINGS THERE ARE PLATTED UTILITY EASEMENTS ON ALL LOTS:
 • 10' ON ALL FRONT OF LOTS
 • 8' ON ALL SIDES OF LOTS
 • 18' ON ALL REAR OF LOTS
 CONTRACTOR IS NOT TO GO ON, STORE ANY MATERIAL, SPOILS OR ACCESS PRIVATE LOTS OUTSIDE OF THE EASEMENTS FOR ANY REASON WITHOUT WRITTEN PERMISSION FROM LOT OWNERS. EVEN THOUGH THERE ARE EASEMENTS FOR WORK WITHIN LOTS, THERE ARE STILL EXISTING LANDSCAPING, SURFACE MATERIALS, FENCES, SHEDS AND OBJECTS WITHIN EASEMENTS THAT CONTRACTOR IS RESPONSIBLE TO REMOVE AND RELOCATE/REPLACE TO EXISTING CONDITIONS AFTER WORK IS COMPLETED. PROPERTY OWNERS WILL BE NOTIFIED TO REMOVE ALL PROPERTY FROM EASEMENTS THEY DO NOT WANT TO GET DAMAGED OR MOVED BY CONTRACTOR.
- IT IS THE CONTRACTORS RESPONSIBILITY TO TAKE PHOTOS AND OR VIDEO TO DOCUMENT ANY DAMAGED PROPERTY PRIOR TO WORK.
- THE APPROXIMATE LOCATION OF ALL KNOWN UTILITIES (WATER, SEWER, GAS, PHONE, ELECTRIC, CABLE, ETC.) ARE SHOWN ON THE DRAWINGS. HOWEVER THE CONTRACTOR SHALL CONTACT ALL UTILITY OWNERS TO VERIFY BOTH LOCATION AND DEPTH OF THE UTILITIES BEFORE ANY WORK BEGINS. THE CONTRACTOR SHALL BEAR THE RESPONSIBILITY FOR THE PROTECTION OF ALL UTILITIES DURING CONSTRUCTION. NO ADDITIONAL PAYMENT WILL BE MADE FOR UTILITIES NOT SHOWN IN DRAWINGS.
- THERE ARE BOTH WATER CURB STOPS AND HOSE WATER SPIGOTS SHOWN ON THE DRAWINGS. HOWEVER THERE IS NO RECORD OF THE WATER LINE LOCATIONS, DEPTH, SIZE OR TYPE OF PIPE. IT IS ANTICIPATED BECAUSE OF PAST REPAIRS ON SEWER AND WATER LINES THAT THE WATER LINE IS IN THE SAME TRENCH (WITHIN 18") OF THE EXISTING SEWER LINE. IT IS CONTRACTORS RESPONSIBILITY TO ALWAYS BE ON THE LOOKOUT FOR THE WATER LINE AND READY TO REPAIR IMMEDIATELY IF DAMAGED.
- A SEWER LINE INSPECTION CAMERA WAS USED TO LOCATE ALL EXISTING SEWER LINES, AS WELL AS TO PROVIDE AN APPROXIMATE DEPTH OF EXISTING SEWER LINES AND LOCATE EXISTING SERVICE LINE CONNECTIONS TO THE EXISTING MAIN LINES.
- THE ATTEMPT HAS BEEN TO SHOW ALL SEWER SERVICE LOCATIONS, HOWEVER IT IS THE CONTRACTORS RESPONSIBILITY TO VERIFY THAT ALL LIVE SERVICE LINES ARE FOUND AND CONNECTED INTO THE NEW SEWER COLLECTION SYSTEM.
- THE VAST MAJORITY OF THE EXISTING SEWER SERVICE LINES ARE 3" PVC, HOWEVER IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY EXISTING PIPE TYPE AND SIZE AND PROVIDE NEEDED FITTING TO MAKE RECONNECTION INTO NEW SEWER COLLECTION SYSTEM.
- DRAWINGS TYPICALLY SHOW ALL SEWER SERVICES AS BEING REPLACED TO THE PROPERTY LINE. WHEN EXISTING SEWER SERVICE IS LOCATED, A WATERLINE DOES NOT NEED TO BE CROSSED, AND THE EXISTING SERVICE LINE IS NOT DAMAGED IN ANYWAY, RECONNECTION INTO NEW SEWER SERVICE LINES CAN BE MADE BEFORE THE PROPERTY LINE. IF THE SERVICE LINE HAS TO CROSS A WATERLINE OR THE EXISTING SERVICE LINE IS DAMAGED, NEW SEWER SERVICE LINE SHALL BE REPLACED TO THE PROPERTY LINE.
- SEVERAL LOTS HAVE SHARED EXISTING SEWER SERVICES WHERE CONNECTIONS BETWEEN THE TWO LOTS ARE MADE WITHIN THE LOTS. IN THESE SITUATION CONTRACTOR IS ONLY TO MAKE THE SINGLE SEWER SERVICE CONNECTION WITHIN THE RIGHT-OF-WAY AND THE EXISTING SHARED SEWER SERVICE CONNECTIONS ON THE PRIVATE PROPERTY IS TO CONTINUE AS IS. AN EFFORT HAS BEEN MADE TO LOCATE SUCH CONDITIONS ON THE DRAWING BUT IT WILL STILL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL SERVICES ARE CONNECTED BACK INTO THE NEW SEWER COLLECTION SYSTEM.
- SEVERAL LOTS HAVE SHARED EXISTING SEWER SERVICES BUT THE CONNECTIONS BETWEEN THE LOTS ARE MADE OUTSIDE OF THE PRIVATE PROPERTY AND WITHIN THE RIGHT-OF-WAYS. IN THESE CONDITIONS CONTRACTOR IS TO CONNECT EACH LOT SERVICE LINE SEPARATELY TO THE NEW MAIN LINE.
- DUE TO THE LOCATIONS OF THE EXISTING SEWER SYSTEM, SEVERAL LOTS WILL REQUIRE NEW SEWER SERVICE LINES TO BE INSTALLED ACROSS PRIVATE PROPERTY OUTSIDE OF THE PLATTED EASEMENTS IN ORDER TO CONNECT THOSE LOTS INTO THE NEW SEWER COLLECTION SYSTEM. LETTERS OF PERMISSION FROM SUCH LOTS ARE BEING OBTAINED BY THE O&A FOR SUCH WORK. CONTRACTOR IS TO VERIFY FROM THE O&A THAT SUCH LETTERS ARE OBTAINED PRIOR TO ANY WORK BEING PERFORMED ON PRIVATE PROPERTY.
- ALL SEWER SERVICES THAT FALL WITHIN INSULATED SEWER RUNS MUST ALSO BE INSULATED.

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| 4 | CONSTRUCTION SET | 10/3/14 | LS |
| 5 | RECORD SET | 10/3/17 | CG |



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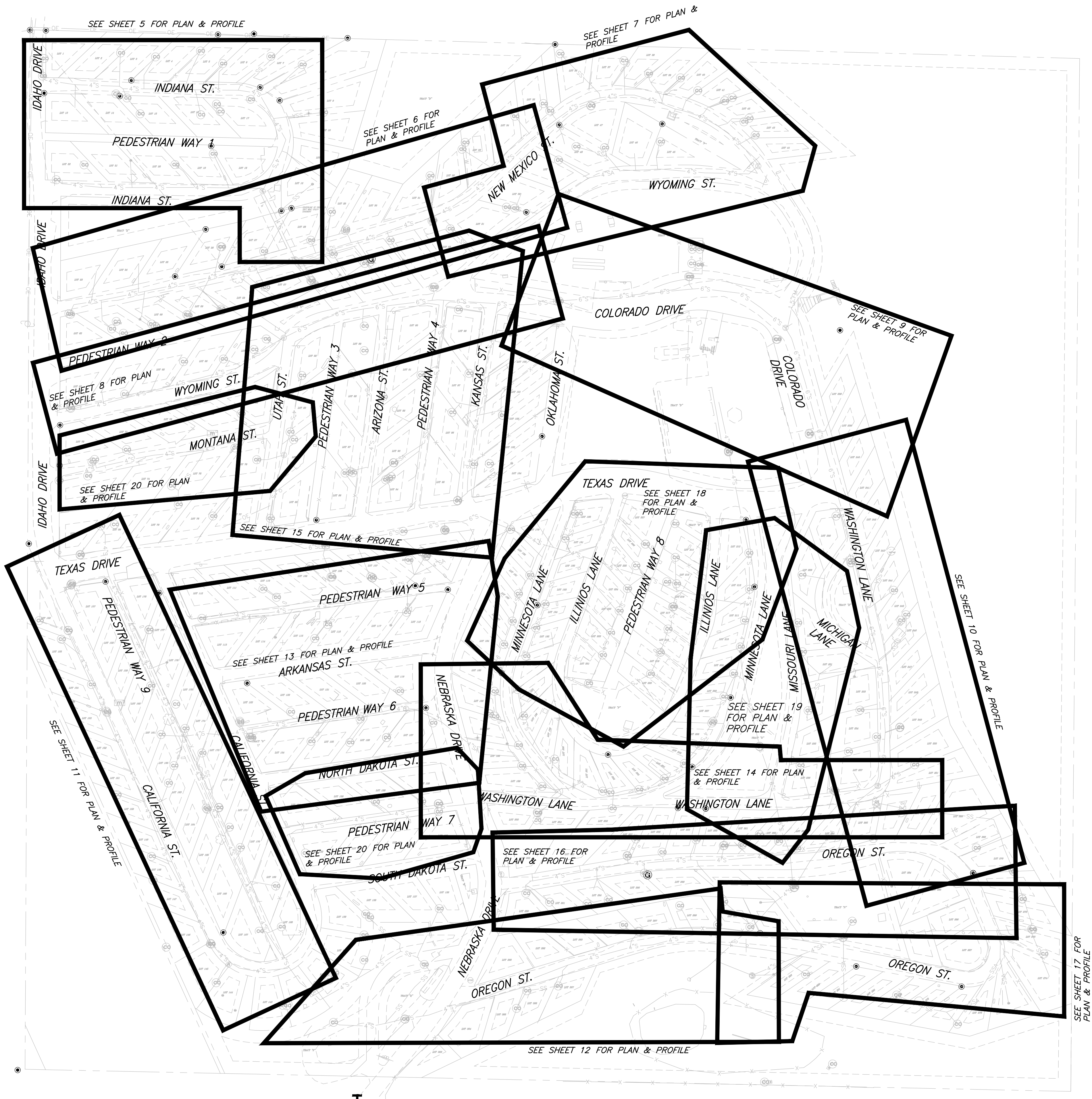
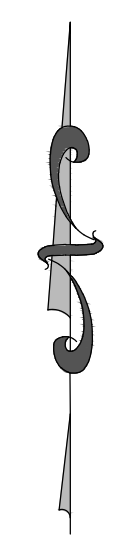
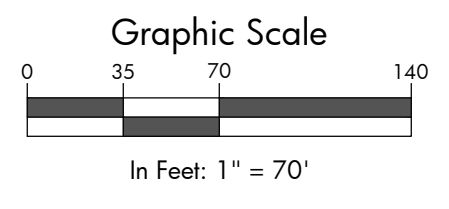
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Pre Project
 Existing Conditions

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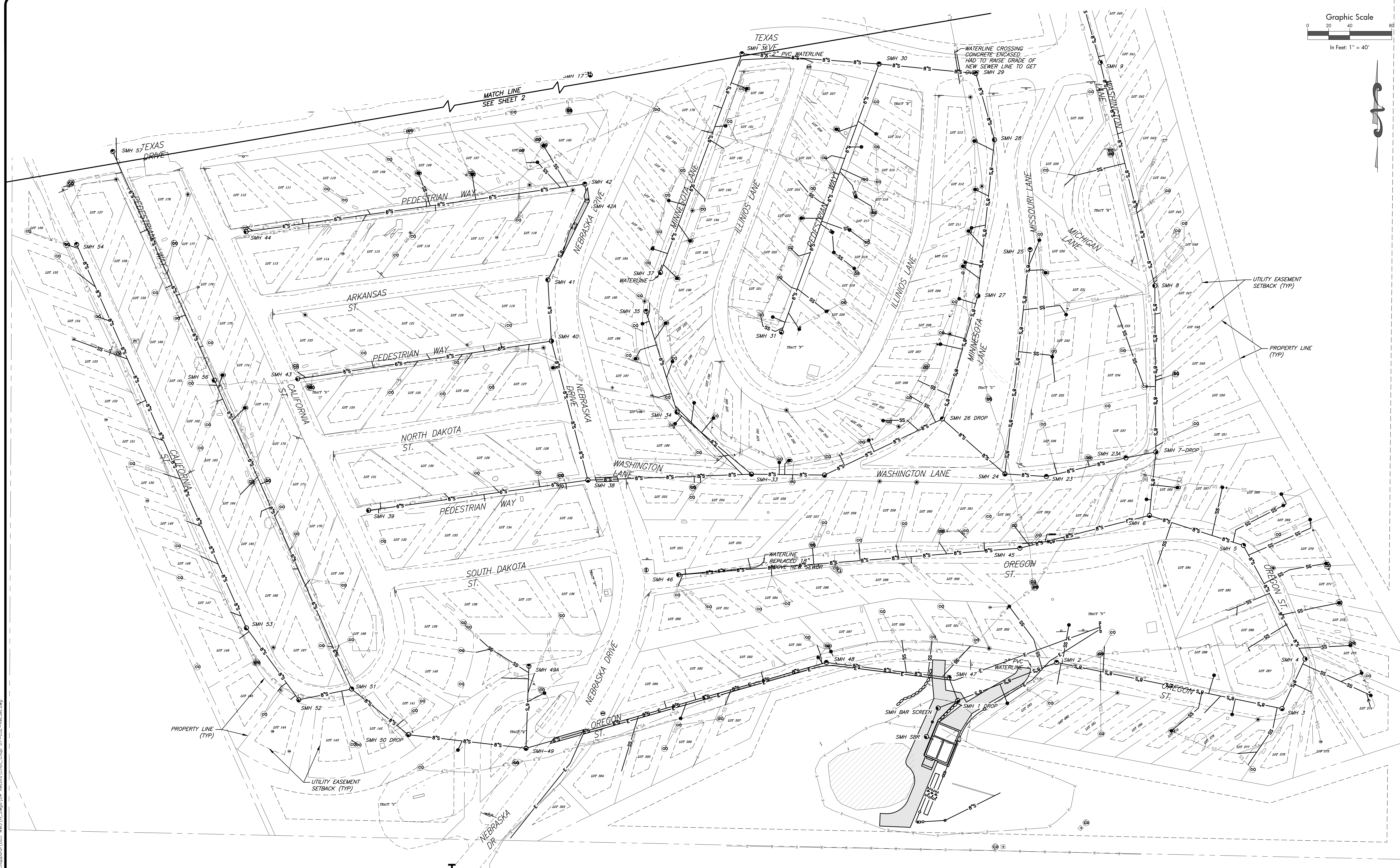
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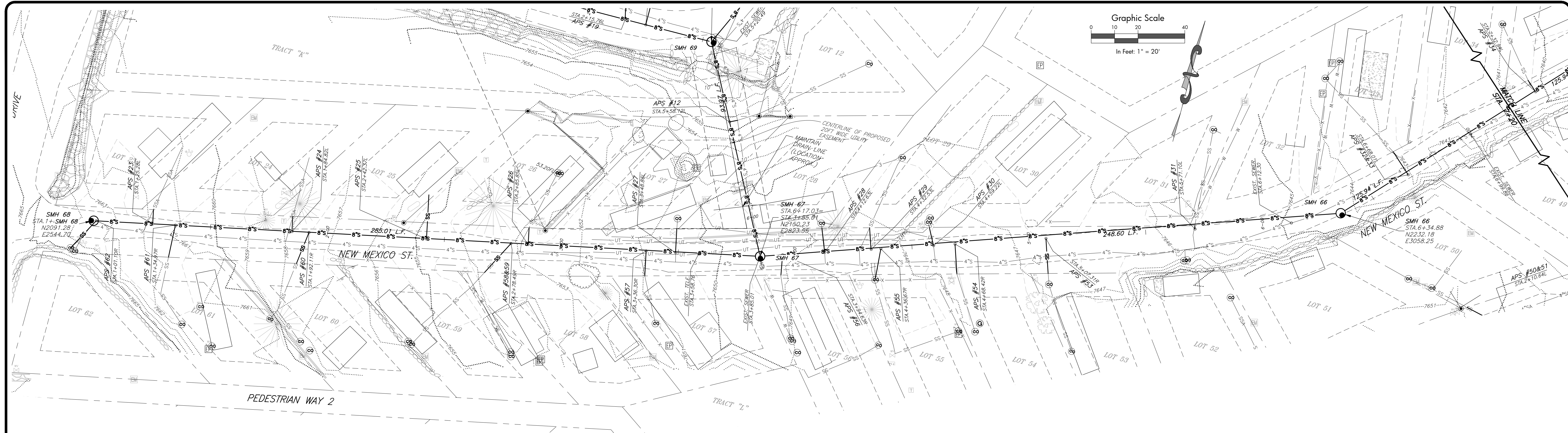
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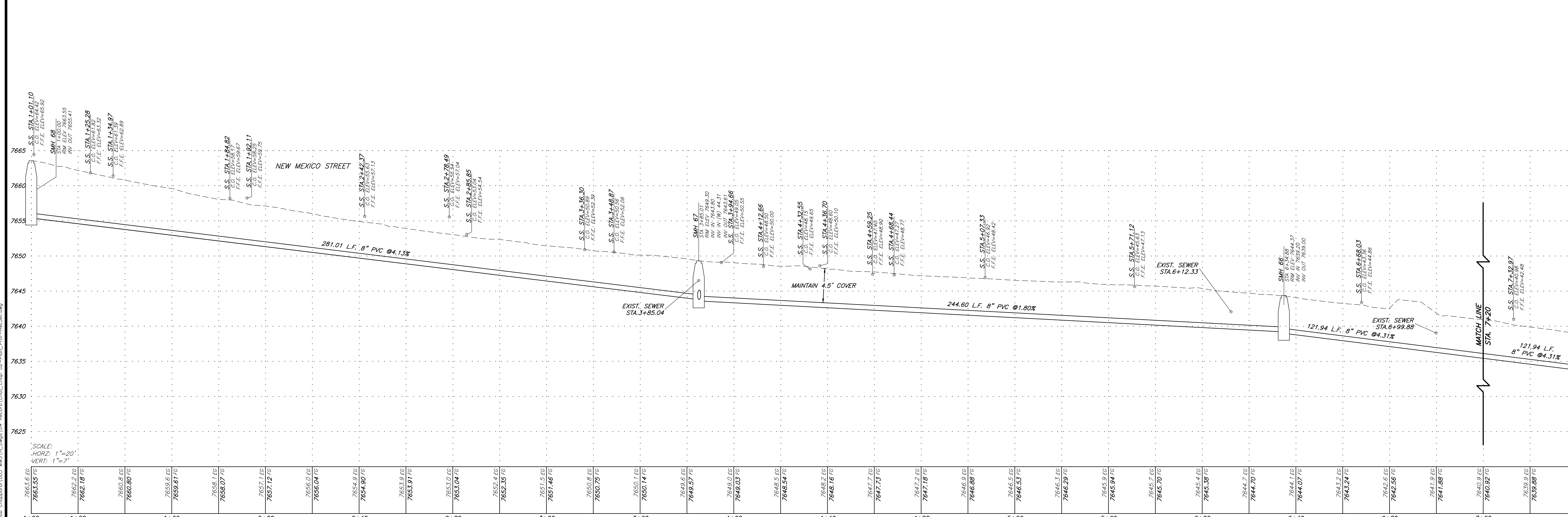
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Overall Sewer Layout 2

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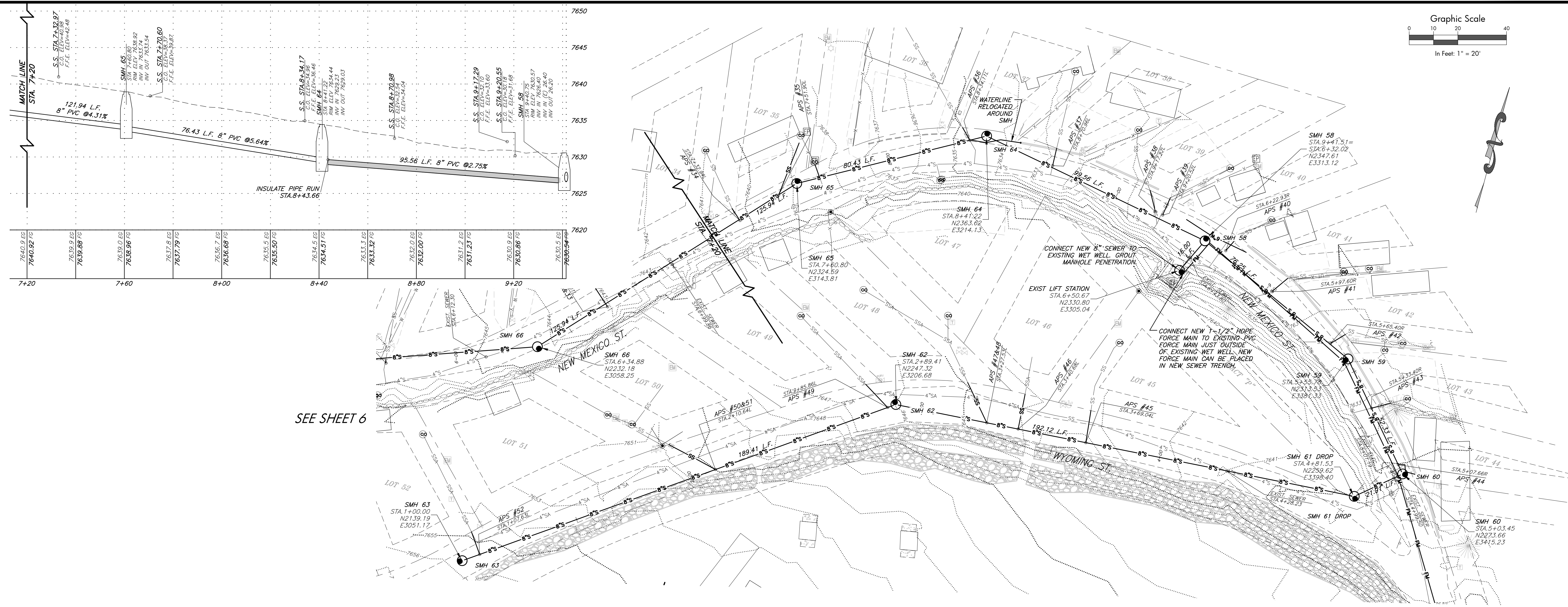
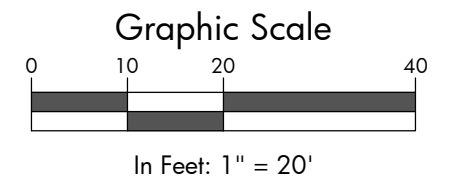
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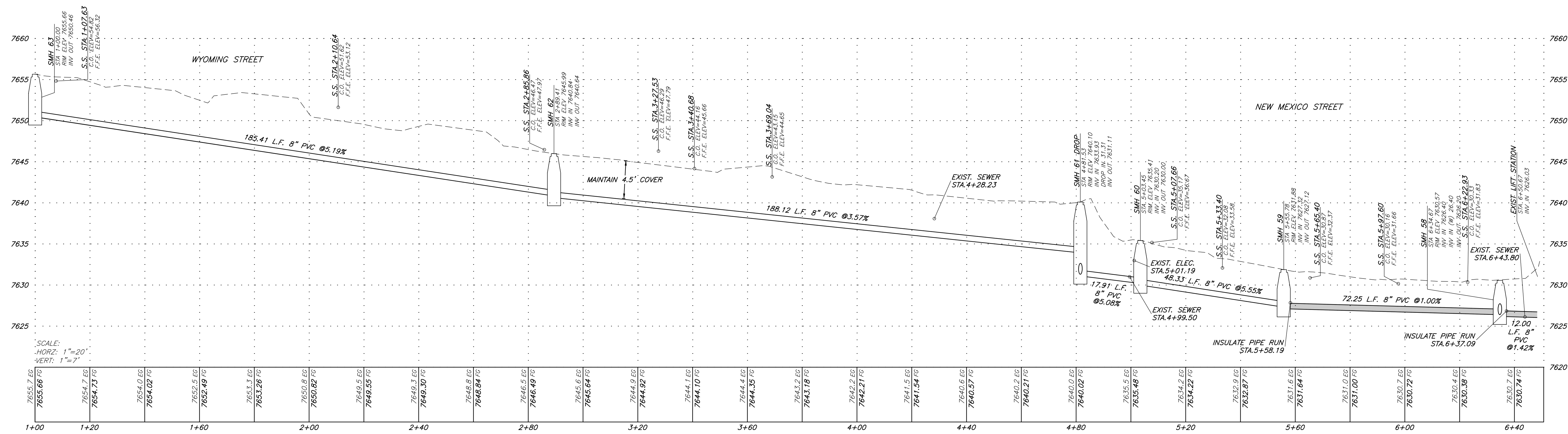
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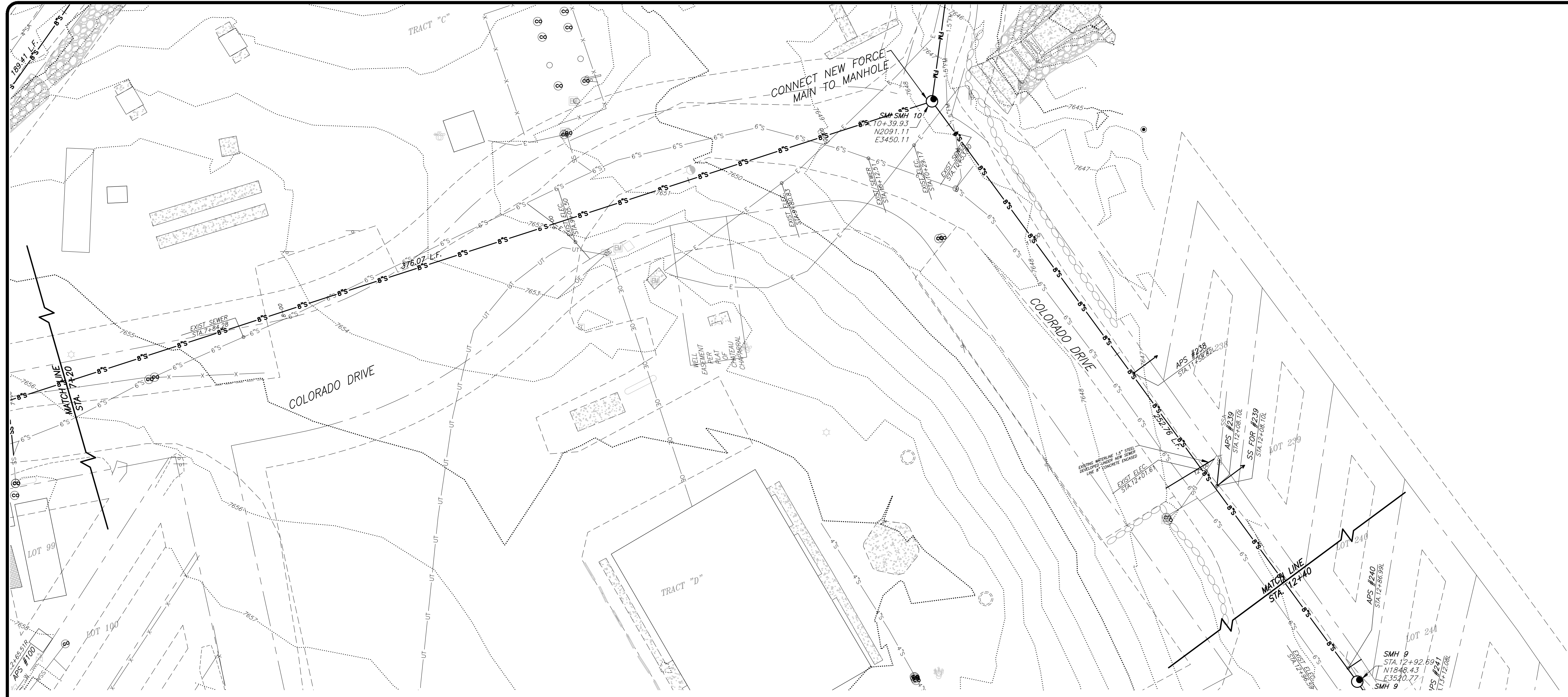
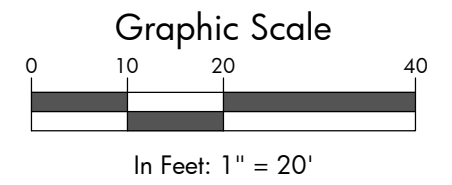
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Sewer Plan & Profile New Mexico St. & Wyoming St.

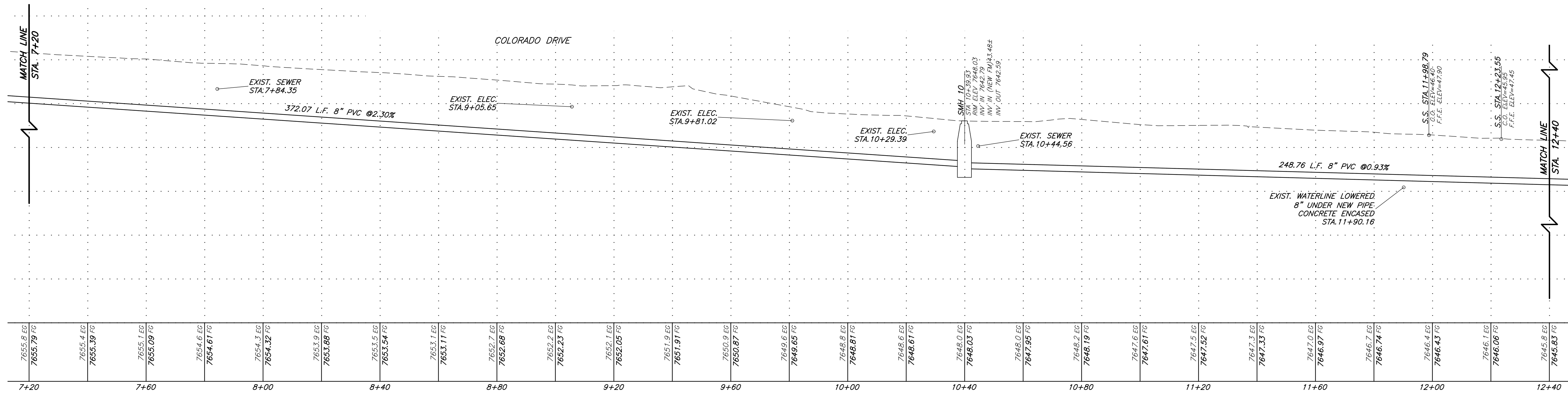
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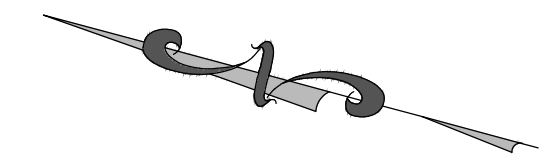
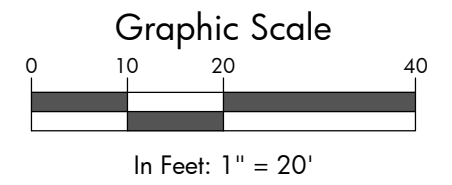
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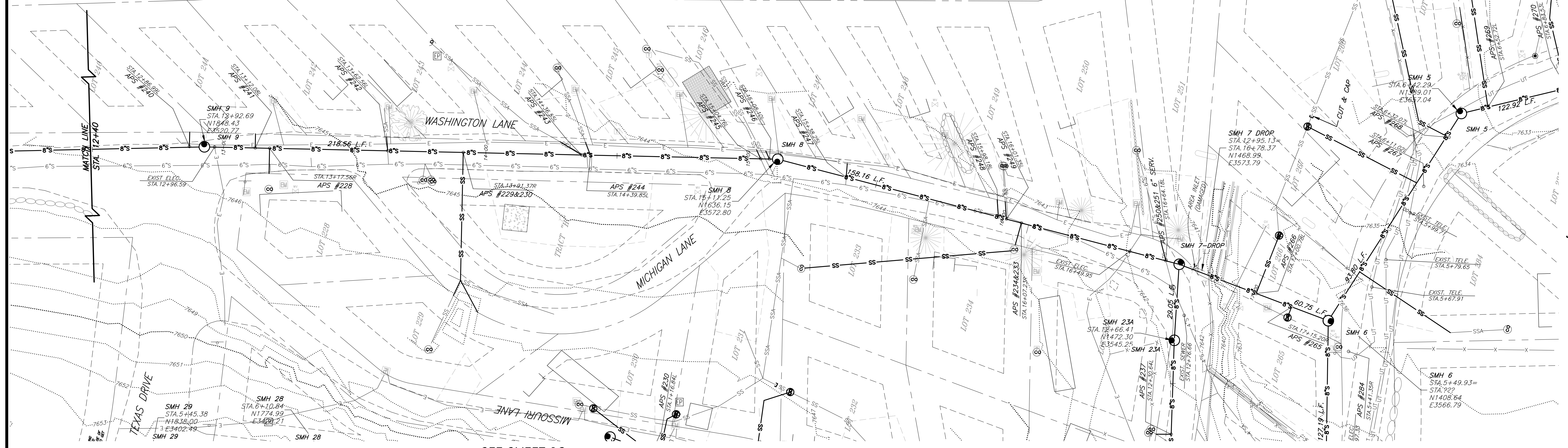
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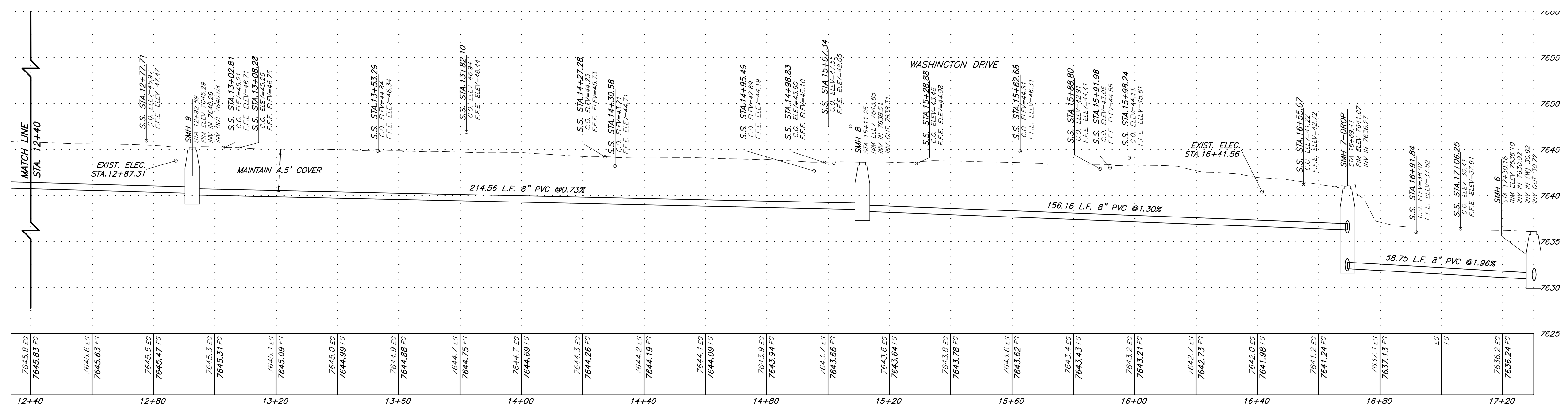


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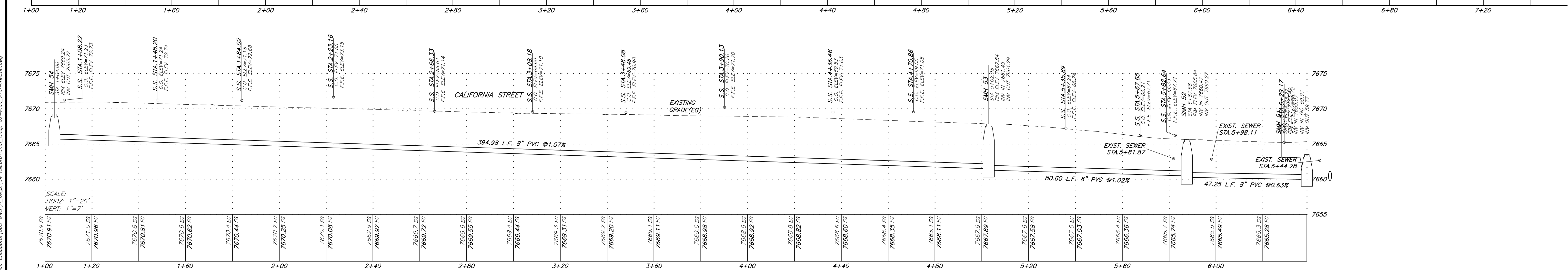
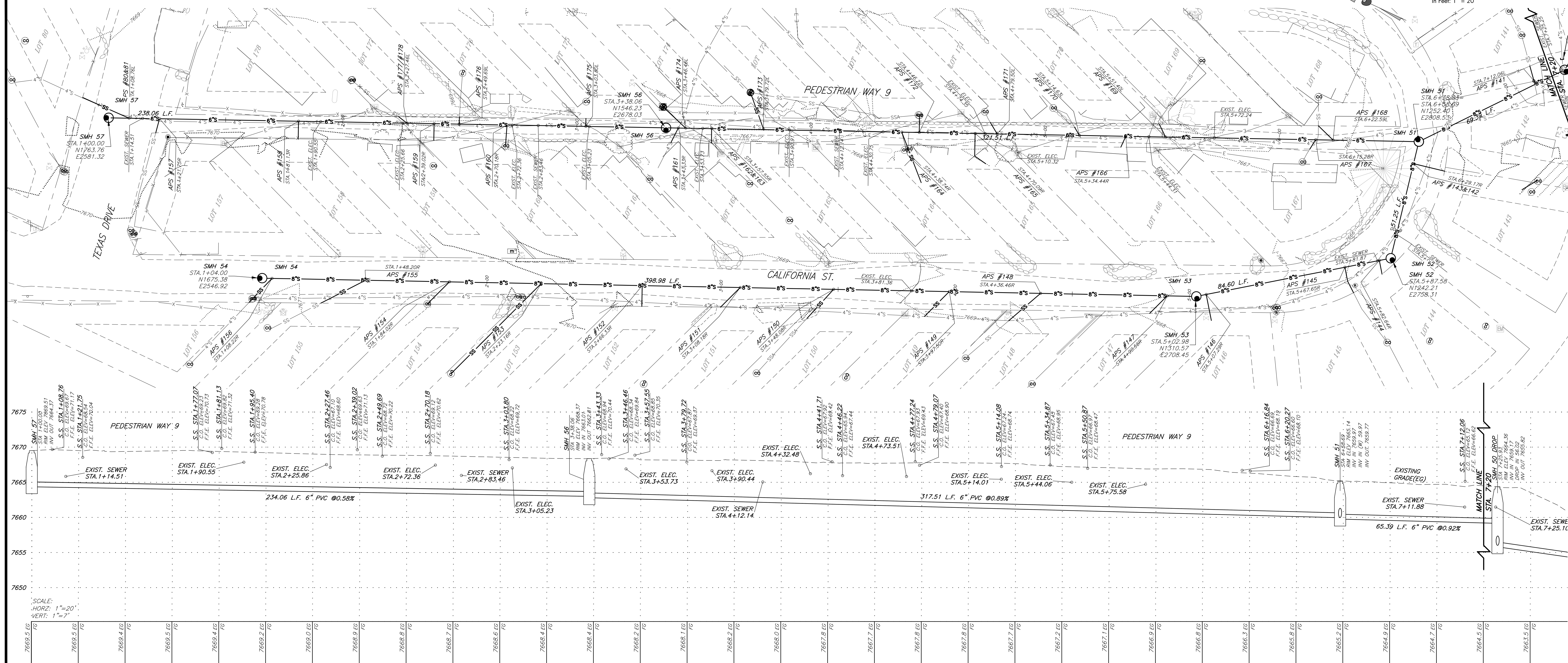
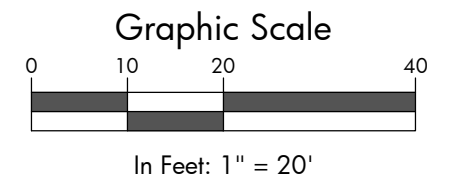
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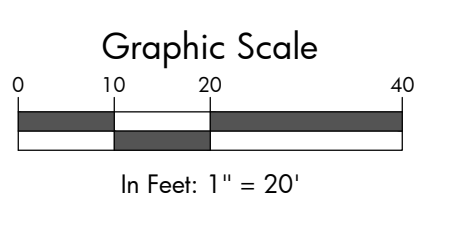
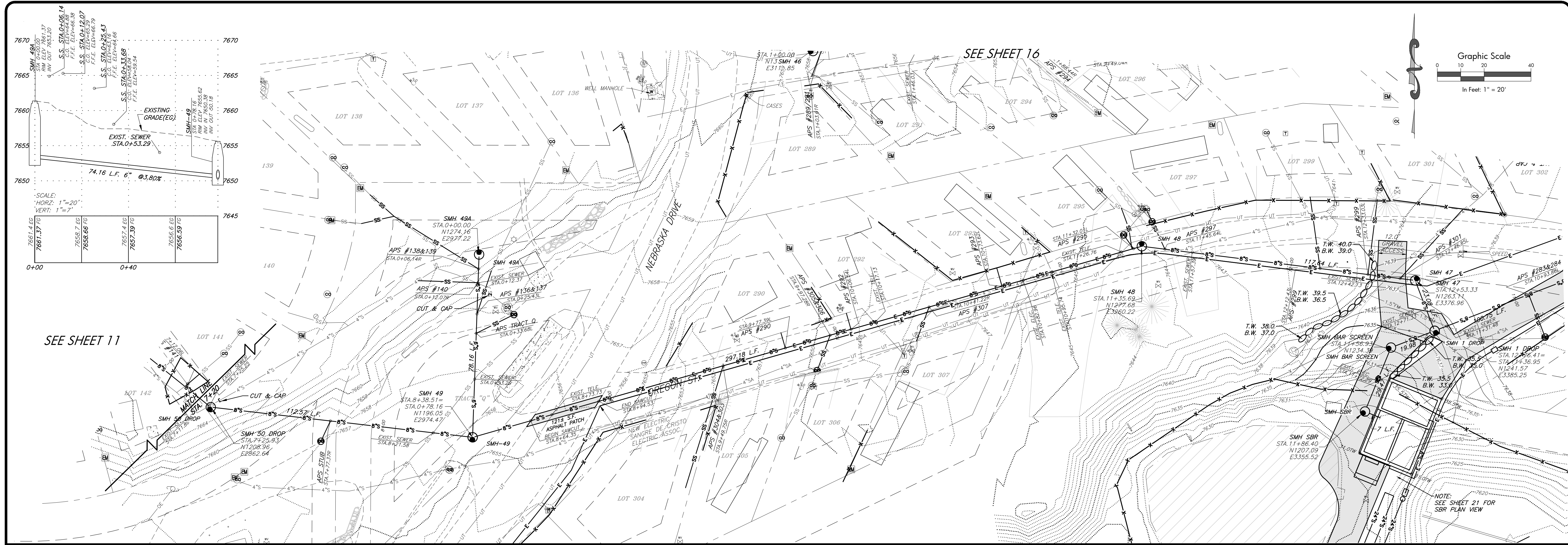
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Sewer Plan & Profile
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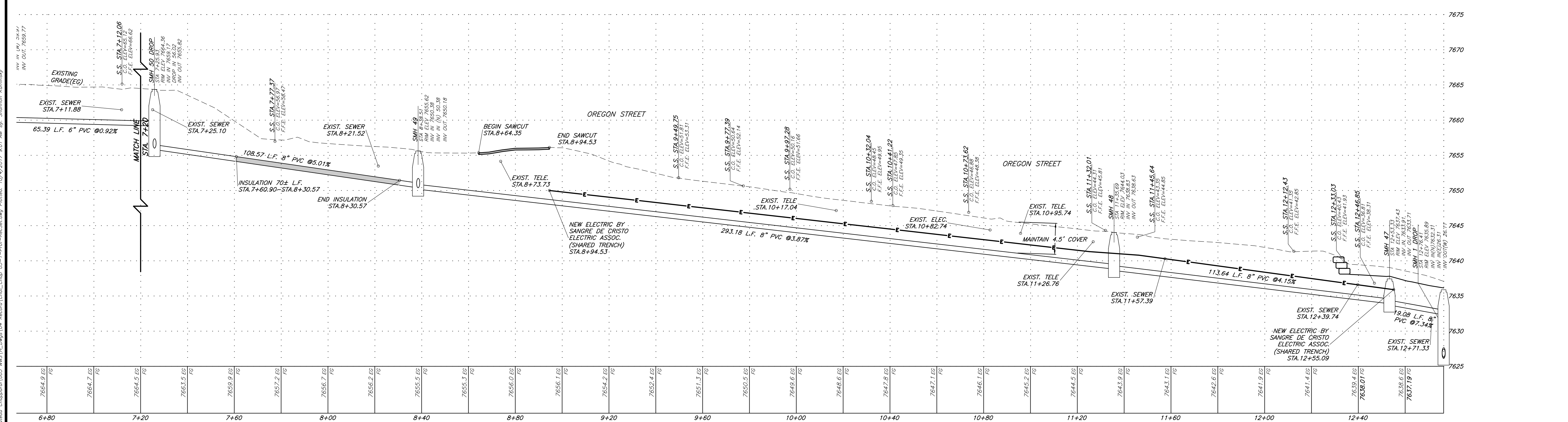
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SEE SHEET 17



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 I:\2008\2008-234_Chateau Chaparral\DWG\104_RecSet.dwg Plotter: 10/4/2017 8:01 AM By: Shannon Kominsky

Record Set


SGM
 103 W. Tomichi Ave., Suite A
 Gunnison, CO 81230
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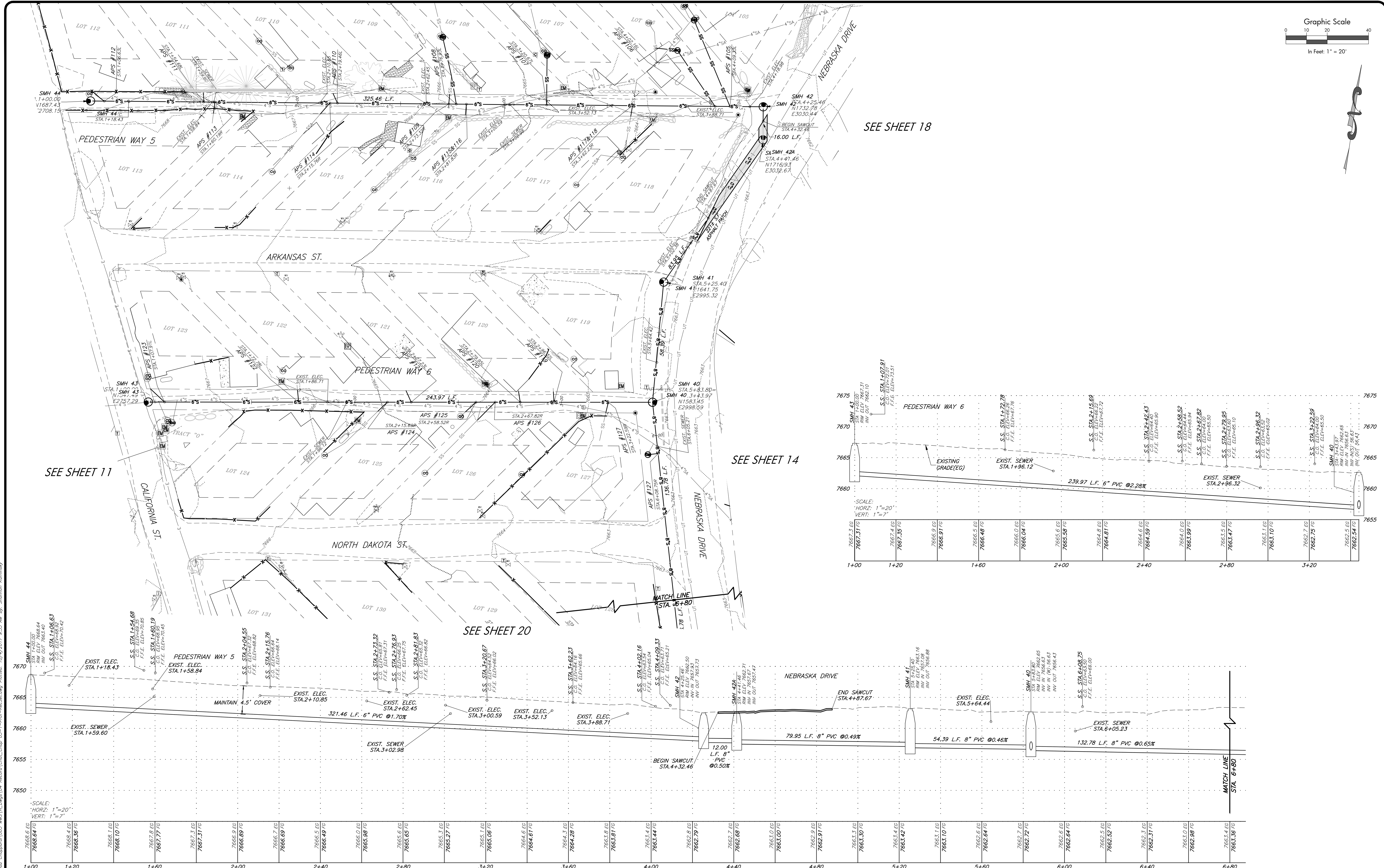
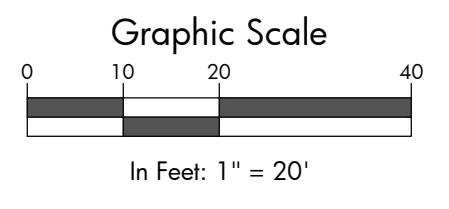
Chateau Chaparral Owners Assoc.
 2014 Sewer System Upgrades, Nathrop, CO

| # | Revision | Date | By |
|---|--------------------|---------|----|
| 1 | PRELIMINARY DESIGN | 12/7/12 | DK |
| 2 | FINAL DESIGN SET | 7/12/13 | DK |
| 3 | FINAL BID SET | 2/3/14 | TH |
| 4 | CONSTRUCTION SET | 10/3/14 | LS |
| 5 | RECORD SET | 10/3/17 | CG |

Sewer Plan & Profile
 Oregon St.

| | |
|-----------|--------------------------|
| Job No. | 2008-234.003 |
| Drawn by: | DK |
| Date: | 5-15-13 |
| QC: | RM PE: TH |
| File: | Chat_Chap 031-ProfRecSet |

12
 Of 28



SEE SHEET 18

SEE SHEET 14

SEE SHEET 11

SEE SHEET 20

SCALE: HORIZ: 1"=20'
VERT: 1"=7'

| |
|------------|
| 7668.64 EG |
| 7668.4 EG |
| 7668.36 EG |
| 7668.1 EG |
| 7668.10 EG |
| 7667.77 EG |
| 7667.3 EG |
| 7667.31 EG |
| 7666.9 EG |
| 7666.89 EG |
| 7666.7 EG |
| 7666.69 EG |
| 7666.5 EG |
| 7666.49 EG |
| 7666.0 EG |
| 7665.98 EG |
| 7665.6 EG |
| 7665.65 EG |
| 7665.3 EG |
| 7665.27 EG |
| 7665.1 EG |
| 7665.06 EG |
| 7664.6 EG |
| 7664.61 EG |
| 7664.3 EG |
| 7664.28 EG |
| 7663.8 EG |
| 7663.81 EG |
| 7663.4 EG |
| 7663.44 EG |
| 7662.9 EG |
| 7662.79 EG |
| 7662.7 EG |
| 7662.68 EG |
| 7663.0 EG |
| 7663.00 EG |
| 7662.9 EG |
| 7662.91 EG |
| 7663.3 EG |
| 7663.30 EG |
| 7663.4 EG |
| 7663.42 EG |
| 7663.1 EG |
| 7663.10 EG |
| 7662.6 EG |
| 7662.64 EG |
| 7662.7 EG |
| 7662.72 EG |
| 7662.6 EG |
| 7662.64 EG |
| 7662.5 EG |
| 7662.52 EG |
| 7662.3 EG |
| 7662.31 EG |
| 7662.9 EG |
| 7662.98 EG |
| 7663.4 EG |
| 7663.36 EG |

SCALE: HORIZ: 1"=20'
VERT: 1"=7'

| |
|------|
| 7675 |
| 7670 |
| 7665 |
| 7660 |
| 7655 |
| 7650 |
| 7645 |
| 7640 |
| 7635 |
| 7630 |
| 7625 |
| 7620 |
| 7615 |
| 7610 |
| 7605 |
| 7600 |

Record Set

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2014 Sewer System Upgrades, Nathrop, CO

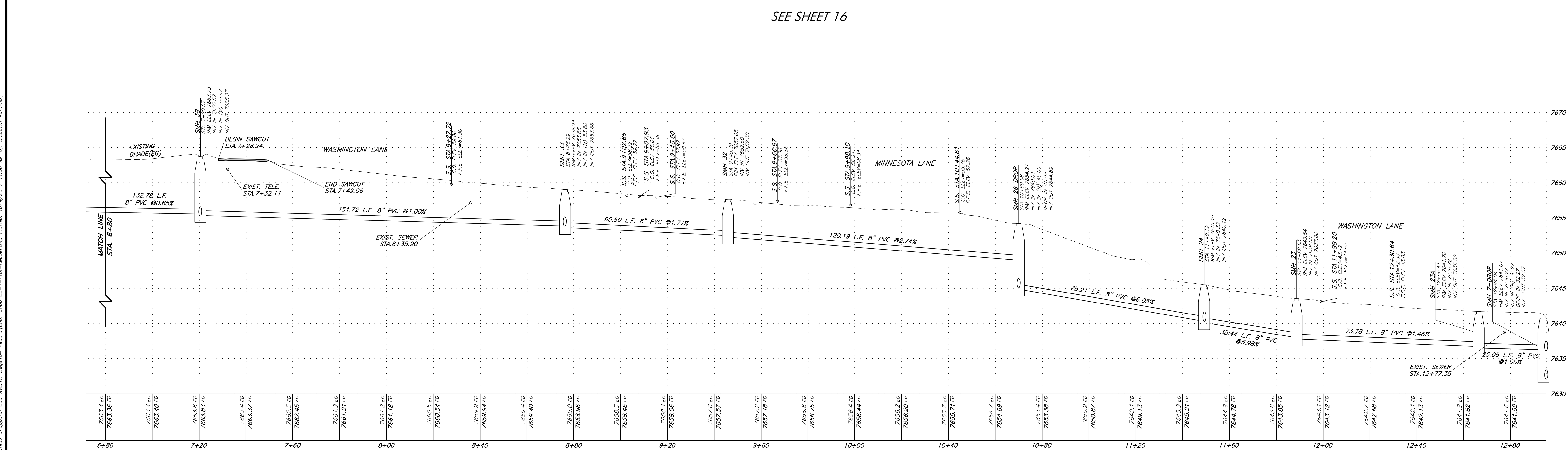
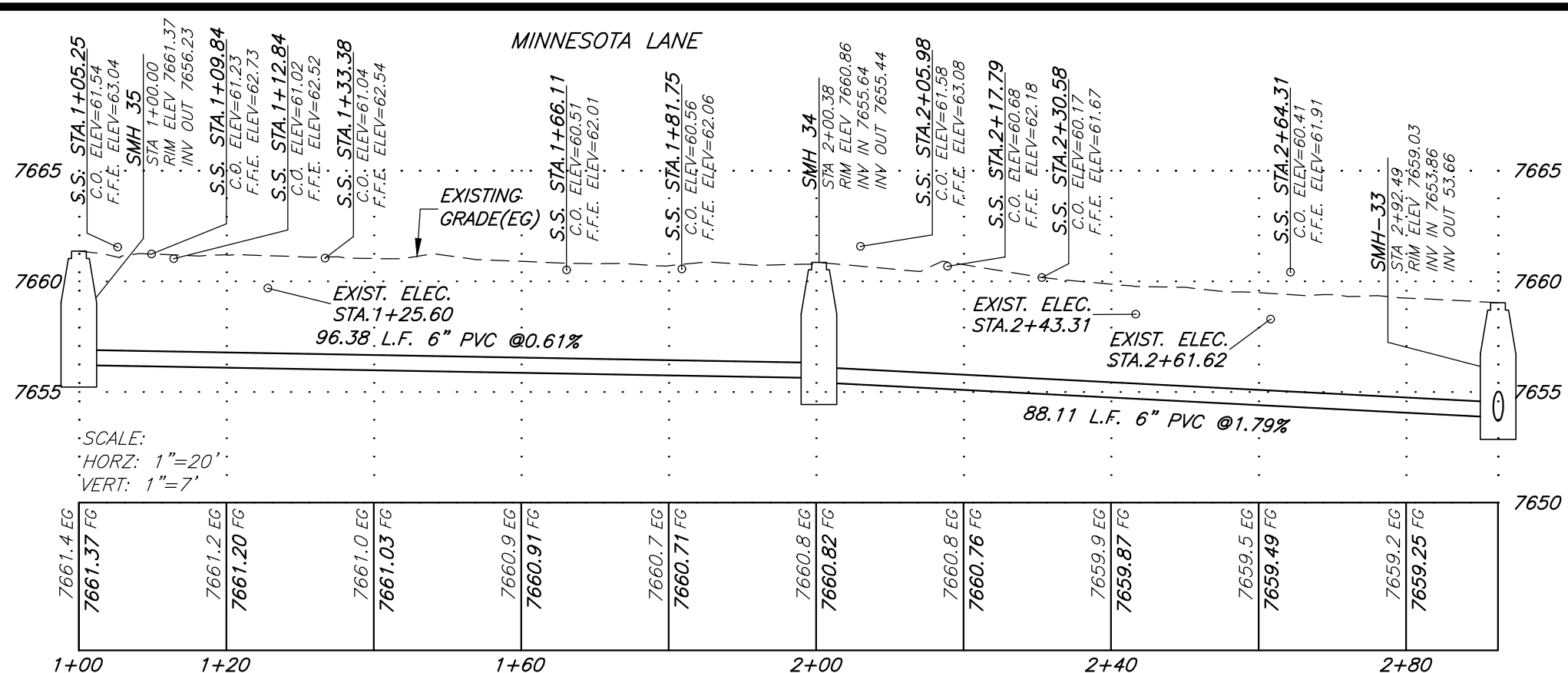
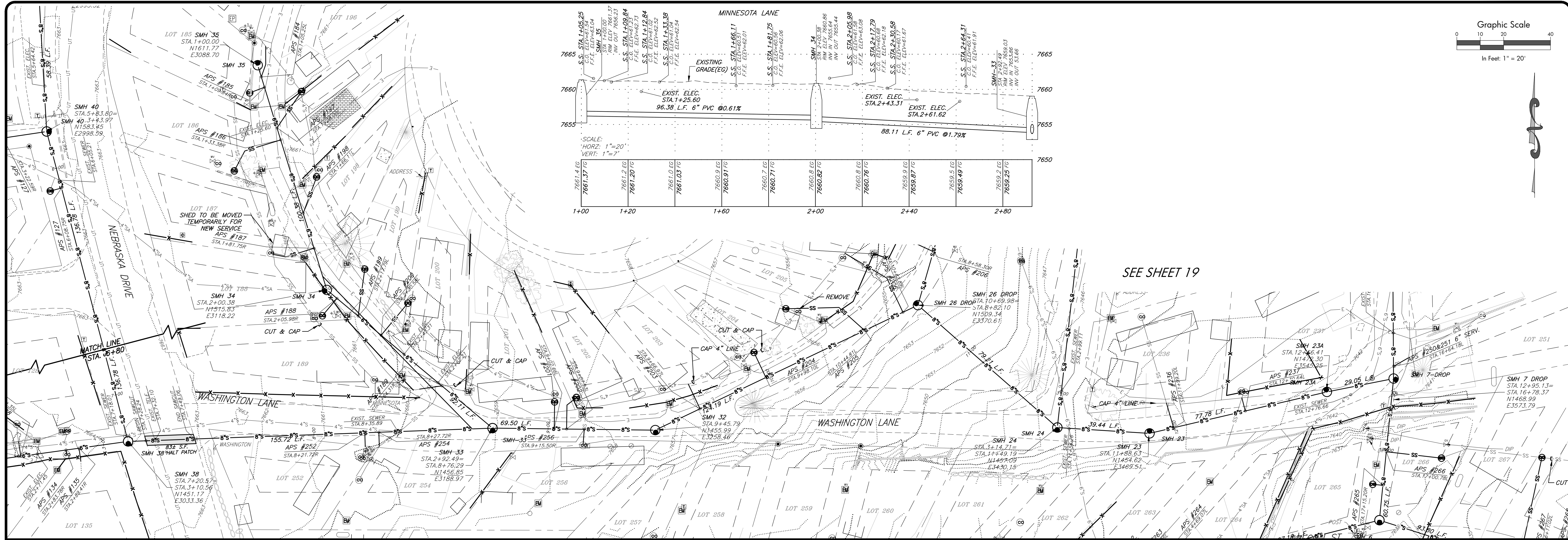
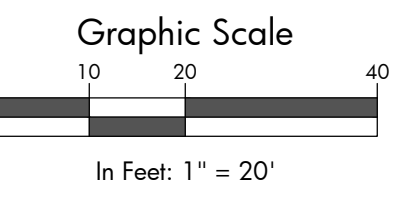
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|---|--------------------|---------|----|
| 1 | PRELIMINARY DESIGN | 12/7/12 | DK |
| 2 | FINAL DESIGN SET | 7/12/13 | DK |
| 3 | FINAL BID SET | 2/3/14 | TH |
| 4 | CONSTRUCTION SET | 10/3/14 | LS |
| 5 | RECORD SET | 10/3/17 | CG |

Sewer Plan & Profile
Washington Lane

| | |
|-----------|-----------------------------|
| Job No. | 2008-234.003 |
| Drawn by: | DK |
| Date: | 5-15-13 |
| QC: | RM PE: TH |
| File: | Chat_Chop 03-1-Prof Rec Set |

13
Of 28

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SEE SHEET 16

SEE SHEET 19

1:2008-2008-234, Chateau Chaparral Owners Assoc. 2014 Sewer System Upgrades, Nathrop, CO. 10/4/2017 11:38 AM By: Shannon Kaminaky

Record Set

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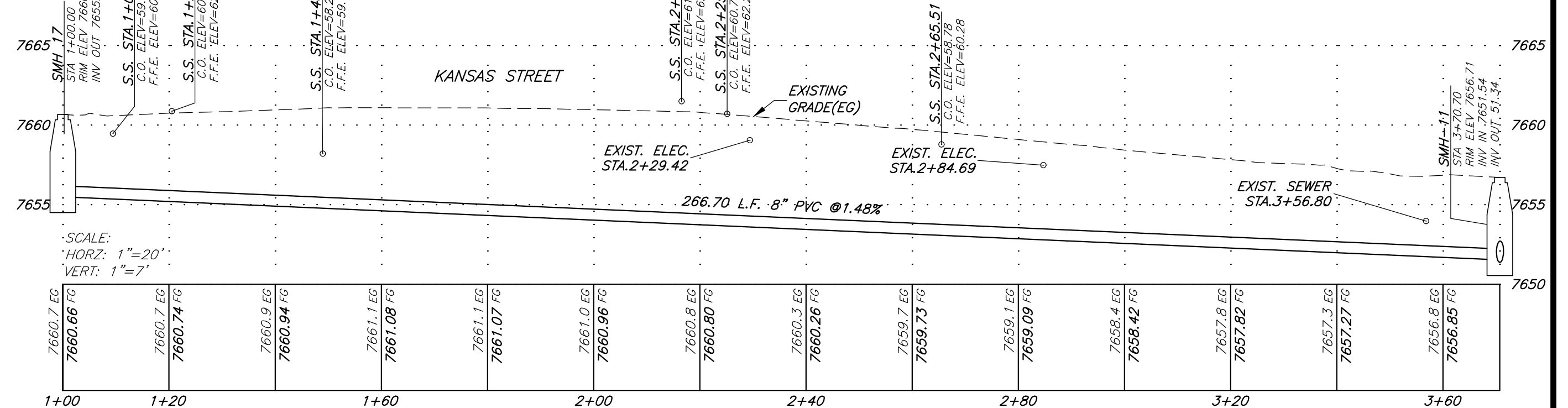
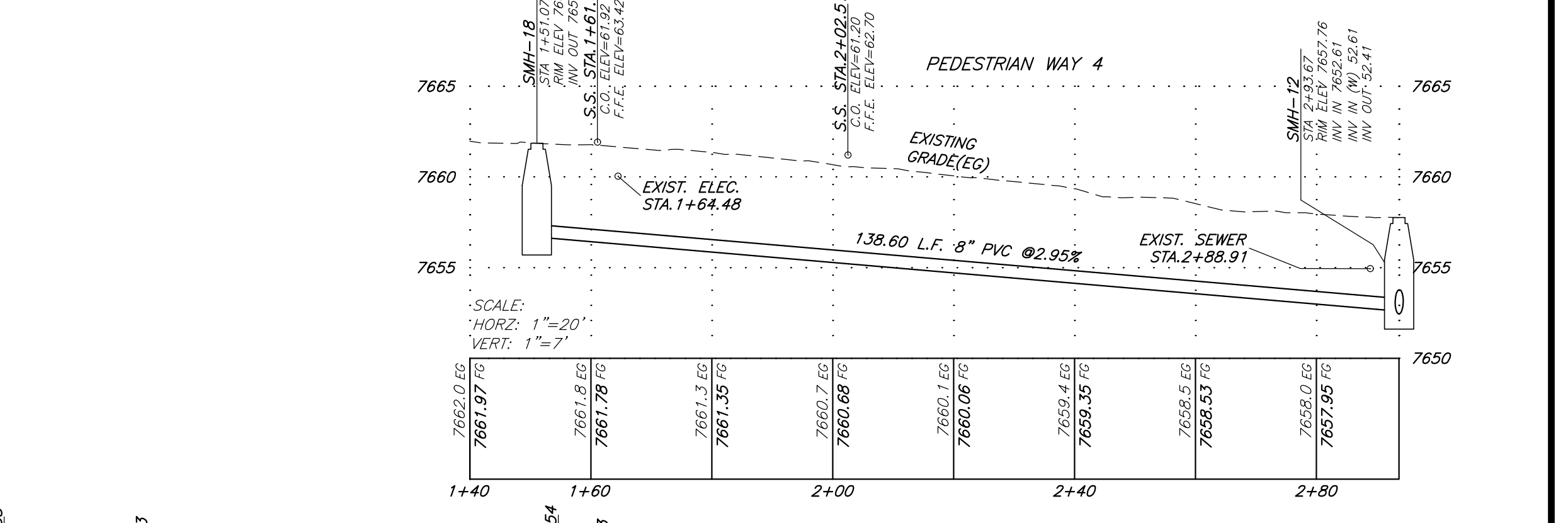
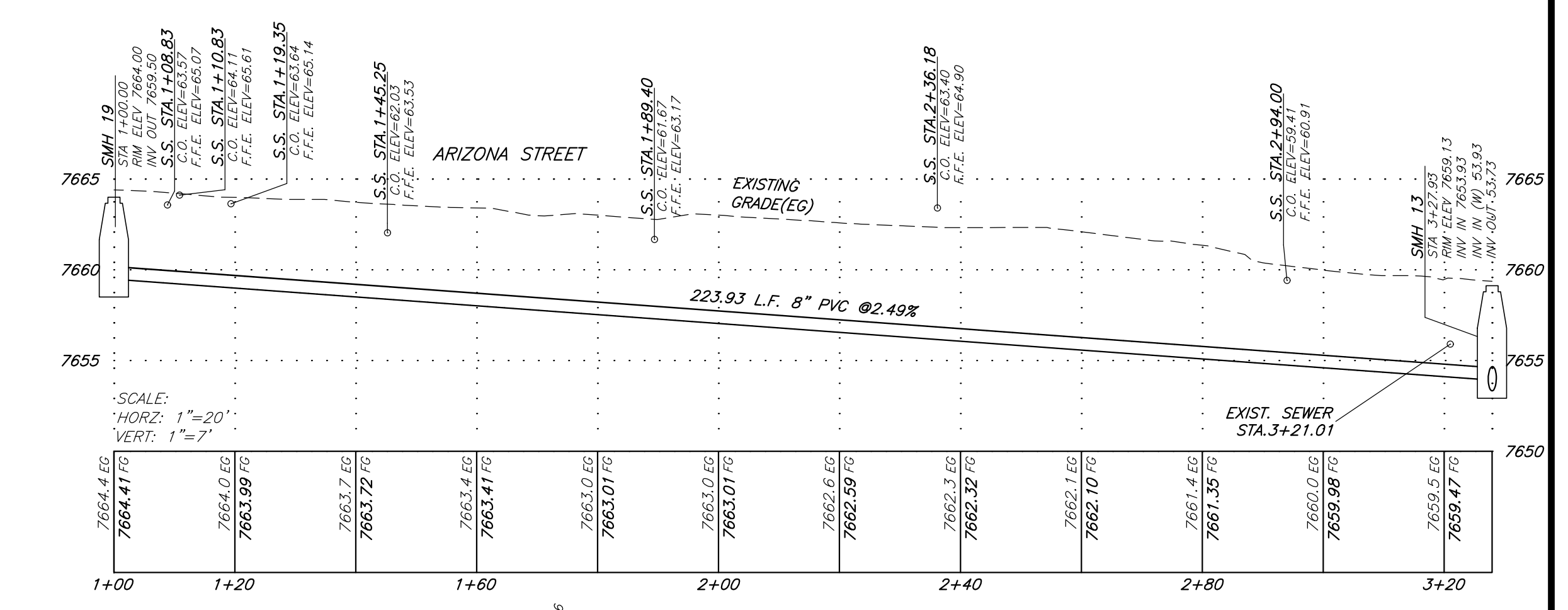
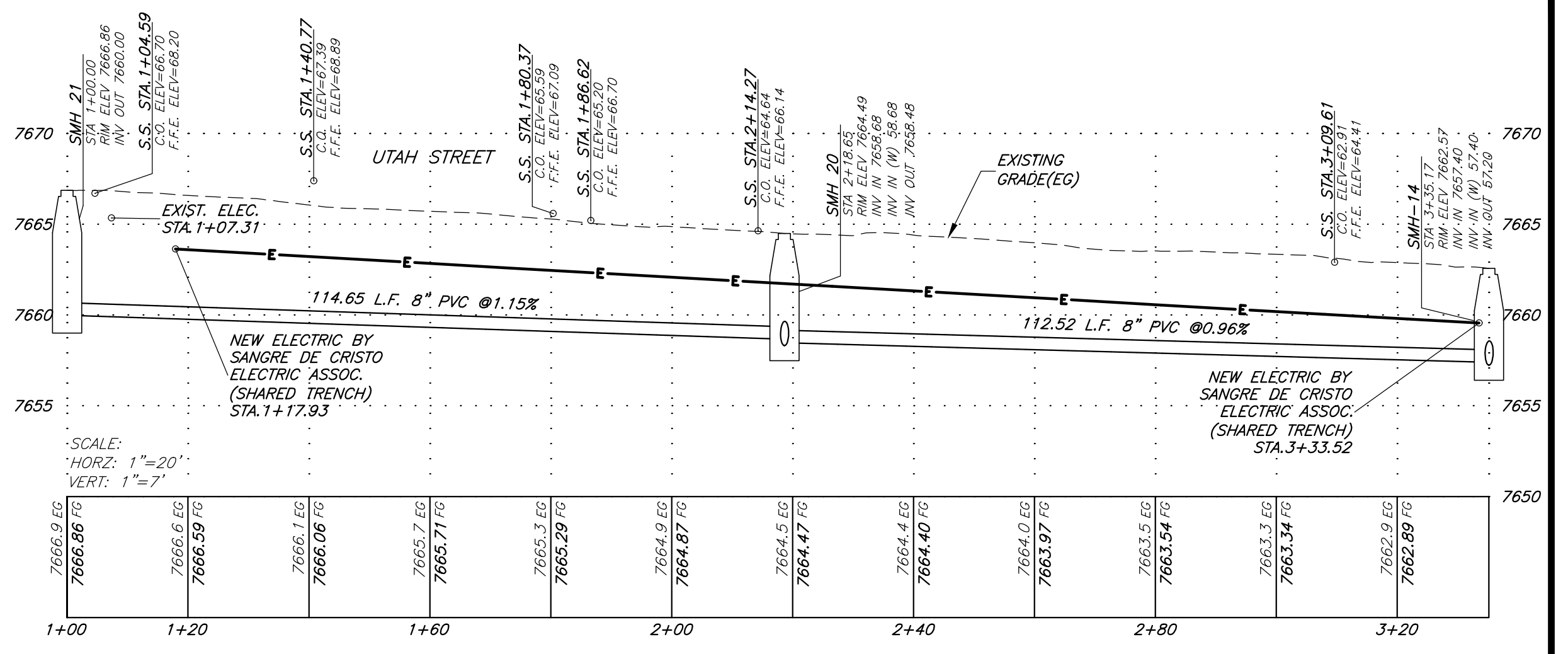
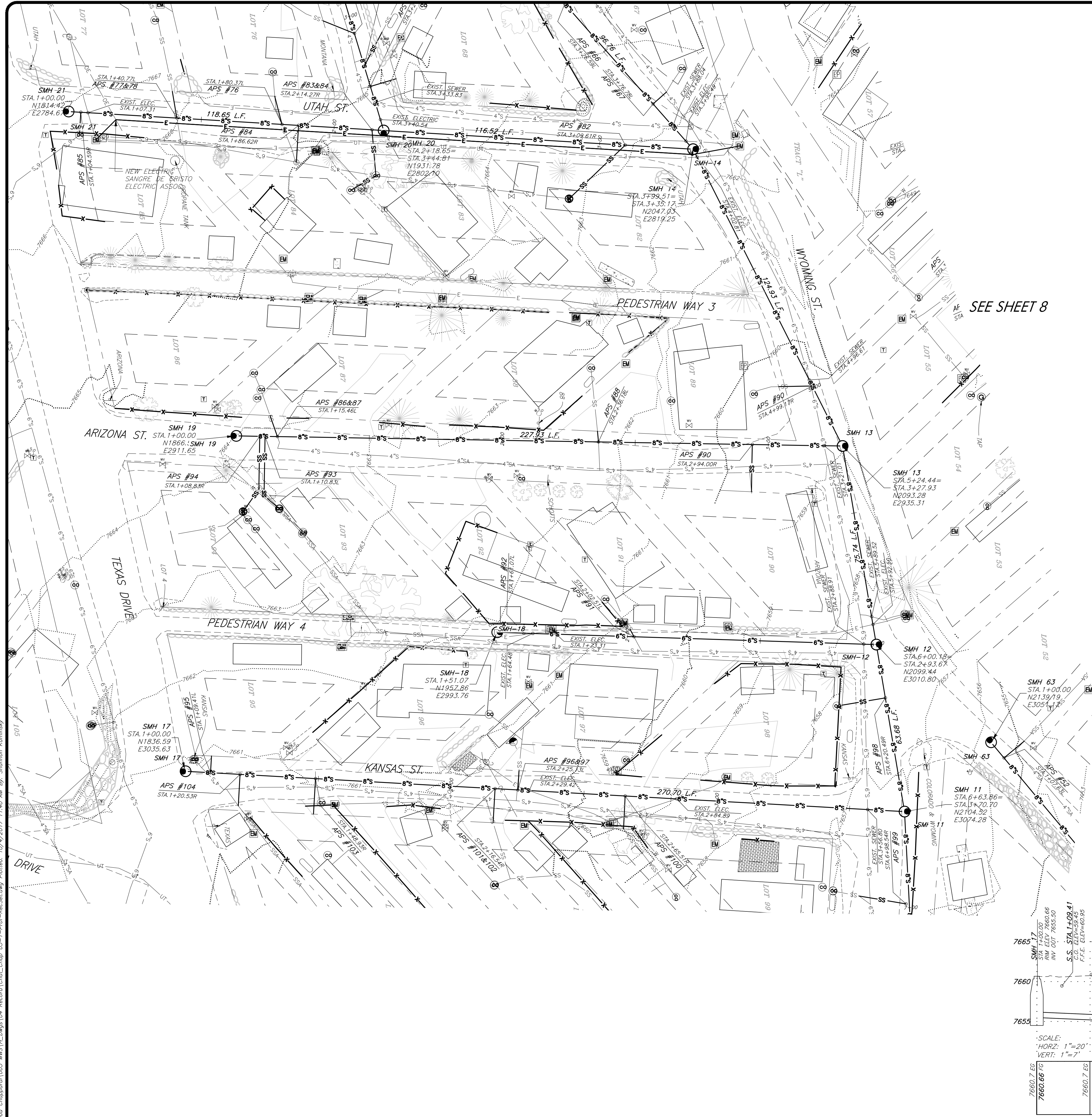
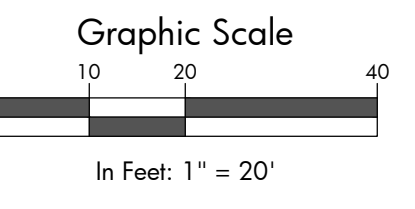
Chateau Chaparral Owners Assoc.
 2014 Sewer System Upgrades, Nathrop, CO

| # | Revision | Date | By |
|---|--------------------|---------|----|
| 1 | PRELIMINARY DESIGN | 12/7/12 | DK |
| 2 | FINAL DESIGN SET | 7/12/13 | DK |
| 3 | FINAL BID SET | 2/3/14 | TH |
| 4 | CONSTRUCTION SET | 10/3/14 | LS |
| 5 | RECORD SET | 10/3/17 | CG |

Sewer Plan & Profile
 Washington &
 Minnesota Lane

| | |
|-----------|--------------------------|
| Job No. | 2008-234.003 |
| Drawn by: | DK |
| Date: | 5-15-13 |
| QC: | RM PE: TH |
| File: | Chat_Chop 031-ProfRecSet |

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 Of 28



SEE SHEET 8

I:\2008\2008-234_Chateau Chaparral\003_MHS\14_Dwg\1-Prof-ResSew.dwg Plotter: 10/4/2017 11:40 AM By: Shannon Kaminisky

Record Set

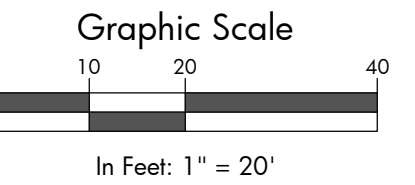


Chateau Chaparral Owners Assoc.
2014 Sewer System Upgrades, Nathrop, CO

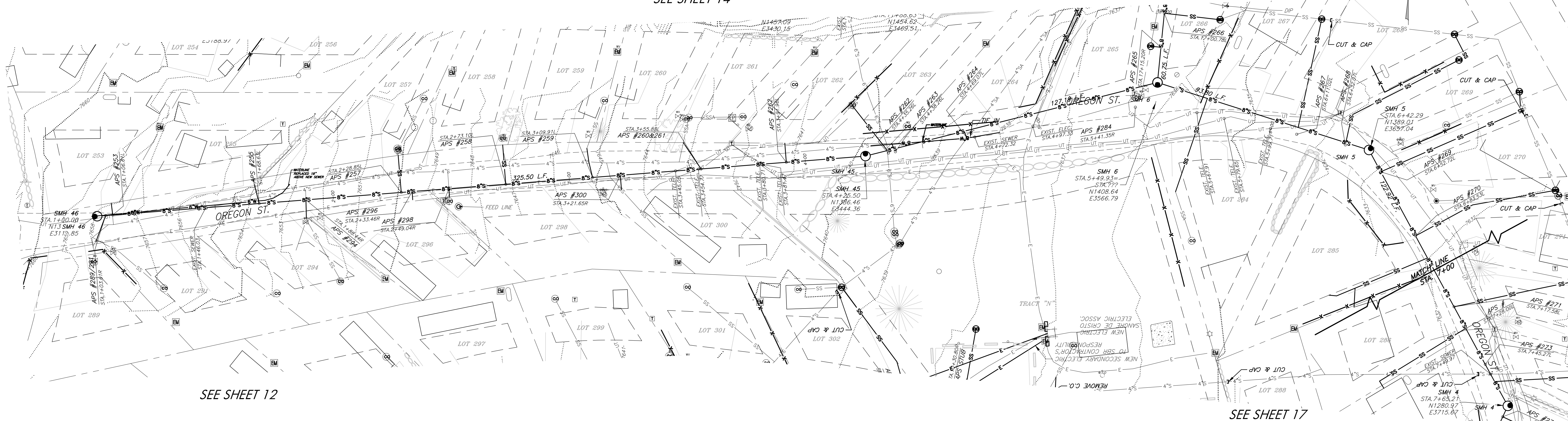
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|---|--|----------|----|
| 2 | FINAL DESIGN SET | 7/12/13 | DK |
| 3 | FINAL BID SET | 2/3/14 | TH |
| 4 | CONSTRUCTION SET | 10/3/14 | LS |
| 5 | REVISION TO MH 18 & SERVICES TO LOTS 91 & 92 | 11/12/14 | SK |
| 6 | RECORD SET | 10/3/17 | SK |

Sewer Plan & Profile Utah,
Arizona, Kansas

| | | |
|-----------|---------------------------|----|
| Job No. | 2008-234.003 | 15 |
| Drawn by: | DK | |
| Date: | 5-15-13 | |
| QC: | RM PE: TH | |
| File: | Chat_Chap 03.1-ProfResSew | |
| | | 28 |

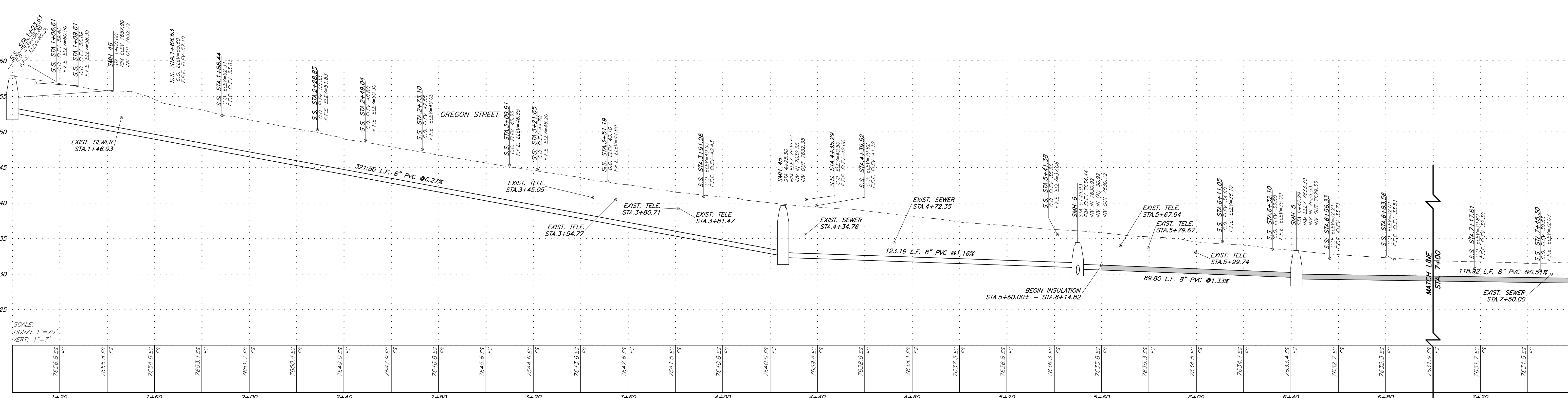


SEE SHEET 14



SEE SHEET 12

SEE SHEET 17



SCALE:
HORIZ: 1" = 20'
VERT: 1" = 7'

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
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| 1+20 | | 1+60 | | 2+00 | | 2+40 | | 2+80 | | 3+20 | | 3+60 | | 4+00 | | 4+40 | | 4+80 | | 5+20 | | 5+60 | | 6+00 | | 6+40 | | 6+80 | | 7+20 |

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Chateau Chaparral Owners Assoc.
2014 Sewer System Upgrades, Nathrop, CO

| # | Revision | Date | By |
|---|--------------------|---------|----|
| 1 | PRELIMINARY DESIGN | 12/7/12 | DK |
| 2 | FINAL DESIGN SET | 7/12/13 | DK |
| 3 | FINAL BID SET | 2/3/14 | TH |
| 4 | CONSTRUCTION SET | 10/3/14 | LS |
| 5 | RECORD SET | 10/3/17 | CG |

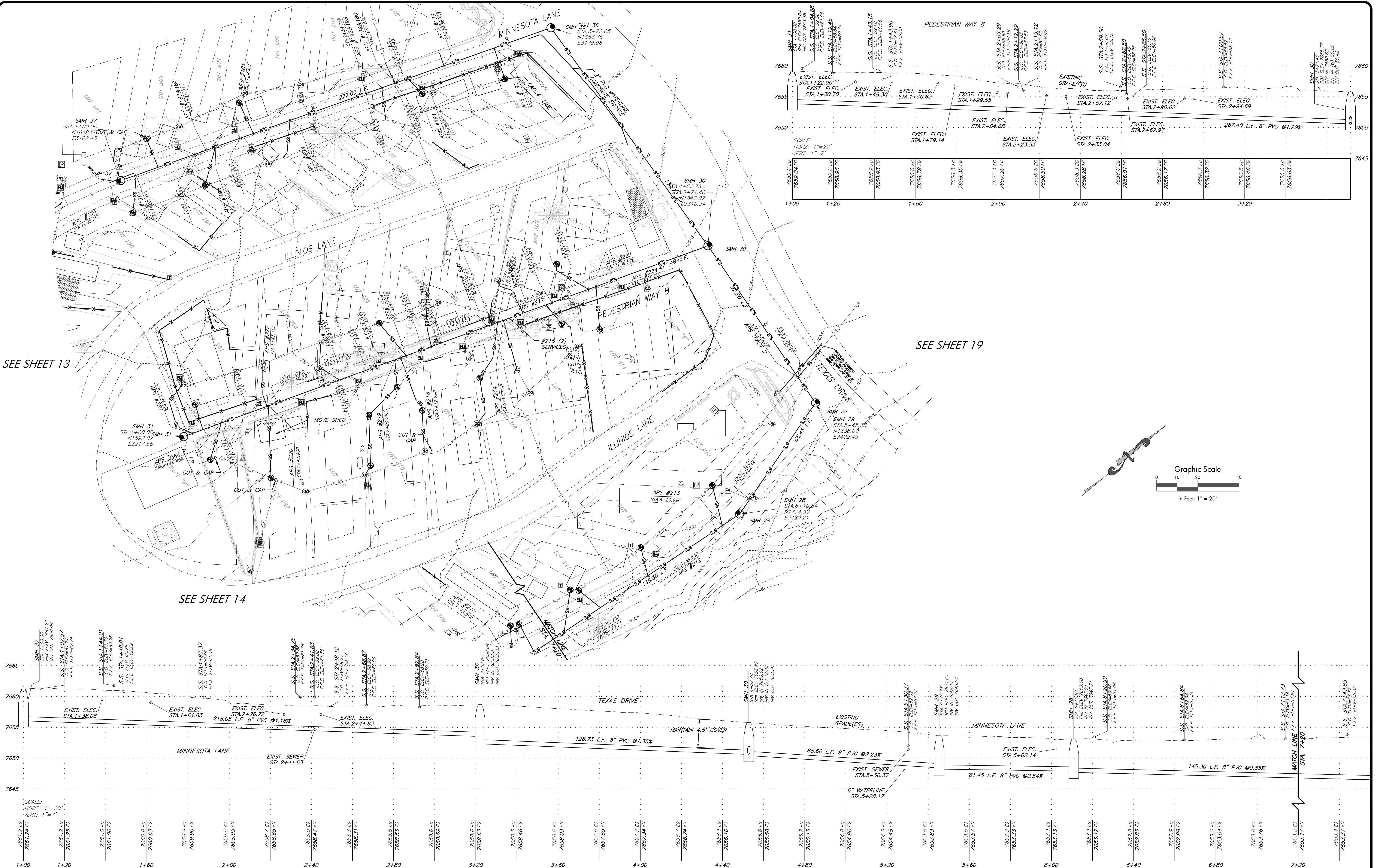
**Sewer Plan & Profile
Oregon**

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|-----------|--------------------------|----|
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| Drawn by: | DK | |
| Date: | 5-15-13 | |
| QC: | RM PE: TH | |
| File: | Chat_Chap_031_PrefRecSet | |

Of 28

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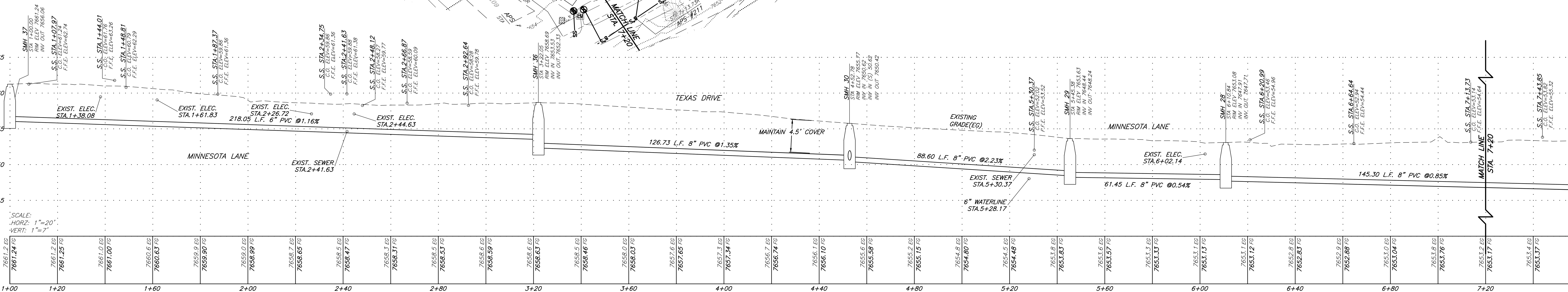
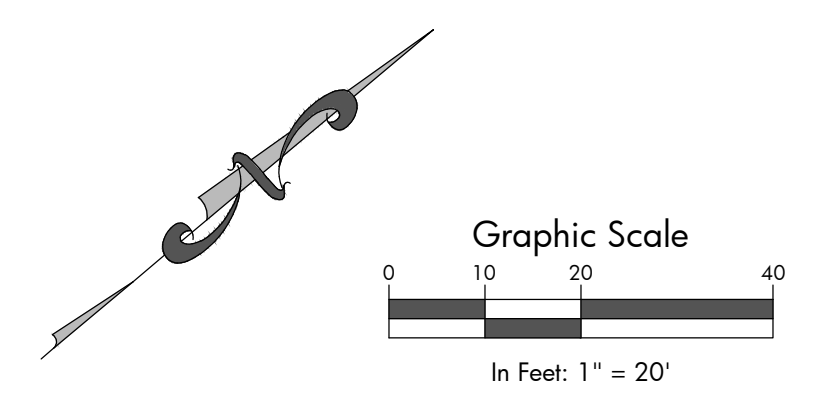
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SEE SHEET 13

SEE SHEET 14

SEE SHEET 19



Record Set

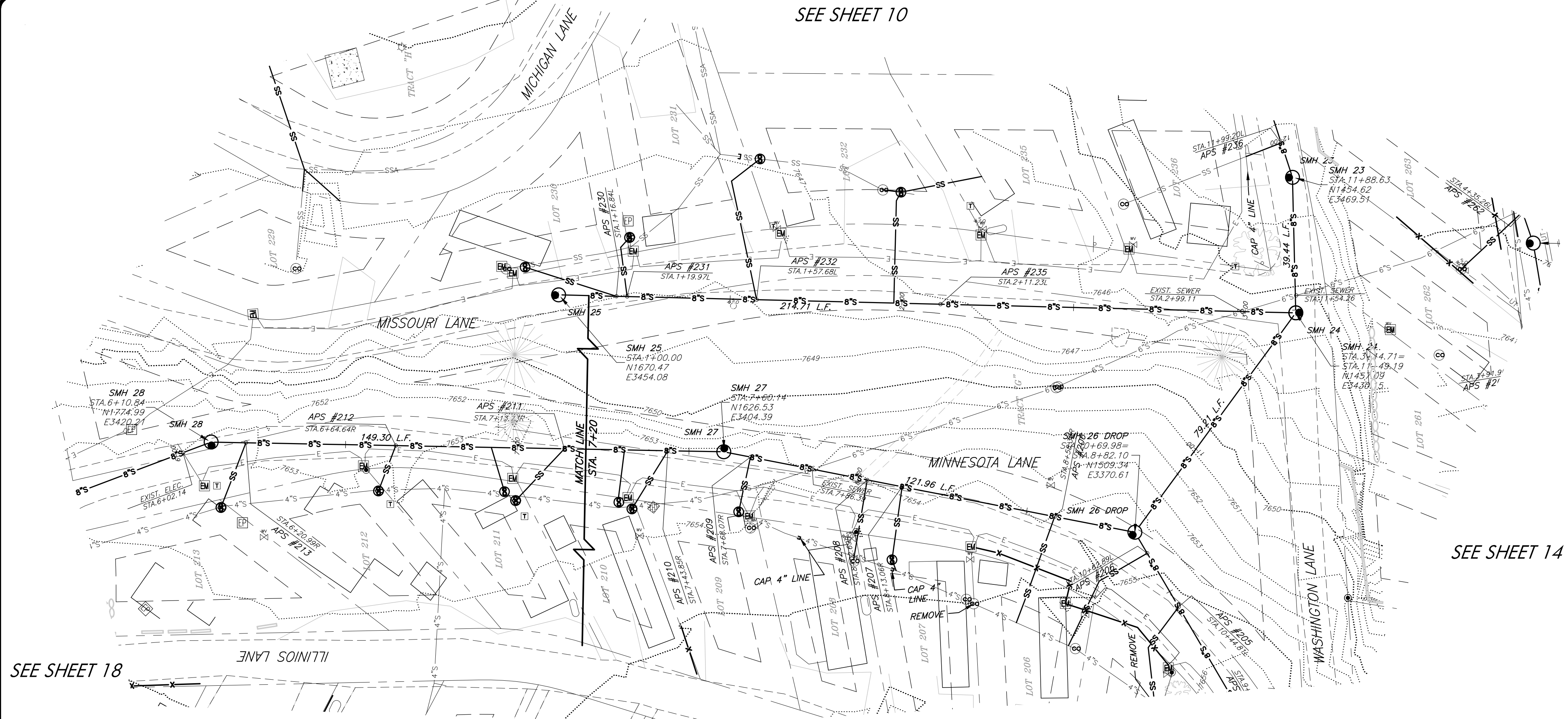
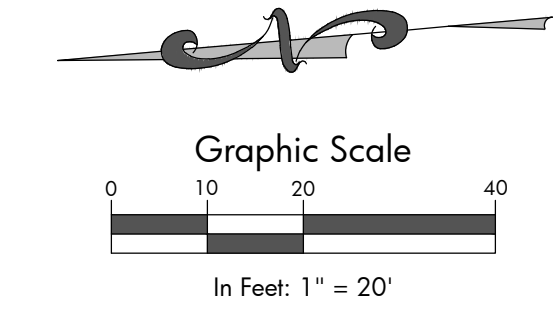
SGM
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 2014 Sewer System Upgrades, Nathrop, CO

| # | Revision | Date | By |
|---|--------------------|---------|----|
| 1 | PRELIMINARY DESIGN | 12/7/12 | DK |
| 2 | FINAL DESIGN SET | 7/12/13 | DK |
| 3 | FINAL BID SET | 2/3/14 | TH |
| 4 | CONSTRUCTION SET | 10/3/14 | LS |
| 5 | RECORD SET | 10/3/17 | CG |

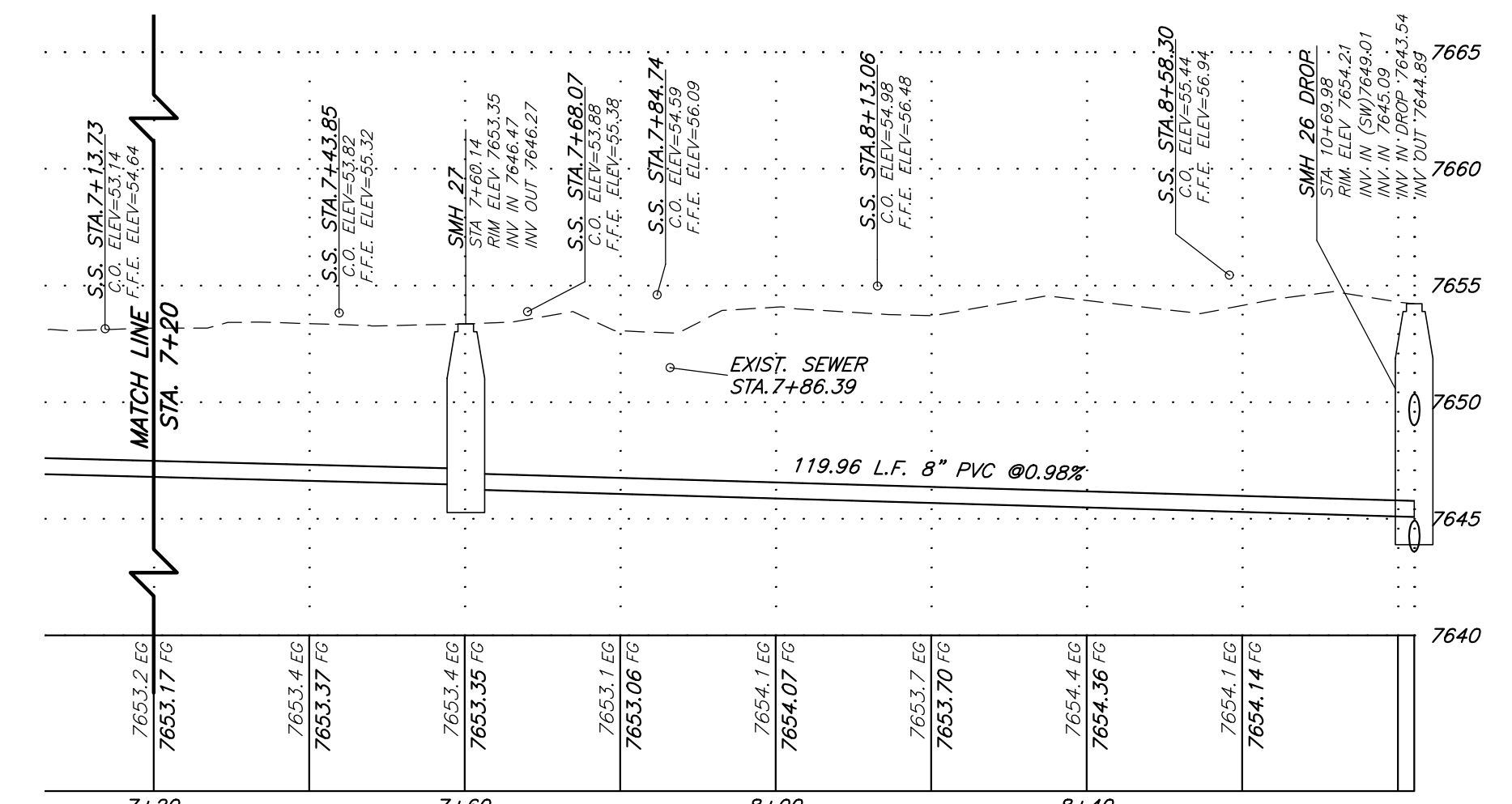
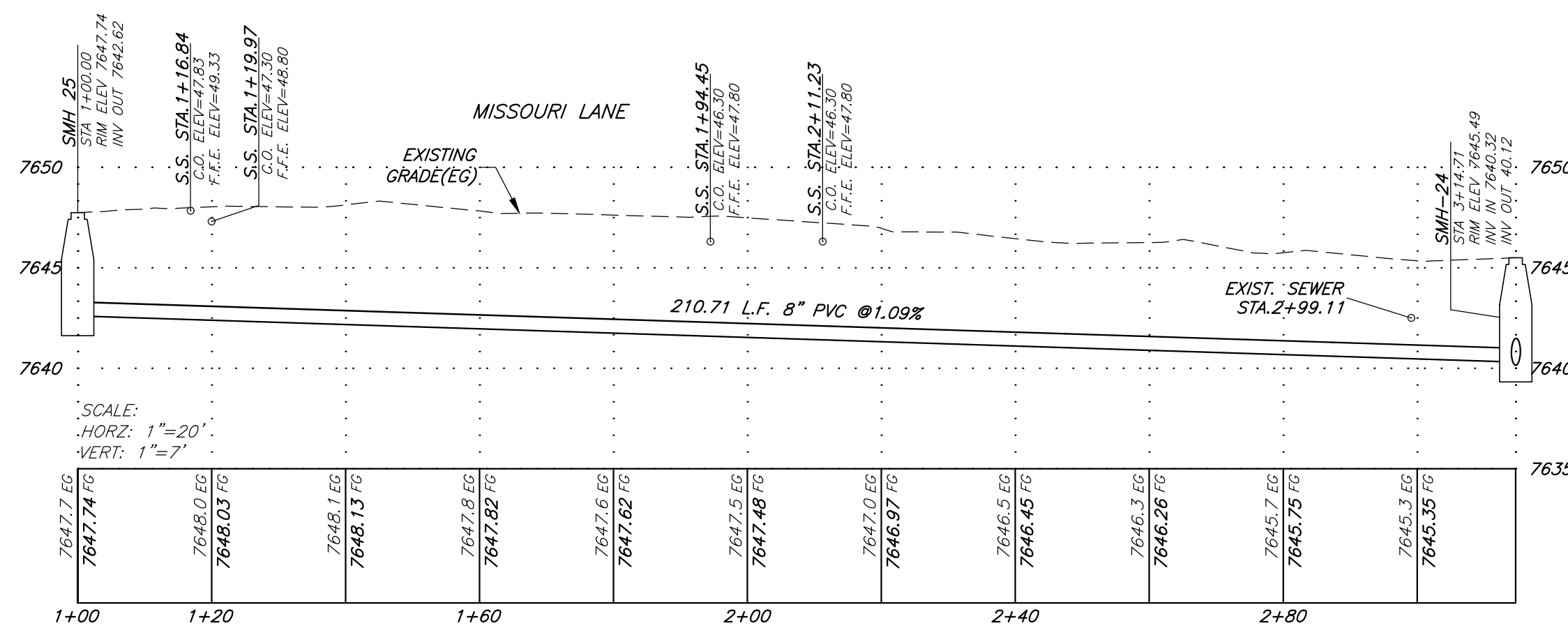
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| Job No. | 2008-234.003 | 18 |
| Drawn by: | DK | |
| Date: | 5-15-13 | |
| QC: | RM PE: TH | |
| File: | Chat_Chp 03-1-PropRes.dwg | |
| | | 28 |

SEE SHEET 10



SEE SHEET 18

SEE SHEET 14



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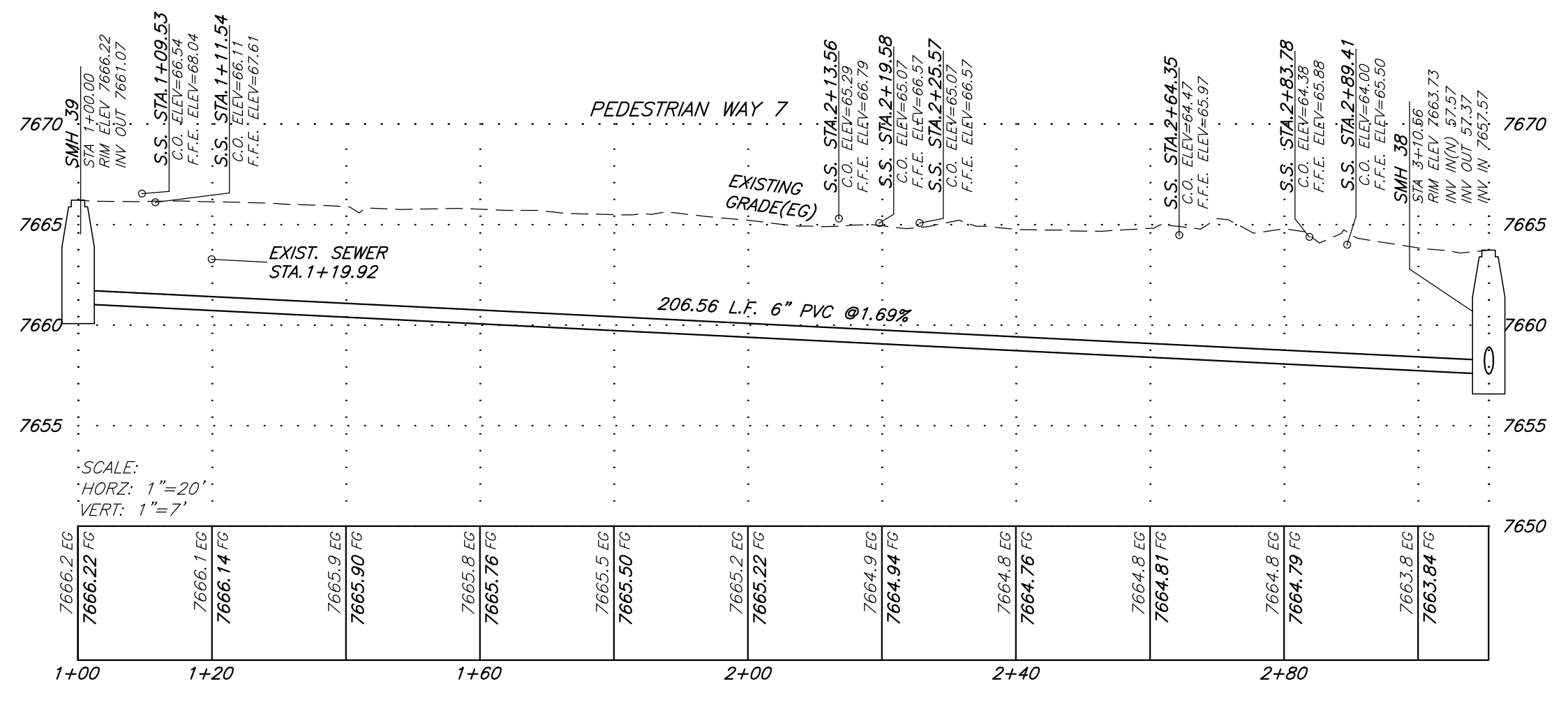
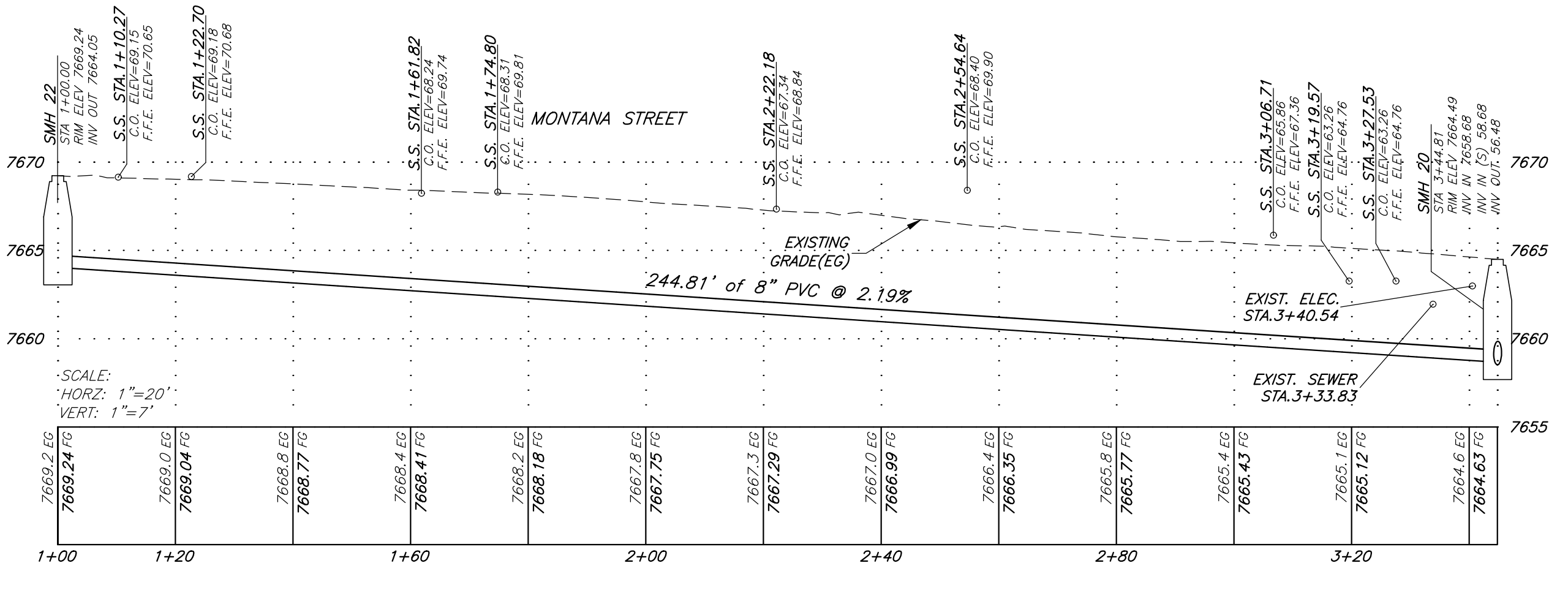
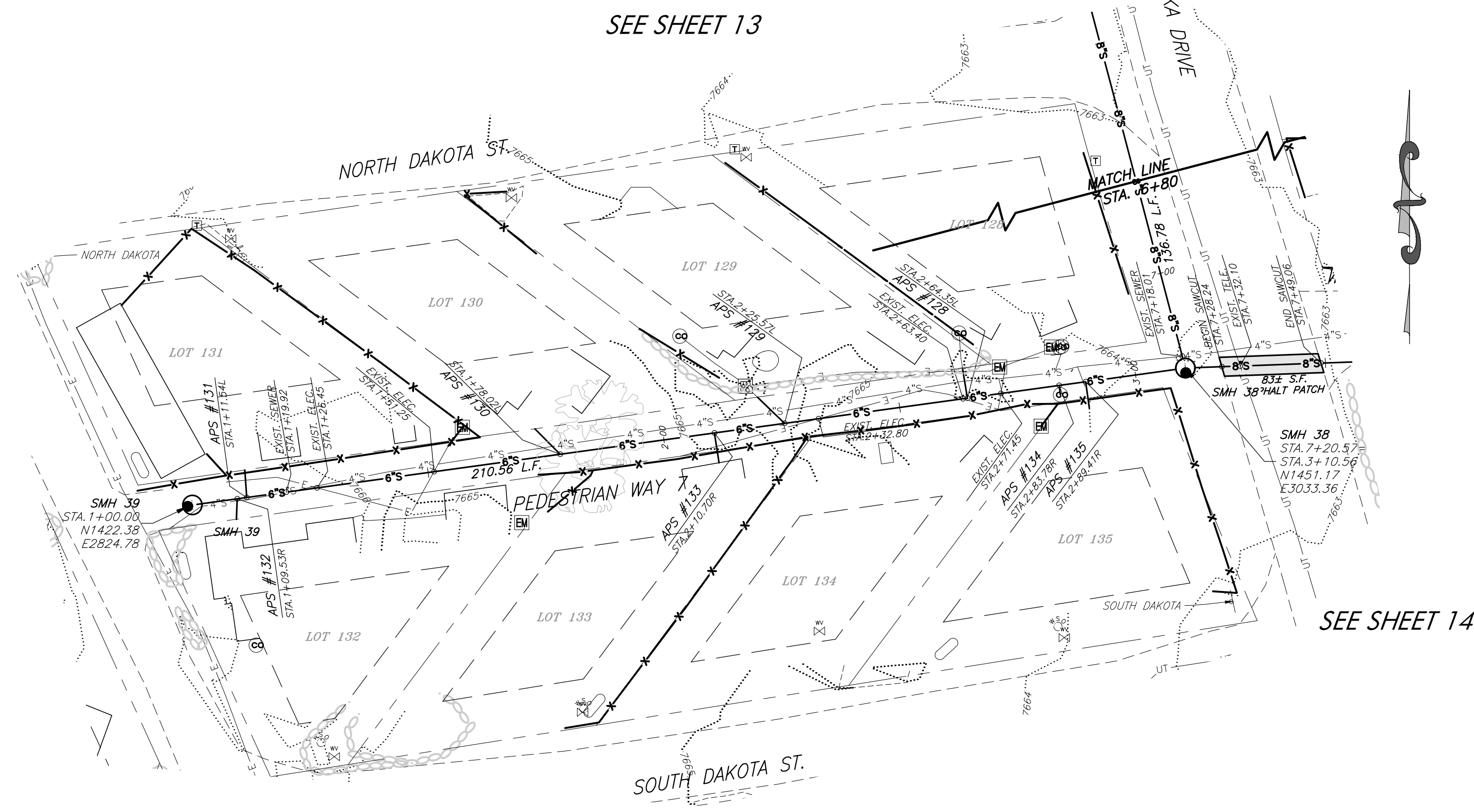
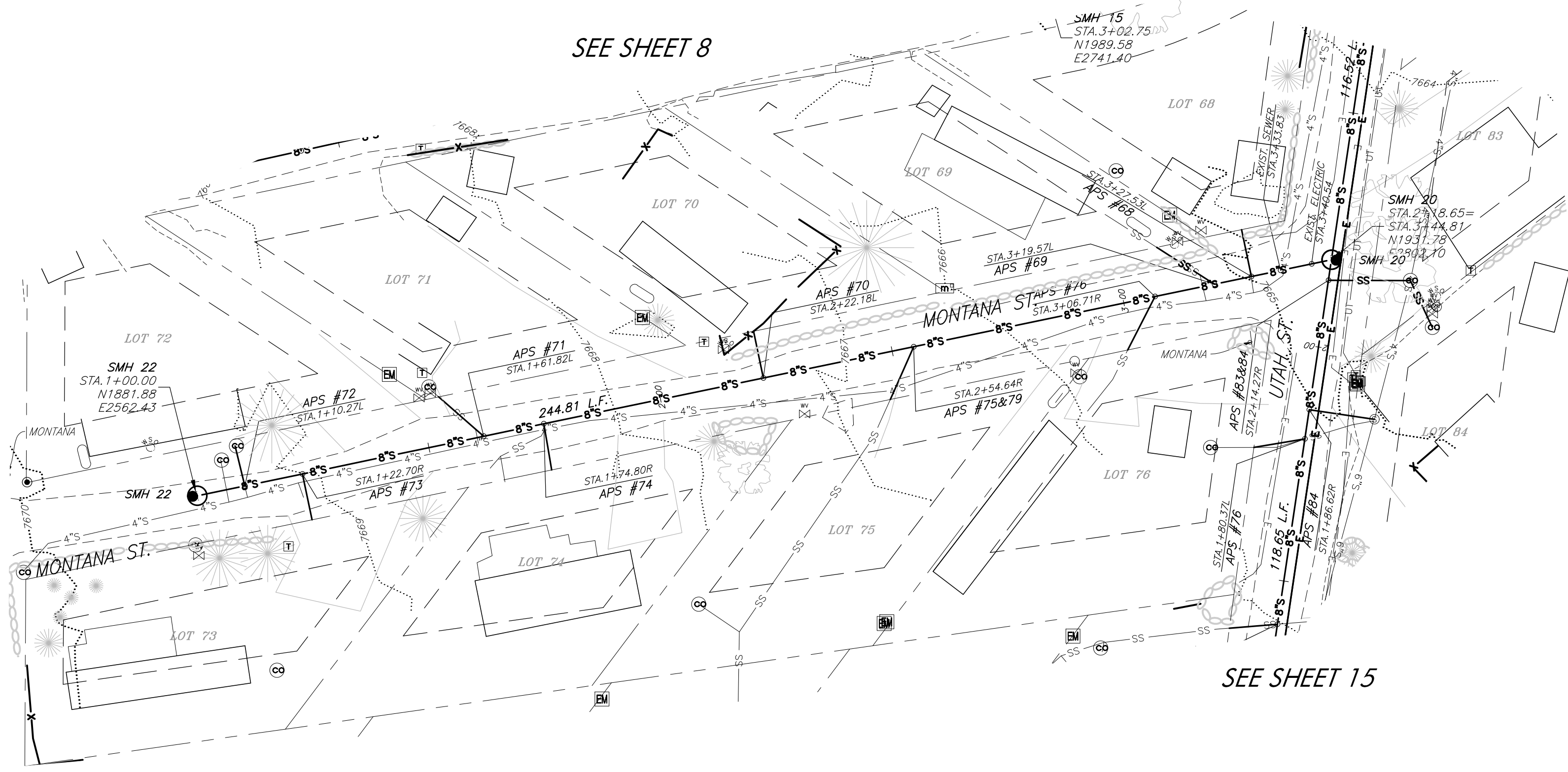
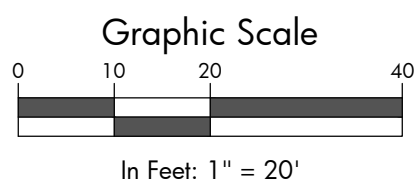
Chateau Chaparral Owners Assoc.
2014 Sewer System Upgrades, Nathrop, CO

| # | Revision | Date | By |
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| 1 | PRELIMINARY DESIGN | 12/7/12 | DK |
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| 3 | FINAL BID SET | 2/3/14 | TH |
| 4 | CONSTRUCTION SET | 10/3/14 | LS |
| 5 | RECORD SET | 10/3/17 | CG |

Sewer Plan & Profile
Missouri & Minnesota

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|-----------|-----------------------------|
| Job No. | 2008-234.003 |
| Drawn by: | DK |
| Date: | 5-15-13 |
| QC: | RM PE: TH |
| File: | Chat_Chap 03.1 Prof Res Set |

19
Of 28



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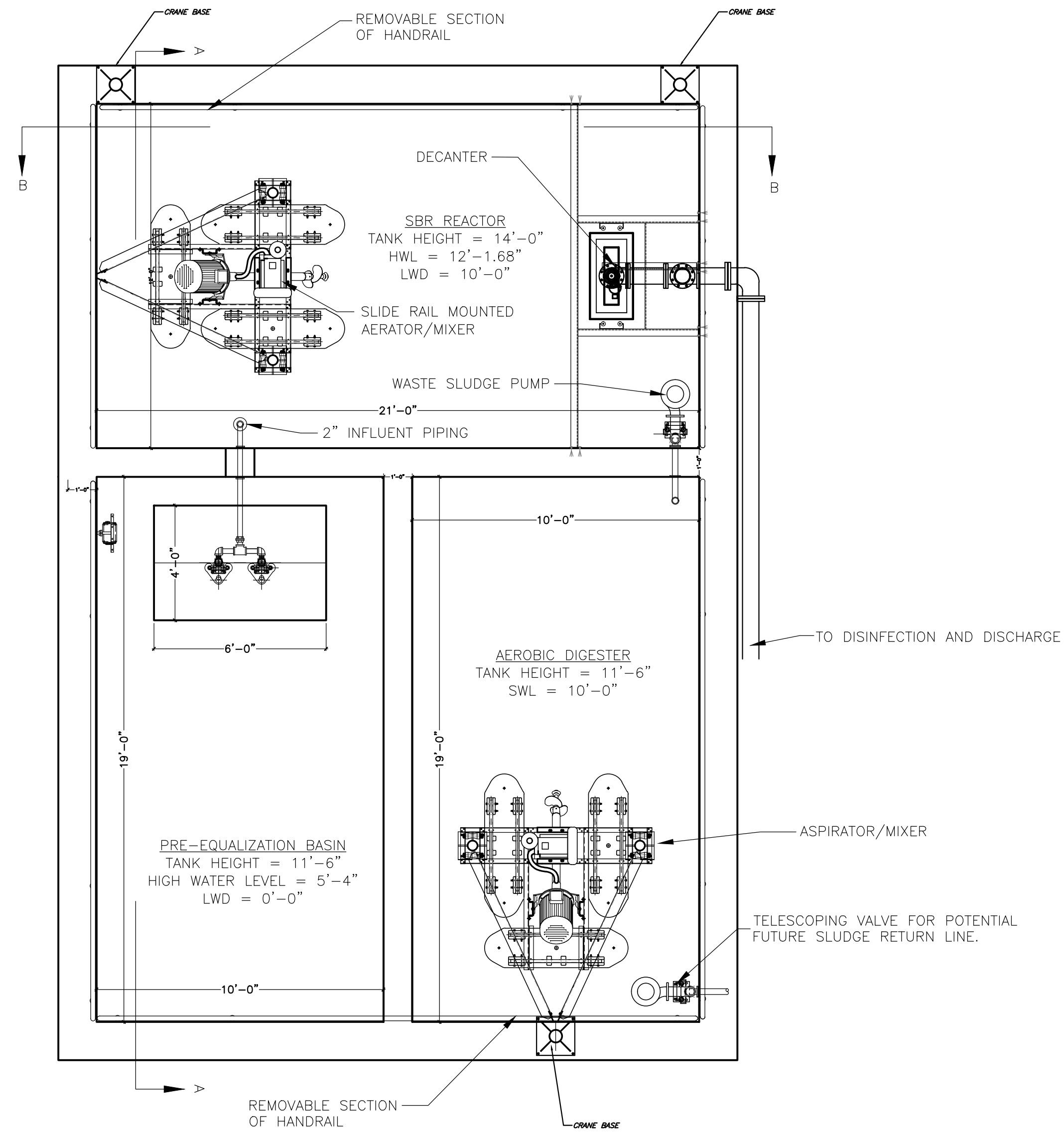
Chateau Chaparral Owners Assoc.
2014 Sewer System Upgrades, Nathrop, CO

| # | Revision | Date | By |
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| 1 | PRELIMINARY DESIGN | 12/7/12 | DK |
| 2 | FINAL DESIGN SET | 7/12/13 | DK |
| 3 | FINAL BID SET | 2/3/14 | TH |
| 4 | CONSTRUCTION SET | 10/3/14 | LS |
| 5 | RECORD SET | 10/3/17 | CG |

Sewer Plan & Profile
Montana & Ped. Way 7

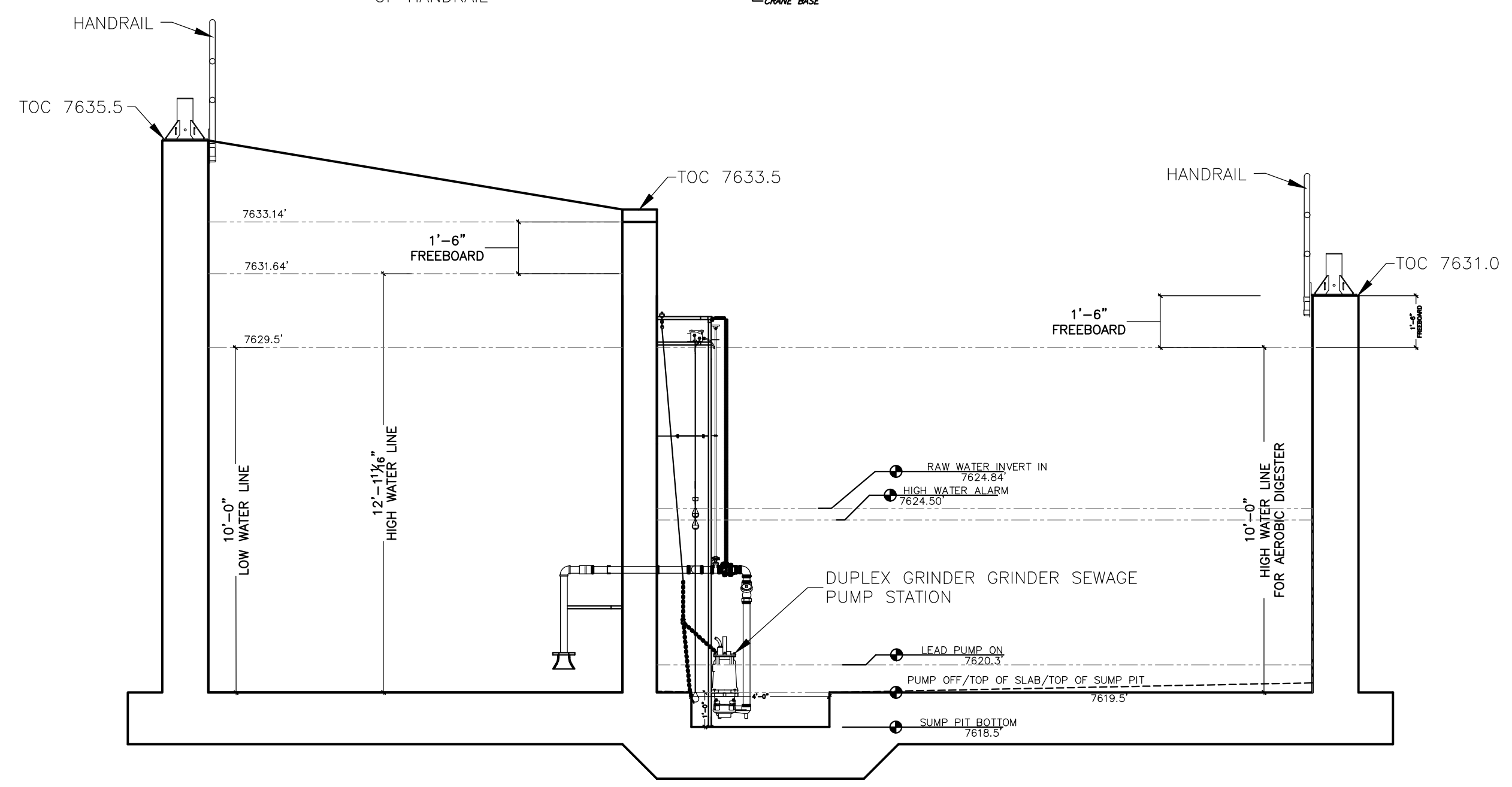
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28

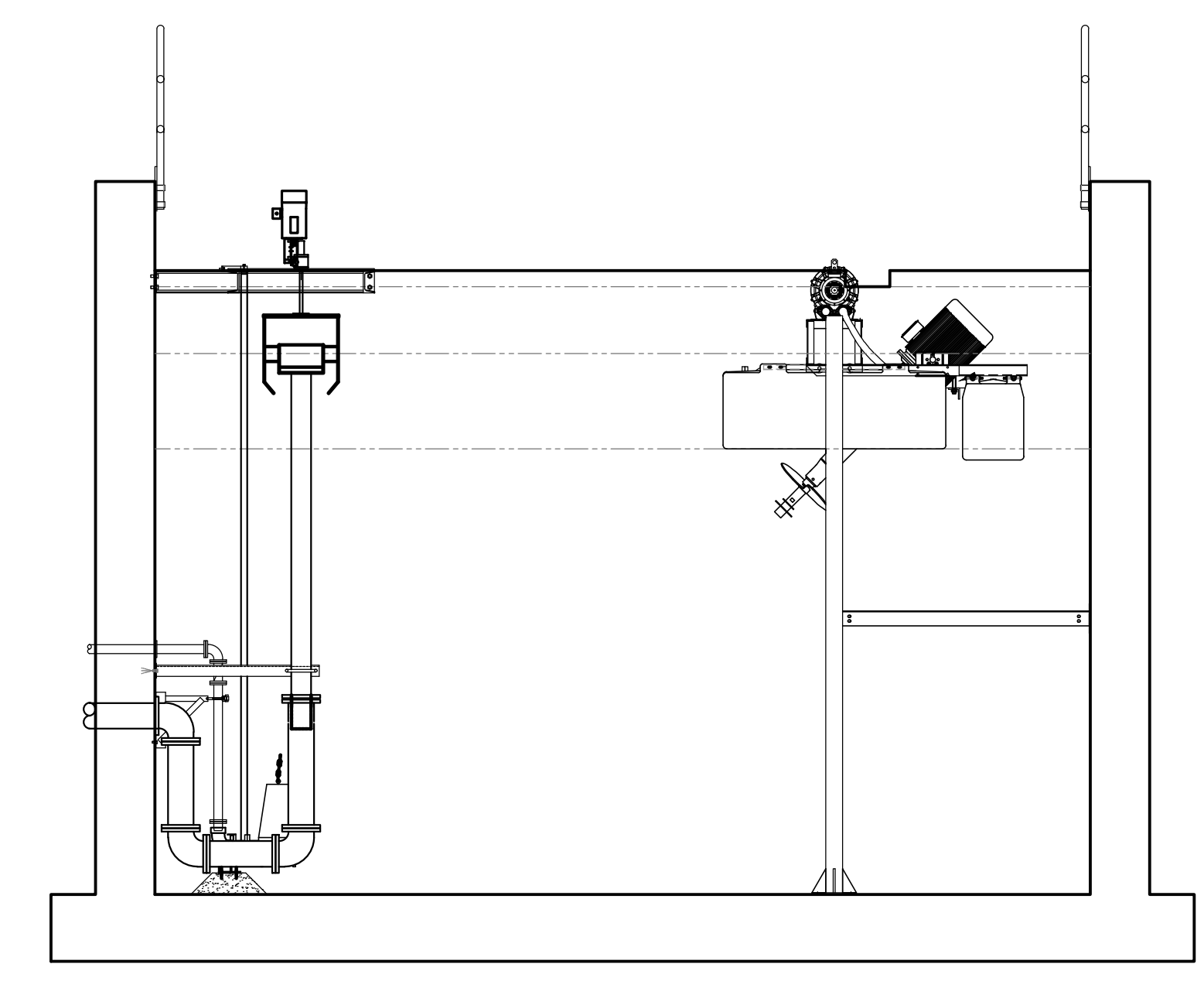


NOTE:
 ALL SBR EQUIPMENT AND PARTS INCLUDING ALL RAILING AND SUPPORTS TO BE PROVIDED BY SBR MANUFACTURE AND INSTALLED PER MANUFACTURES DIRECTIONS AND LOCATIONS PER AN APPROVED SHOP DRAWING. SEE TECHNICAL SPECIFICATION SECTION 11300

ALL STRUCTURAL SPECIFICS AND DETAILS SHOWN ON STRUCTURAL SHEET #24



SECTION A-A SBR REACTOR AND PRE EQUALIZATION BASIN



SECTION B-B SBR REACTOR

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Chateau Chaparral Owners Assoc.
 2014 Sewer System Upgrades, Nathrop, CO

| # | Revision | Date | By |
|---|--------------------|---------|-----|
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| 2 | FINAL DESIGN SET | 7/12/13 | DK |
| 3 | FINAL BID SET | 2/3/14 | TJH |
| 4 | CONSTRUCTION SET | 10/3/14 | LS |
| 5 | RECORD SET | 10/3/17 | CG |

SBR - Section - Details

| | |
|-----------|-----------------------|
| Job No. | 2008-234.003 |
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| Date: | 12/12/2012 |
| QC: | RM PE: TH |
| File: | Chat_Chap 06SBRRecSet |

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STRUCTURAL NOTES

Design and construction shall conform to the requirements of the International Building Code, 2006 Edition (2006 IBC) as adopted by Chaffee County.

Occupancy Classification: Category III

LOADS

| | |
|-------------------|----------------------------|
| Dead | |
| Concrete | 150 pcf |
| Live | |
| Vehicle Surcharge | 250 psf |
| Snow | 40 psf @ 7600 elev, area C |
| Fluid | |
| Water | 62.4 pcf |

Basic Wind Speed: 90 mph/3 sec gust

Seismic Design Category: C

GEO-TECHNICAL INFORMATION:

- Design is based upon values found in the Geotechnical Engineering Study by Mountain Engineering and Testing, Project No. 13013, dated May 15, 2013.
- Soils engineering values shall be as follows and have been computed on the basis of an equivalent fluid weight:
 - At-rest: 55 pcf above water table
 - Active: 35 pcf above water table
 - Passive: 350 pcf above water table
- Excavation and Trench Construction: "Type C" soils
- Backfill shall be compacted to meet the minimum standard Proctor density per ASTM D698 (95% below slabs, 98% below foundations) unless otherwise noted in the geotechnical report. Backfill shall be placed in 12" maximum vertical lifts or as detailed in the soils report and shall be free of deleterious material and compacted in a manner that does not damage the foundation, waterproofing or damp-proofing material. If soft spots are encountered contractor shall remove material and re-compact w/ approved material (RE: soils report) Finished grading shall drain away from the foundation wall at a minimum of 5%.
- Do not backfill against walls in retaining until all supporting elements are in place and properly anchored or adequate shoring is installed. Concrete slabs shall be properly cured.
- Avoid excessive wetting or drying of the excavations, keeping the excavation reasonably free from water during placement of concrete.

REINFORCED CONCRETE:

- All fluid filled concrete structures have been designed in accordance w/ ACI 350-06. All structural concrete construction work shall conform to ACI 301-05 unless noted otherwise.
- Cast in place concrete shall be made with Type I or II cement to maintain the following requirements, admixtures containing chloride salts shall not be used. Re: section 03300 of the specifications manual for add'l information on concrete mix.

| Element: | w/c Ratio: | Strength: | Entrained Air: |
|---------------------|------------|-----------|-----------------|
| Basin Walls & Slabs | 0.45 | 4000 psi | 4 1/2 - 7 1/2 % |
- Concrete coverage for reinforcing steel shall provide the following:
 - Concrete poured permanently against earth: 3"
 - Concrete poured in forms (exposed to weather, fluid or earth): 2"
- Hot and cold weather concreting procedures shall conform to the recommendations in the ACI Manual of Concrete Practice.

REINFORCING STEEL:

- All reinforcement detailing, fabrication and placement shall conform to the ACI Details and Detailing of Reinforcement (ACI 315-05).
- All reinforcing shall be of high grade deformed bars conforming to ASTM A615, grade 60, except ties and anchors which shall conform to ASTM A615, grade 40 or ASTM A706, grade 60.
- Welded wire fabric shall conform to ASTM A185, grade 60 and be lapped a minimum of one full mesh plus two inches at side and end splices and be wired together.
- Lap splices of reinforcement, where permitted, shall be a minimum of 38 bar diameters for #6 bar and smaller and 47 bar diameters for #7 and larger bar for Class A splice. Increase to 50 and 62 respectively for Class B lap splices, unless noted otherwise. Contact engineer for splicing recommendations prior to construction where not specifically detailed or noted. Do not weld or use mechanical splicing.
- Continuous top bars shall be spliced at mid-span and continuous bottom bars over supports.
- Extend reinforcing steel a minimum of a Class B lap splice through cold joints approved by the structural engineer.

CONSTRUCTION JOINTS:

- Contractor to provide a slab and/or wall construction joint plan for each tank/structure to the engineer of record for approval PRIOR to placing any concrete.
- Contractors construction joint plan should be laid out to minimize the number of construction joints in each individual structure.
- Construction joints in walls shall not occur close to wall corners or intersections such that they will divide additional corner/intersection reinforcement. Re: details for lengths of additional corner/intersection reinforcement.
- The maximum spacing between construction joints shall be as follows:
 - Fluid filled Tank - Walls: 50 ft on-center maximum parallel spacing
 - Fluid filled Tank - Slabs: 50 ft on-center maximum parallel spacing

EXCAVATION, TRENCHING AND SHORING:

- Contractor is responsible for designing and constructing all temporary excavations.
- All excavations shall be sloped or shored in accordance with OSHA Standard on Excavations 29 CFR 1926 Subpart P and the Geotechnical Report referenced above. Excavations more than 20 feet deep or that encounter groundwater must be shored.
- System of shored excavations is to be selected by Contractor. Contractor must be trained, experienced and knowledgeable of the system to be installed and system must be appropriate for conditions encountered in this project.
- Shored excavations shall be designed by a professional engineer registered in the State of Colorado using applicable soil or vehicle surcharge loads listed above. All details and calculations shall be submitted to the engineer of record for approval before any work begins.

TANK TESTING:

- After concrete has been cured and all joints sealed (RE: detail 3/S1). The tanks shall be filled & tested one at a time. If the contractor wishes to test multiple tanks concurrently, then they shall be non-adjacent tanks, followed by the remaining tank(s). Testing shall consist of filling the tank(s) to the overflow level and allowing them to stand for at least 24 hours.
- Test A shall be a level measurement taken after the initial 24 hours, again at 48 hours, and a last measurement at 72 hours. If the level has dropped less than 0.2" during this time, the tank(s) will have passed Test A. Allowance shall be made for effects of evaporation.
- Test B is a visual inspection of the dry side of the walls. All exposed wall surfaces, inside and out, shall be inspected. If damp spots (areas where moisture can be picked up on a dry hand) are observed, they shall be repaired with a product approved by the engineer. If no damp spots are observed within the 72 hour period, the tank(s) will have passed Test B.

STRUCTURAL SPECIAL INSPECTION

- Owner will employ a qualified Special Inspector in accordance with the requirements of Chapter 17 of the IBC. The Special Inspector shall keep records of inspections, and provide copies to the Engineer and Building Official as requested. The Engineer of Record will submit a statement of special inspections, summarized as listed in this section.
- Concrete Construction shall be inspected in accordance with IBC Table 1704.4, noting the following verification and inspection requirements:
 - There is no on-site prestressing or post-tensioning of structural elements
 - There is no shotcrete placement specified by the Engineer

GENERAL REQUIREMENTS:

- Structural erection and bracing: The structural drawings illustrate the completed structure with all elements in their final positions supported and braced. The contractor, in the proper sequence, shall provide shoring and bracing as may be required during construction to achieve the final completed structure. Contact engineer for consultation (not in contract) as required.
- Shop drawings: Submit shop and erection drawings for all precast, structural steel, structural aluminum, miscellaneous steel, steel joists and girders, steel deck, masonry reinforcing steel, engineer to review prior to fabrication. This review is for general compliance with the intent of the structural design. The manufacturing or fabrication of any items prior to written review of the shop drawings will be at the risk of the contractor. The contractor is responsible for checking quantities, dimensions and coordination with other trades.
- Dimensions: Dimensions are to edge of framing or concrete, unless noted otherwise. Masonry dimensions are nominal. All dimensions on drawings shall be field verified. All discrepancies shall be brought to the attention of the Engineer and Owner prior to construction. Do not scale drawings.
- Construction practices: The general contractor is responsible for means, methods, techniques, sequences and procedures for construction of this project. Notify structural engineer of omissions or conflicts between the working drawings and existing conditions.
- Coordinate requirements for mechanical/electrical/plumbing penetrations through structural elements with structural engineer. Prior to installation of such equipment or other items to be attached to the structure, the contractor shall obtain approval for connections and support. Contractor shall furnish required hangers, connections, etc. required for installation of such items, unless specifically noted on plans.
- Jobsite safety is the sole responsibility of the contractor. All methods used for construction shall be in accordance with the 2006 IBC.
- The structural engineer may make periodic observation visits to the jobsite for determination of general conformance with the construction documents. Such observation visits shall not replace required inspections by the governing authorities or serve as "special inspections" as may be required by Section 17 of the International Building Code.
- Though every effort has been made to provide a complete and clear set of construction documents, discrepancies or omissions may occur. Release of these drawings anticipates cooperation and continued communication between the contractor, architect and engineer to provide the best possible structure. These drawings have been prepared for the use of a qualified contractor experienced in the construction techniques and systems depicted.

ABBREVIATIONS

| | | | | | |
|--------|-----------------------|--------|------------------------|--------|------------------------|
| AB | ANCHOR BOLT | FDN | FOUNDATION | SO | SQUARE |
| AFF | ABOVE FINISHED FLOOR | FF | FINISHED FLOOR | SS | STAINLESS STEEL |
| ARCH | ARCHITECT | FRP | FIBER REINFORCED PANEL | STD | STANDARD |
| B | BOTTOM OF | FT | FOOTING | STL | STEEL |
| BF | BOTTOM OF FOOTING | H.A.S. | HEADED ANCHOR STUD | T | TOP OF |
| BLDG | BUILDING | HORIZ | HORIZONTAL | T&B | TOP AND BOTTOM |
| BM | BEAM | HT | HEAVY TIMBER | T.O.W. | TOP OF WALL |
| BRC | BEARING | INT | INTERIOR | TP | TYPICAL |
| BW | BOTTOM OF WALL | JOINT | JOINT | U.N.O. | UNLESS NOTED OTHERWISE |
| C.I.P. | CAST IN PLACE | MANUF | MANUFACTURER | VERT | VERTICAL |
| CL | CONTROL JOINT | MAX | MAXIMUM | V.I.F. | VERIFY IN FIELD |
| CLR | CLEAR | MIN | MINIMUM | | |
| CMU | CONCRETE MASONRY UNIT | O.A.E. | OR APPROVED EQUAL | | |
| CONC | CONCRETE | O.C. | ON CENTER | | |
| CONT | CONTINUOUS | O.H. | OVERHANG | | |
| (S) | EXISTING | PLY | PLYWOOD | | |
| EA | EACH | PT | PRESSURE TREATED | | |
| E.O. | EDGE OF | REF | REFERENCE | | |
| E.S. | EACH SIDE | REINF | REINFORCEMENT | | |
| EXP | EXPANSION | R.O. | ROUGH OPENING | | |
| EXT | EXTERIOR | SF | SQUARE FEET | | |
| FD | FLOOR DRAIN | SIM | SIMILAR | | |

SYMBOLS LEGEND

| | | | |
|--|----------------------|--|--------------------------|
| | REVISION MARK | | BEAM POCKET |
| | ELEVATION MARK | | BEAM HANGING |
| | SECTION CUT LABEL | | BEARING, JOIST OR RAFTER |
| | ELEVATION VIEW LABEL | | COLUMN ABOVE |
| | GRID LINE | | TOP OF COLUMN |
| | | | WALL STEP |
| | | | FOOTING STEP |
| | | | PLYWOOD/SLAB STEP |

MATERIALS LEGEND

| | |
|--|------------------------|
| | CAST IN PLACE CONCRETE |
| | CONCRETE MASONRY UNIT |
| | CLAY MASONRY / BRICK |
| | STEEL |
| | DIMENSIONED LUMBER |
| | BLOCKING |
| | PLYWOOD |
| | NATIVE SOIL |
| | COMPACTED SOIL |
| | GRAVEL |

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Record Set

118 West Sixth Street, Suite 200
Glenwood Springs, CO 81601
970.945.1004 www.sgm-inc.com

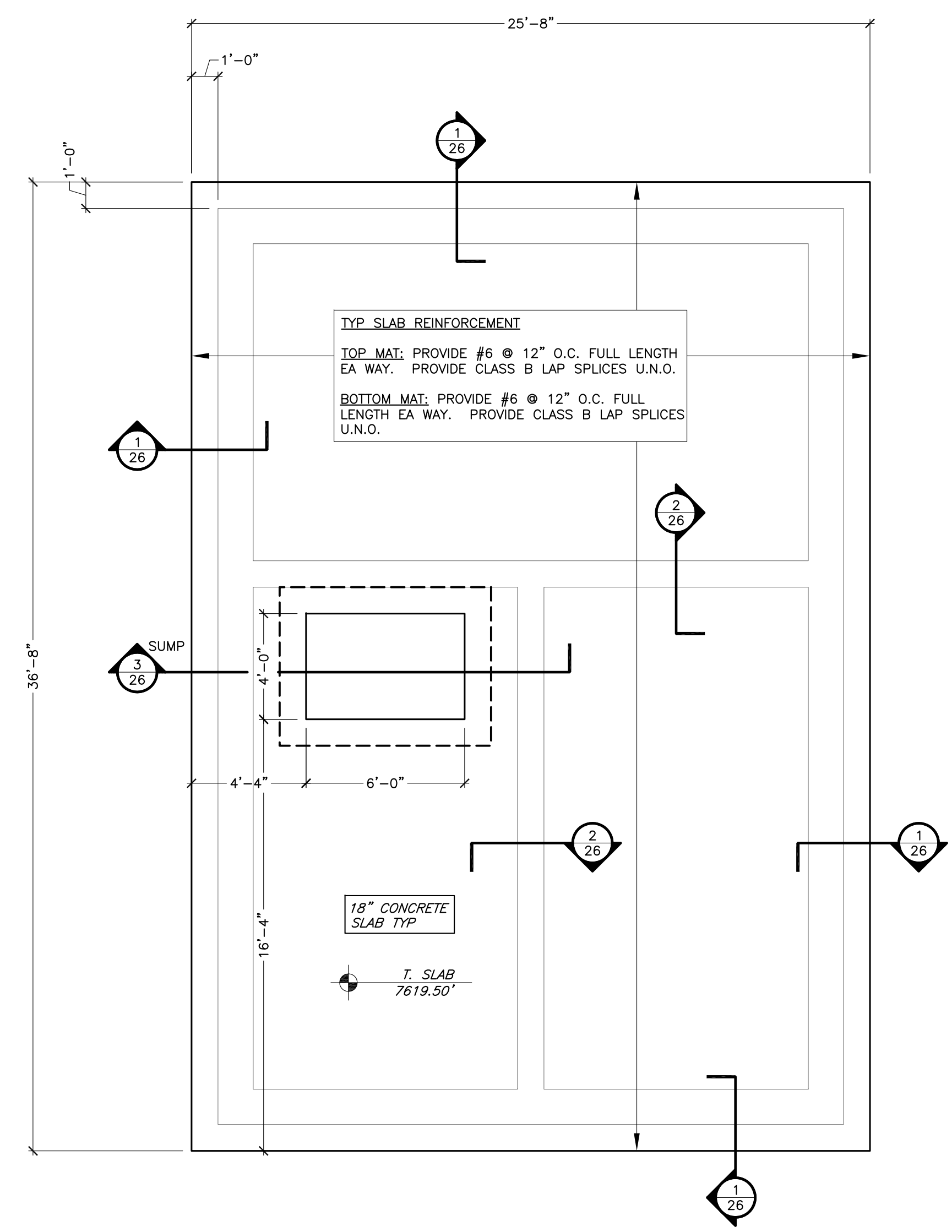
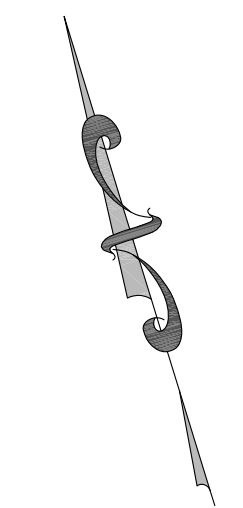
Chateau Chaparral Owners Assoc.
2014 Sewer System Upgrades, Nathrop, CO

| # | Revision | Date | By |
|---|--------------------|---------|-----|
| 1 | PRELIMINARY DESIGN | 12/7/12 | - |
| 2 | FINAL DESIGN SET | 7/12/13 | MAN |
| 3 | FINAL BID SET | 2/3/14 | TH |
| 4 | CONSTRUCTION SET | 10/3/14 | LS |
| 5 | RECORD SET | 10/3/17 | CG |

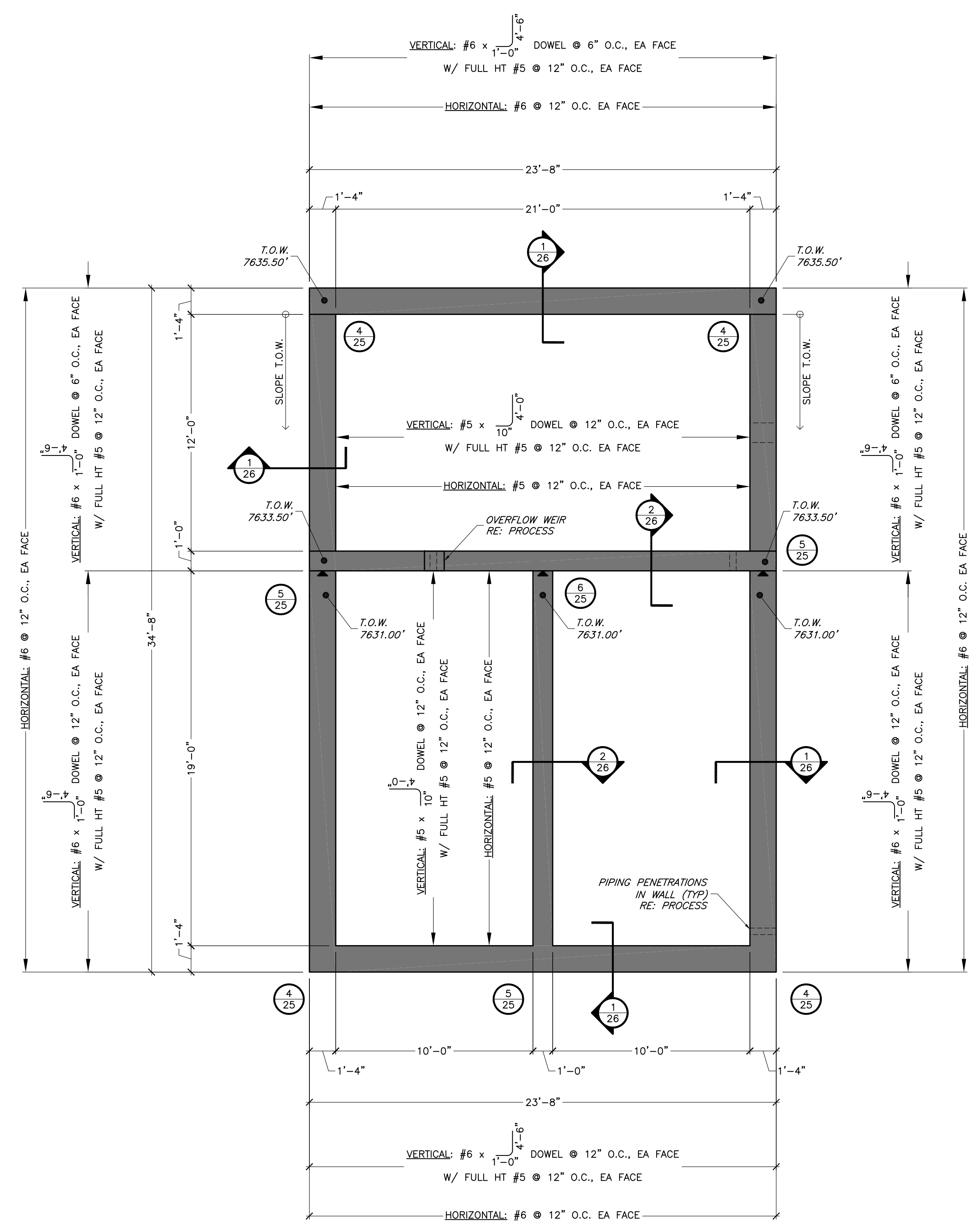
Structural Notes

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| Job No. | 2008-234.003 |
| Drawn by: | MAN |
| Date: | 6/26/2013 |
| QC: | - PE: MAN |
| File: | ChateauChap_struct-RecSet |

23
28



1 SLAB PLAN
 24 SCALE: 1/4" = 1'-0"

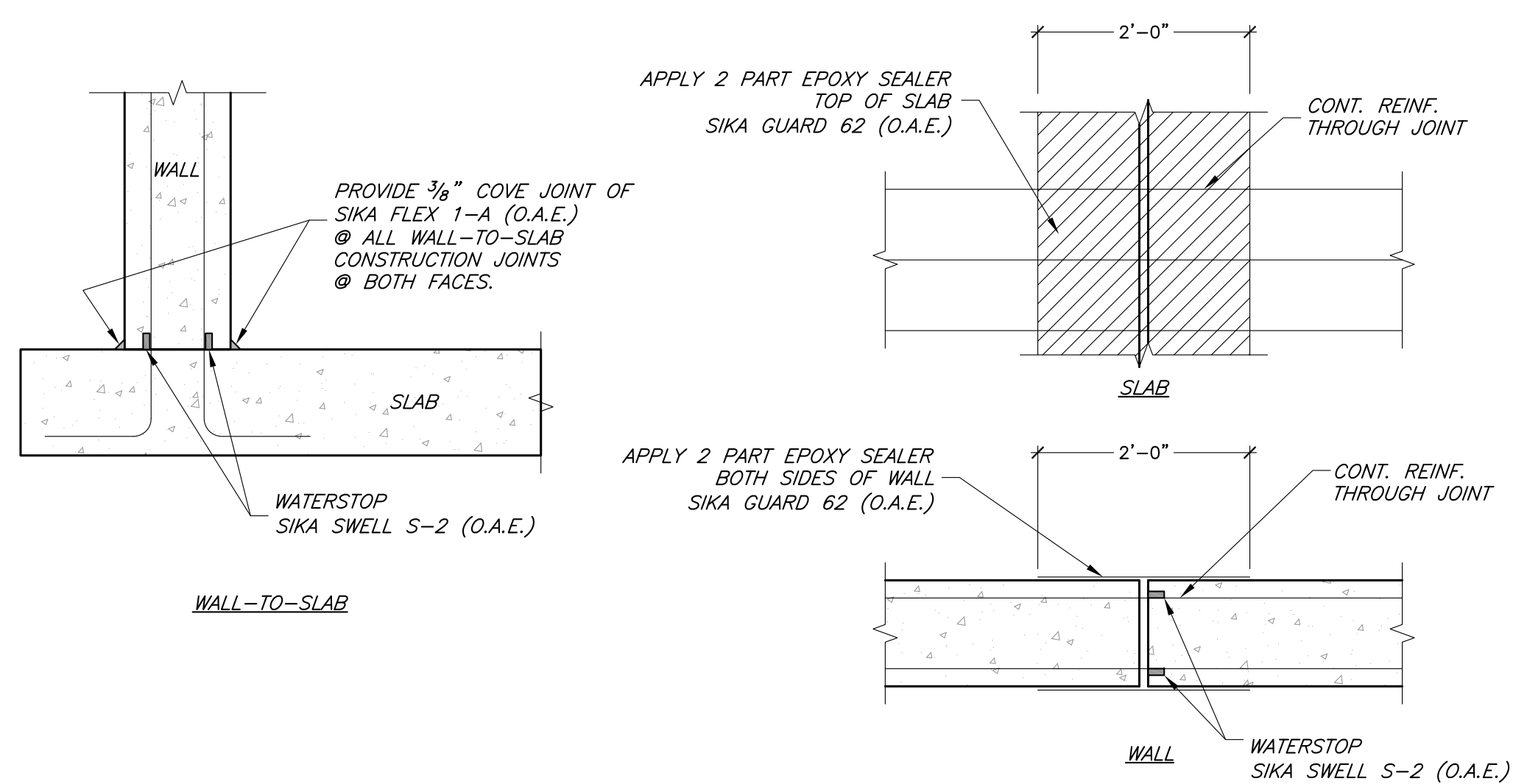


2 WALL PLAN
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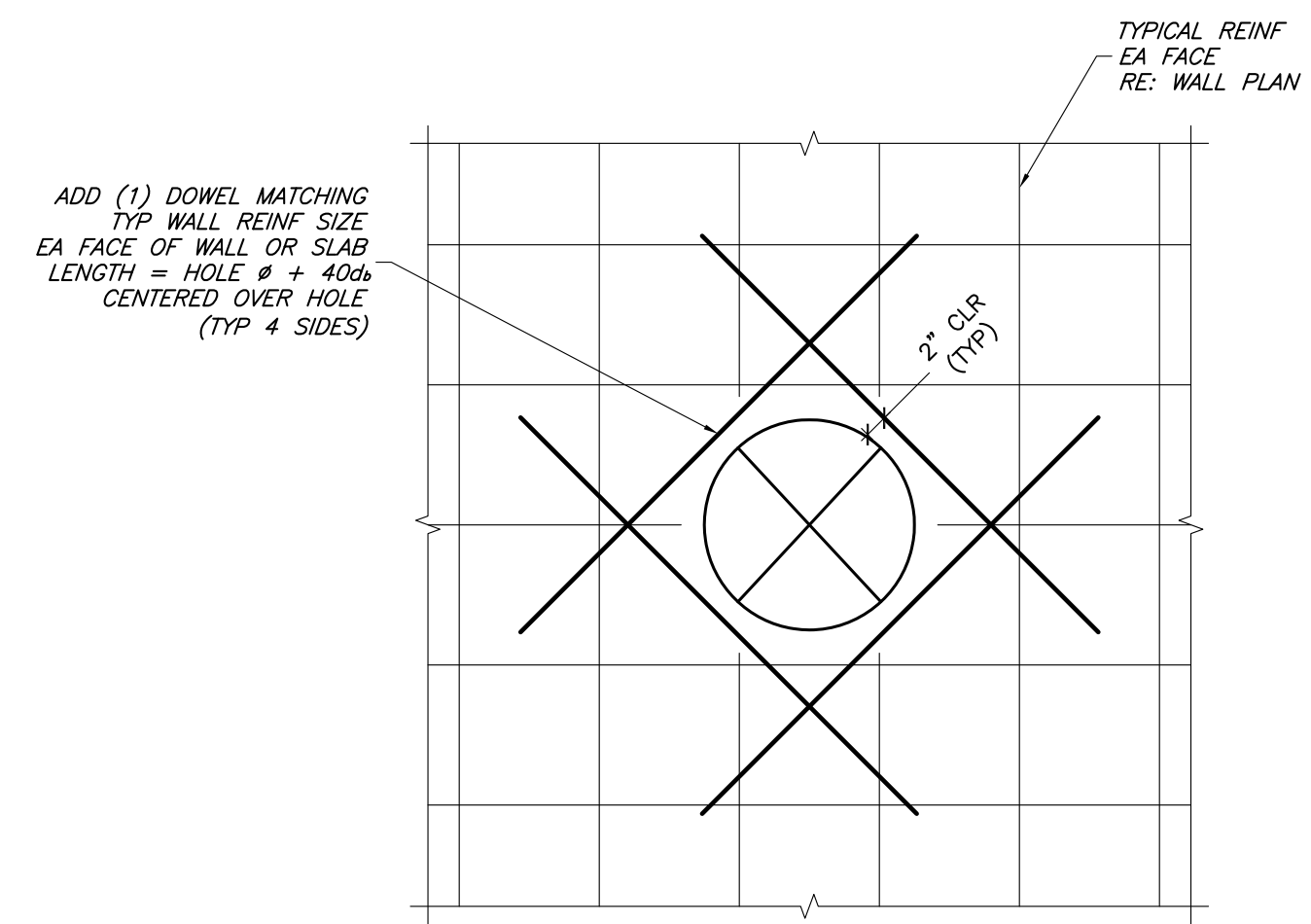
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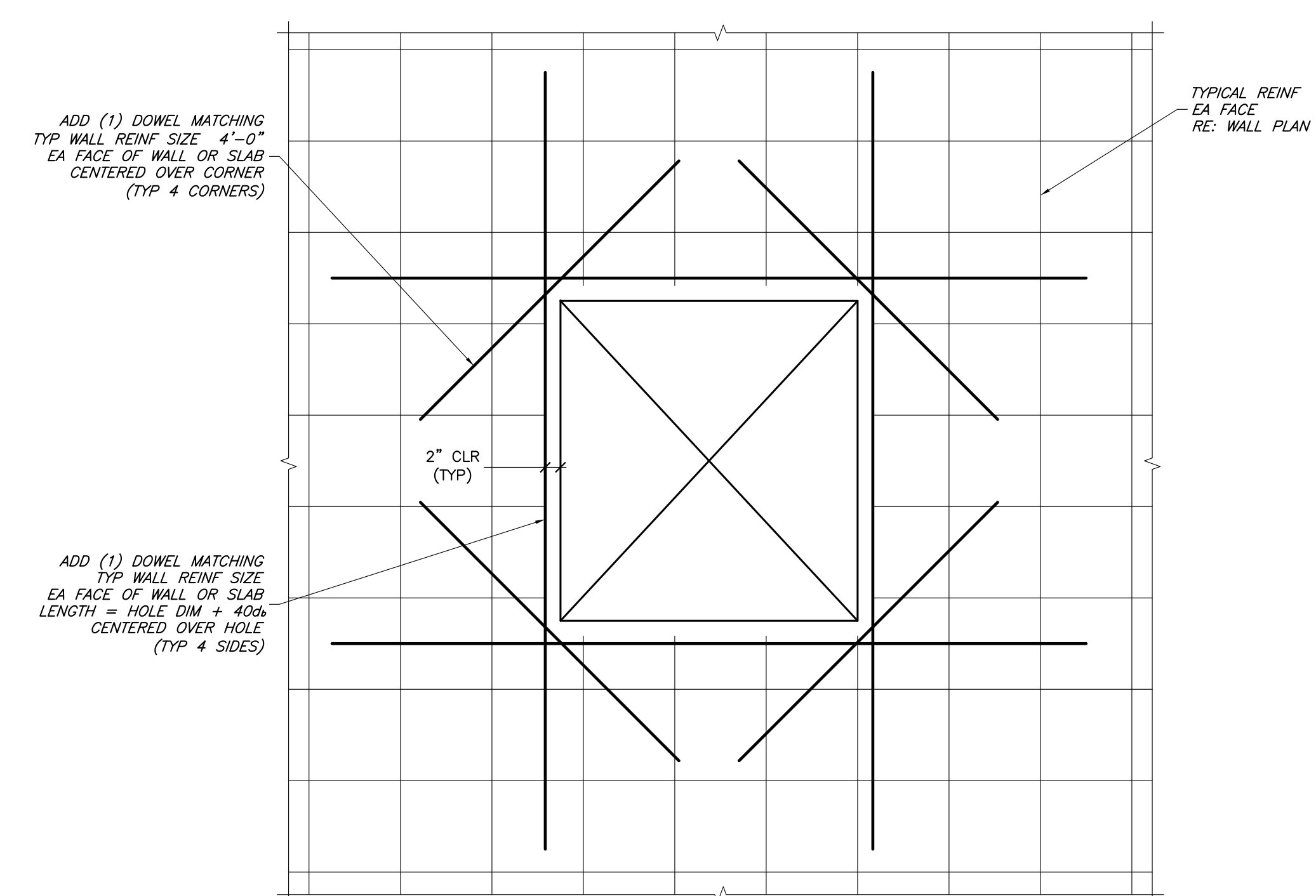
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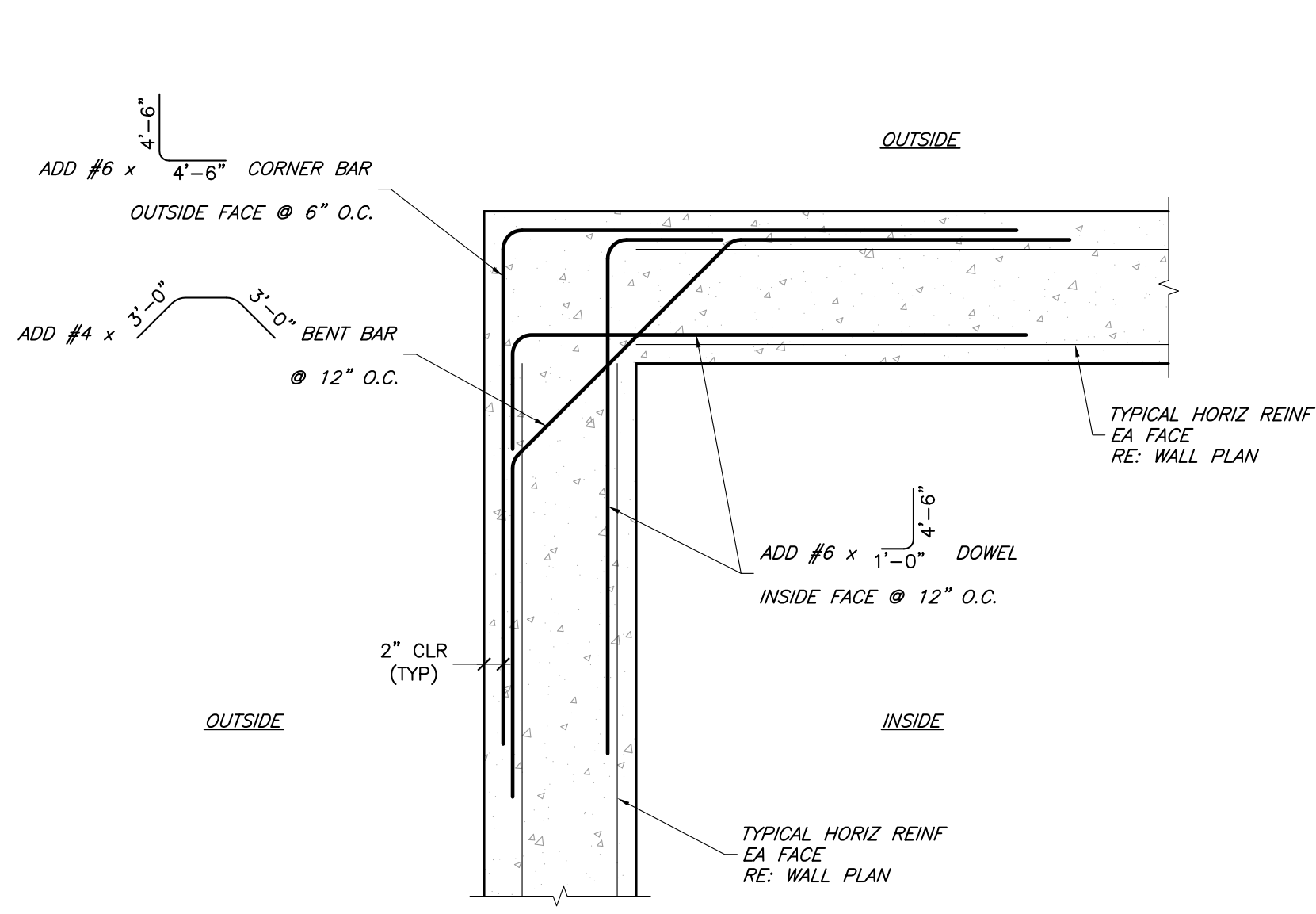
1 CONSTRUCTION JOINT DETAILS
SCALE: 3/4" = 1'-0"



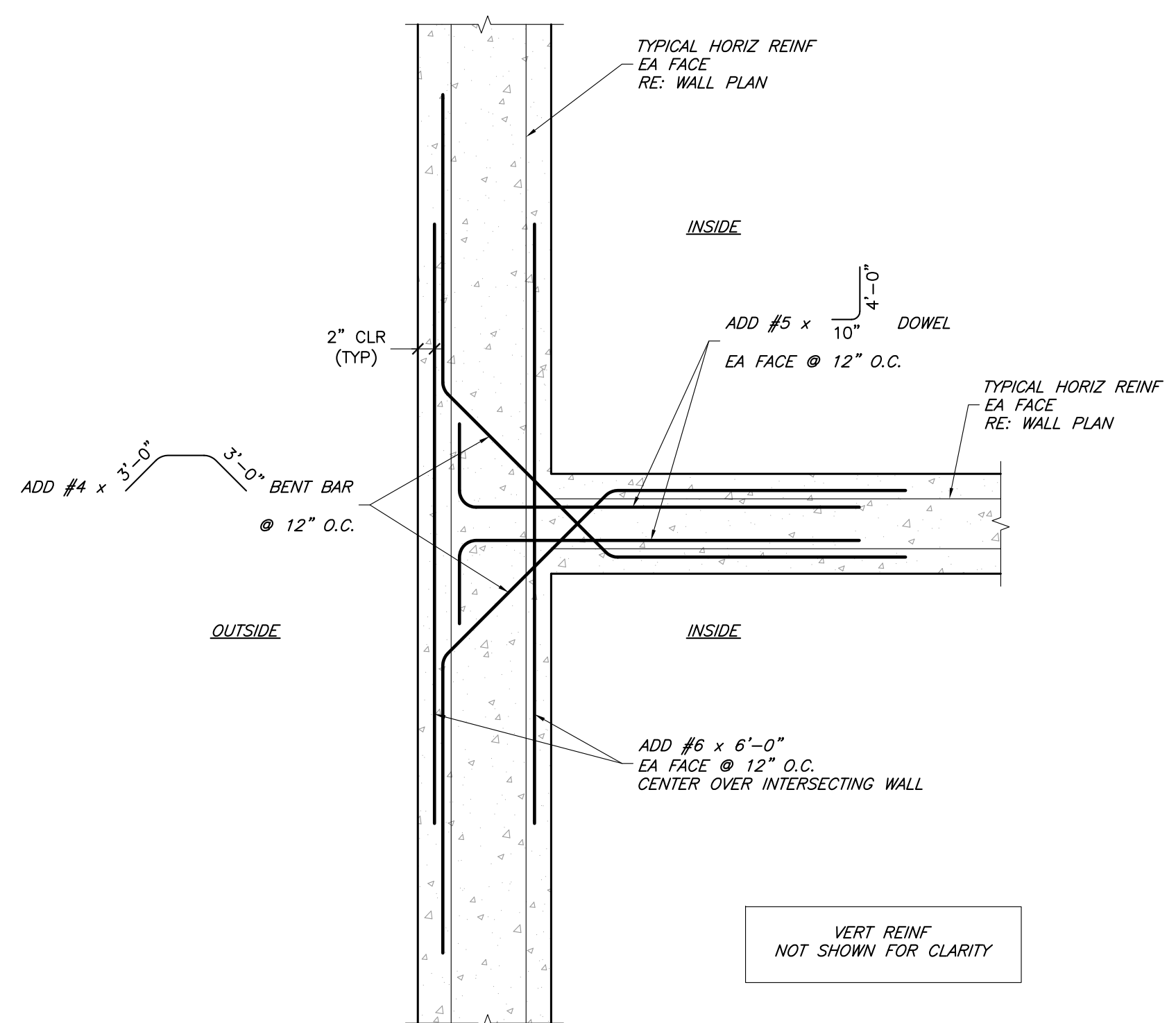
2 CIRCULAR WALL OR SLAB PENETRATION 10" Ø OR LARGER REINFORCEMENT DETAIL
SCALE: 3/4" = 1'-0"



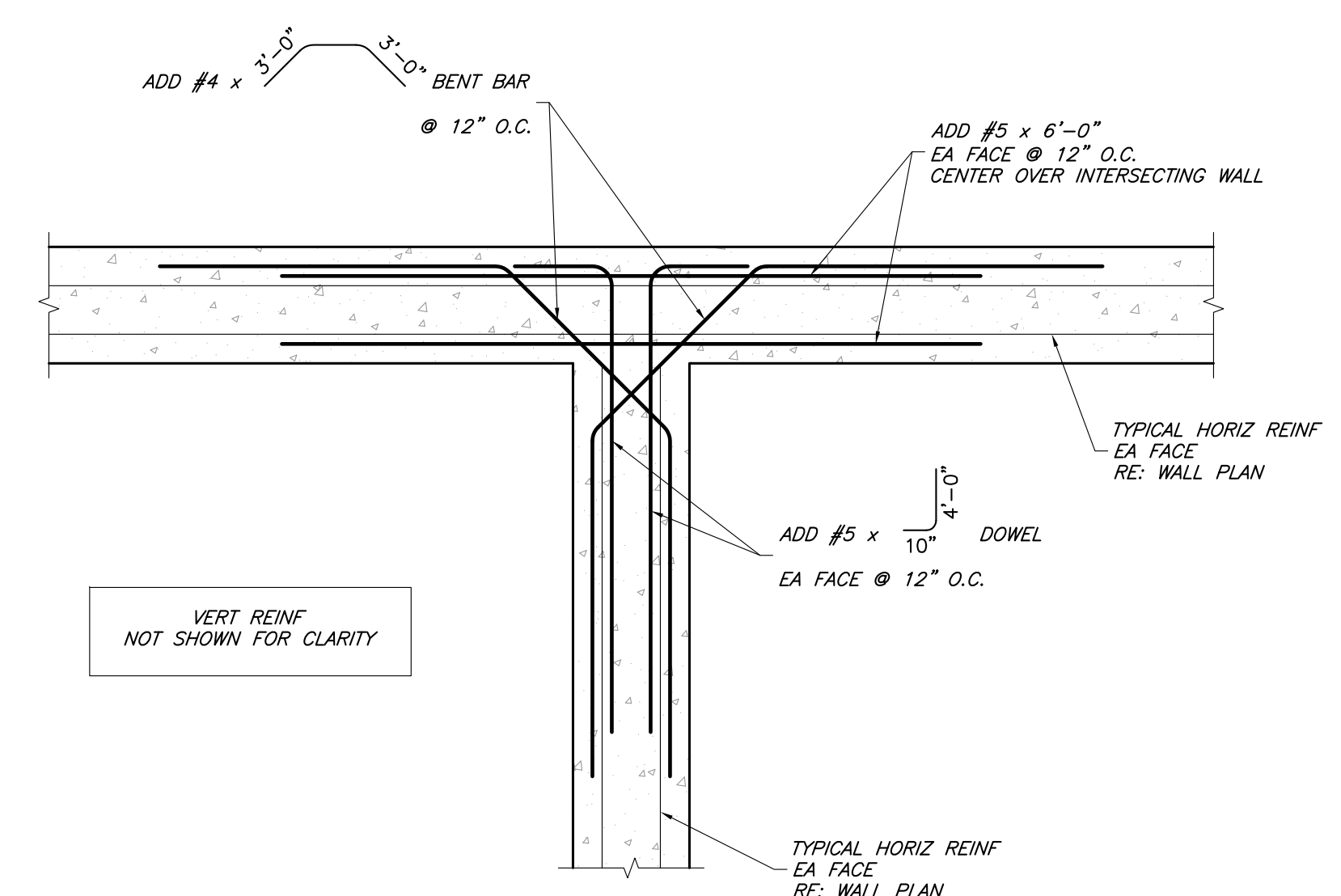
3 RECTANGULAR WALL OR SLAB PENETRATION 10" x 10" OR LARGER REINFORCEMENT DETAIL
SCALE: 3/4" = 1'-0"



4 CORNER REINFORCEMENT DETAIL
SCALE: 3/4" = 1'-0"



5 T-INTERSECTION REINFORCEMENT DETAIL
SCALE: 3/4" = 1'-0"

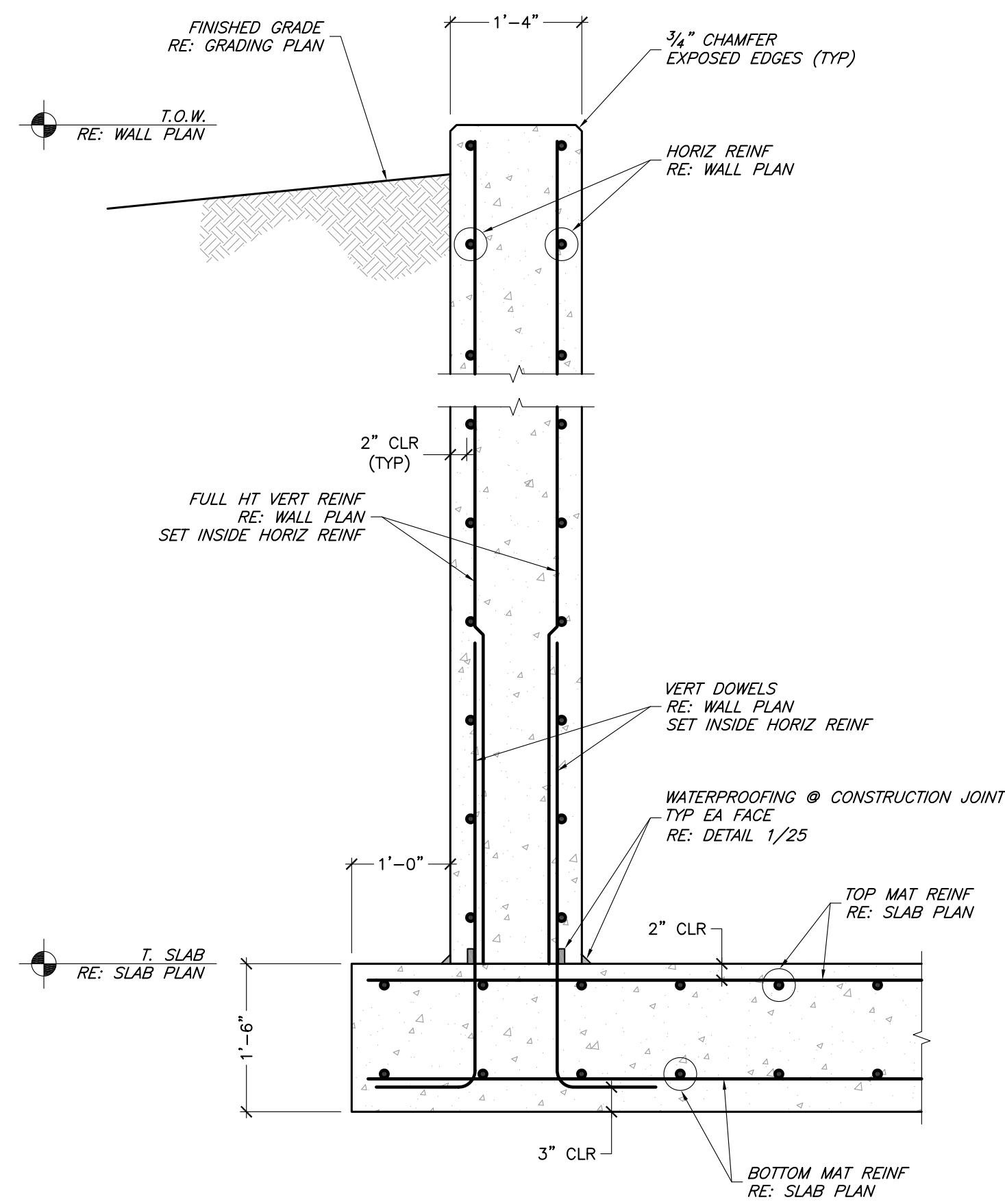


6 T-INTERSECTION REINFORCEMENT DETAIL
SCALE: 3/4" = 1'-0"

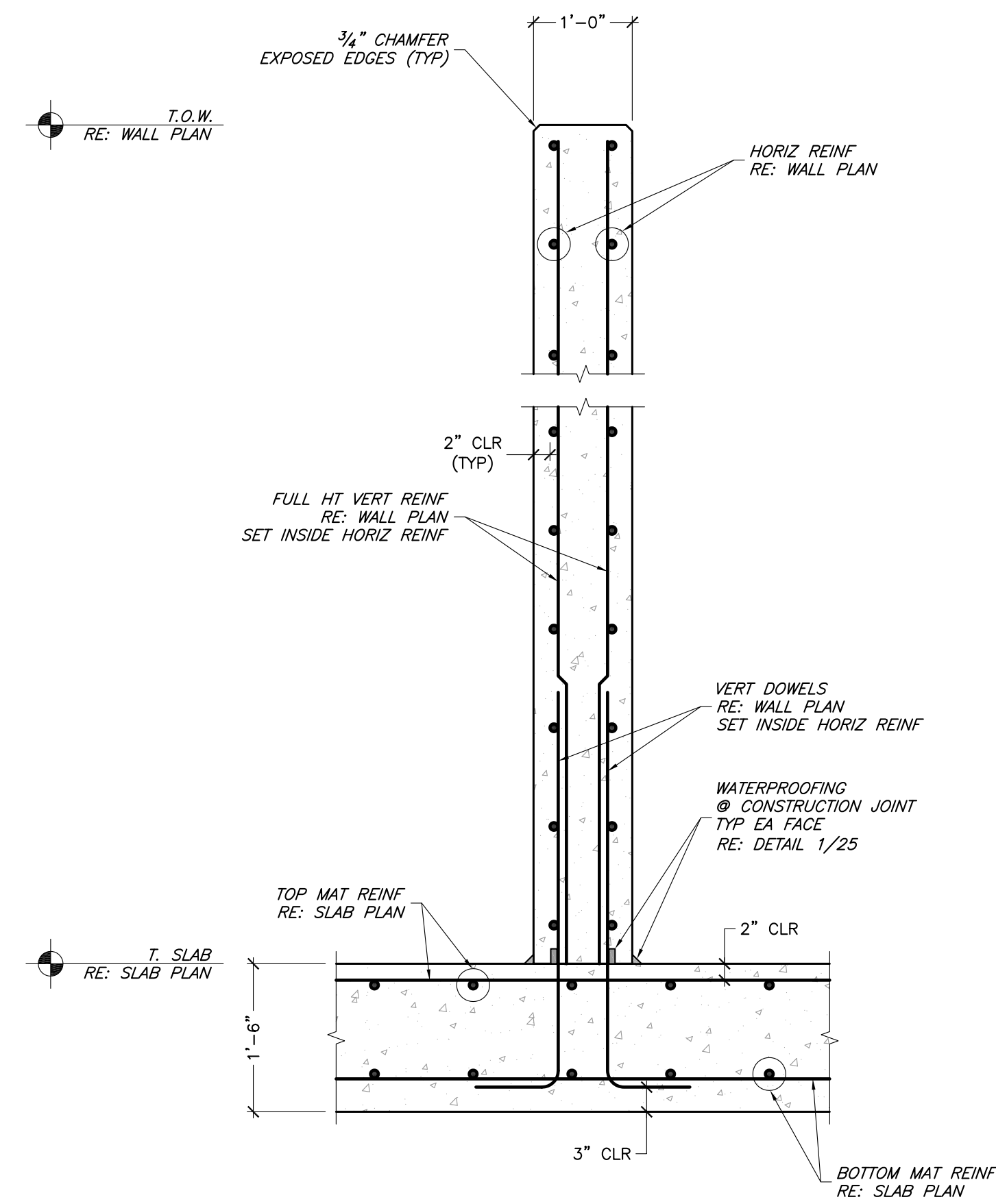
| # | Revision | Date | By |
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| Date: | 6/26/2013 |
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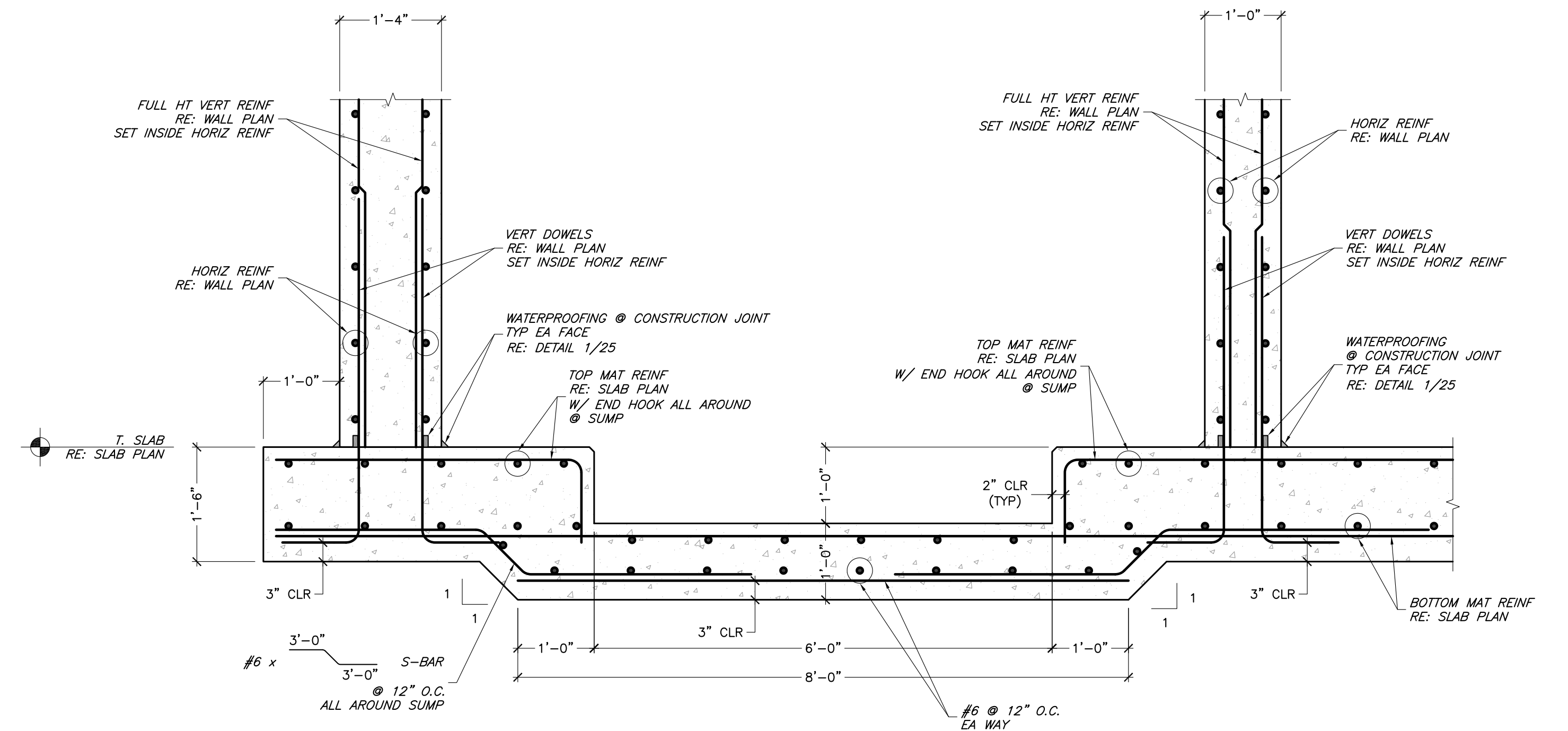
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1
26 EXTERIOR WALL SECTION
SCALE: 3/4" = 1'-0"



2
26 INTERIOR WALL SECTION
SCALE: 3/4" = 1'-0"



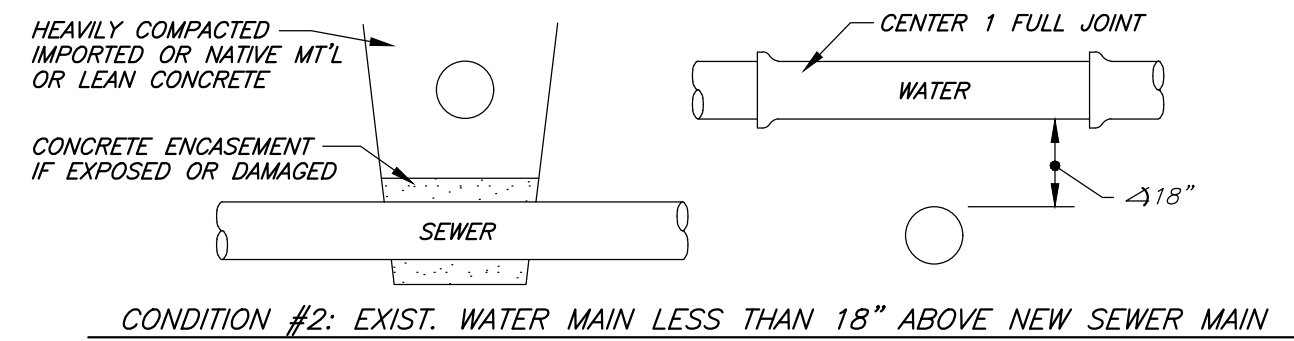
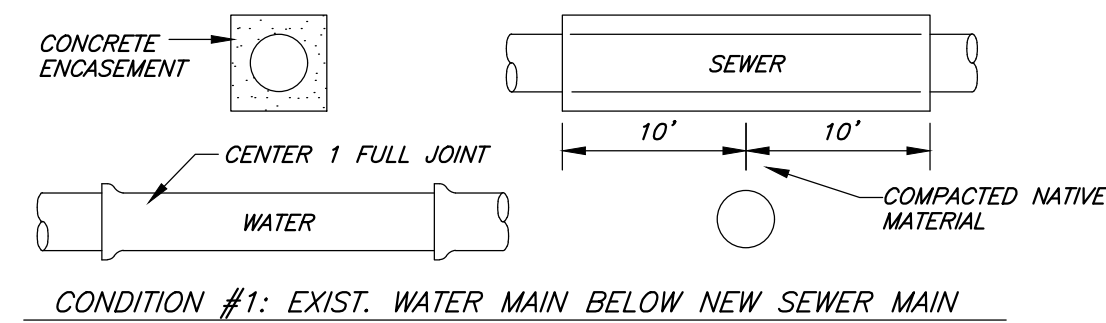
3
26 WALL SECTION @ SUMP
SCALE: 3/4" = 1'-0"

| # | Revision | Date | By |
|---|--------------------|---------|-----|
| 1 | PRELIMINARY DESIGN | 12/7/12 | - |
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| Date: | 6/26/2013 |
| QC: | PE: MAN |
| File: | ChateauChap_structRecSet |

GENERAL SEWER NOTES:

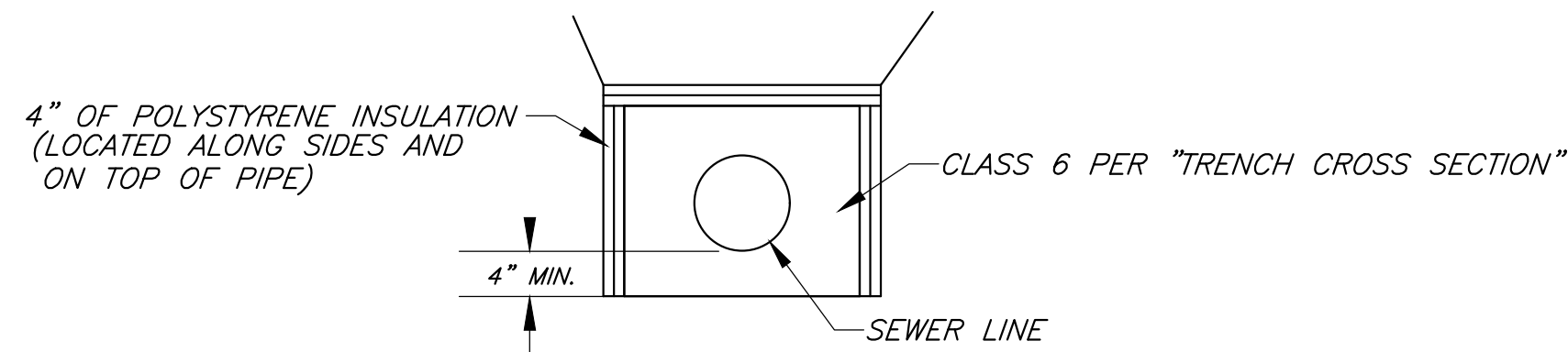
- 1) THE APPROXIMATE LOCATION OF ALL KNOWN UTILITIES (WATER, SEWER, GAS, PHONE, ELECTRIC, CABLE, ETC.) ARE SHOWN ON THE DRAWINGS. THE CONTRACTOR SHALL CONTACT ALL UTILITY OWNERS TO VERIFY BOTH LOCATION AND DEPTH OF UTILITIES BEFORE ANY WORK BEGINS. CONTRACTOR SHALL BEAR THE RESPONSIBILITY FOR THE PROTECTION OF UTILITIES DURING CONSTRUCTION. NO ADDITIONAL PAYMENT WILL BE MADE FOR UTILITIES LOCATED BUT NOT SHOWN IN DRAWINGS.
- 2) FOLLOW ALL CDH (COLORADO DEPARTMENT OF HEALTH) REGULATIONS FOR WATER AND SEWER LINE CROSSINGS.
- 3) THE CONTRACTOR WILL BE RESPONSIBLE FOR RESTORING ANY DISTURBED AREAS IN ACCORDANCE WITH SPECIFICATIONS.
- 4) FINISH ENDS OF ALL SEWER SERVICE LINES NOT CONNECTED TO EXISTING SERVICE LINES WITH CAPPED CLEAN-OUT.
- 5) CONTRACTOR TO VERIFY THE GRADE OF ALL EXISTING SEWER LINES BEFORE INSTALLING ANY PIPE TO VERIFY INVERT ELEVATIONS. CONTACT ENGINEER WITH ANY DIFFERENCES IN ELEVATIONS SO THAT GRADES CAN BE ADJUSTED.
- 6) CONTRACTOR SHALL POTHOLE ALL MISCELLANEOUS UTILITIES THAT WILL CROSS OR PARALLEL THE LINE PRIOR TO INSTALLING NEW LINE. IF GRADE CONFLICTS OCCUR, CONTACT ENGINEER SO THAT GRADES CAN BE ADJUSTED.
- 7) PLAN VIEW DISTANCE BETWEEN MANHOLES IS CENTERLINE TO CENTERLINE OF MANHOLES. PROFILE DISTANCE AND SLOPE BETWEEN MANHOLES IS FROM INVERT OUT TO INVERT IN OF MANHOLES (CL. TO CL. MANHOLE DISTANCE MINUS 1/2 INSIDE DIAMETER OF EACH MANHOLE).
- 8) THE SEWER MANHOLES SHOWN IN PLAN VIEW INDICATE THE LOCATION OF THE STEPS WITHIN THE MANHOLE AND MANHOLE RIM LOCATION BY A BLACKENED CIRCLE. THIS WILL BE THE REQUIRED LOCATION FOR EACH MANHOLE SHOWN. EXISTING MANHOLES SHALL BE REMOVED AND HOLE FILLED BACK IN.
- 9) ALL KNOWN SERVICES WHICH TIE INTO THE EXISTING MAIN ARE SHOWN. ANY SERVICE WHICH IS NOT SHOWN BUT TIES INTO MAIN SHALL BE REPLACED AND TIED INTO NEW MAIN.
- 10) REPLACE ALL DISTURBED ASPHALT WITH 2" ASPHALT AND 6" CL. 6 BASE COURSE. ALL ASPHALT WORK SHALL BE PERFORMED WITH A LAYDOWN MACHINE.



1) EXACT LOCATION, PIPE SIZE, PIPE TYPE OF EXISTING WATER MAIN IS UNKNOWN. DETAIL SHALL BE USED AT ALL CROSSINGS OR LESS THAN 18" FOUND LOCATIONS

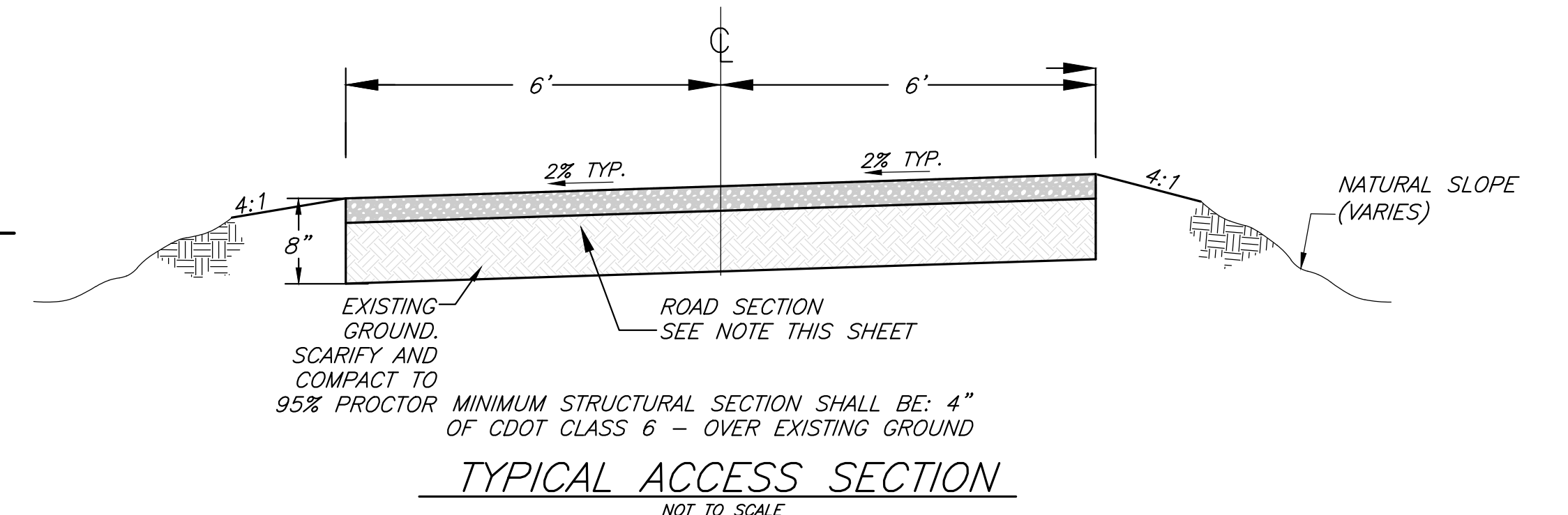
WATER / SEWER CROSSING DETAIL

NOT TO SCALE



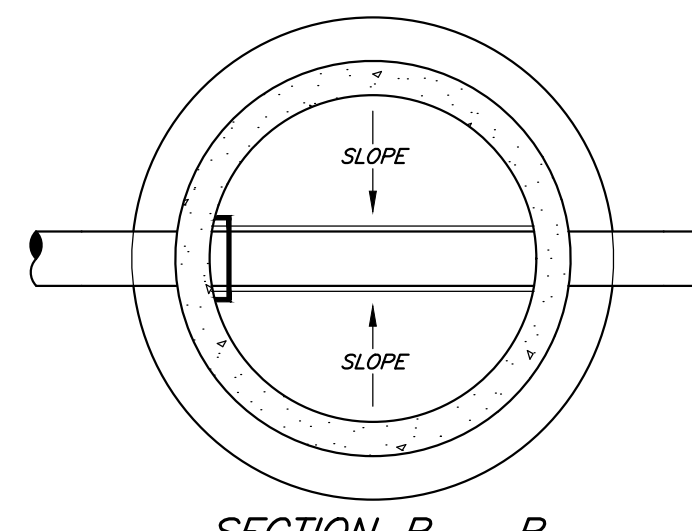
INSULATION SECTION

NO SCALE



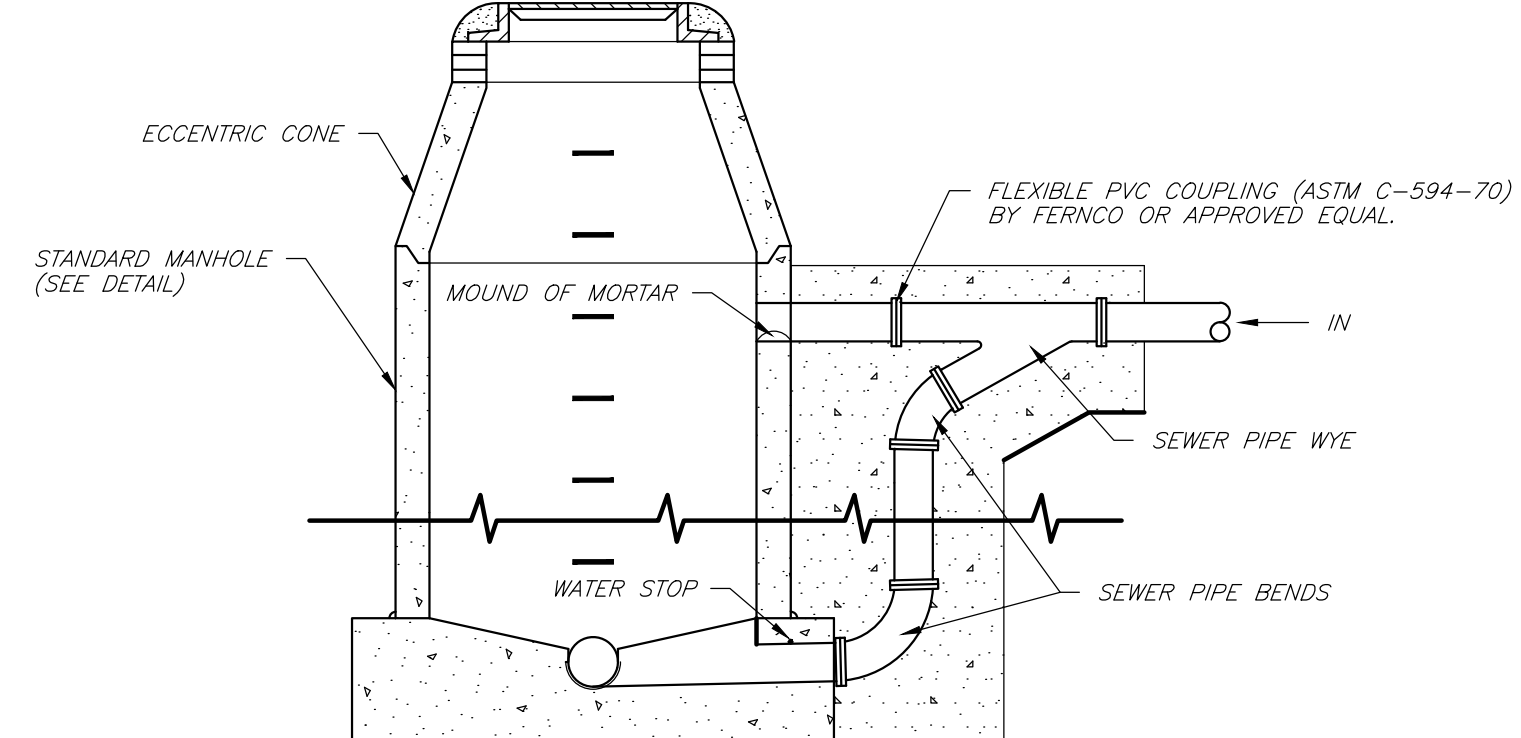
TYPICAL ACCESS SECTION

NOT TO SCALE



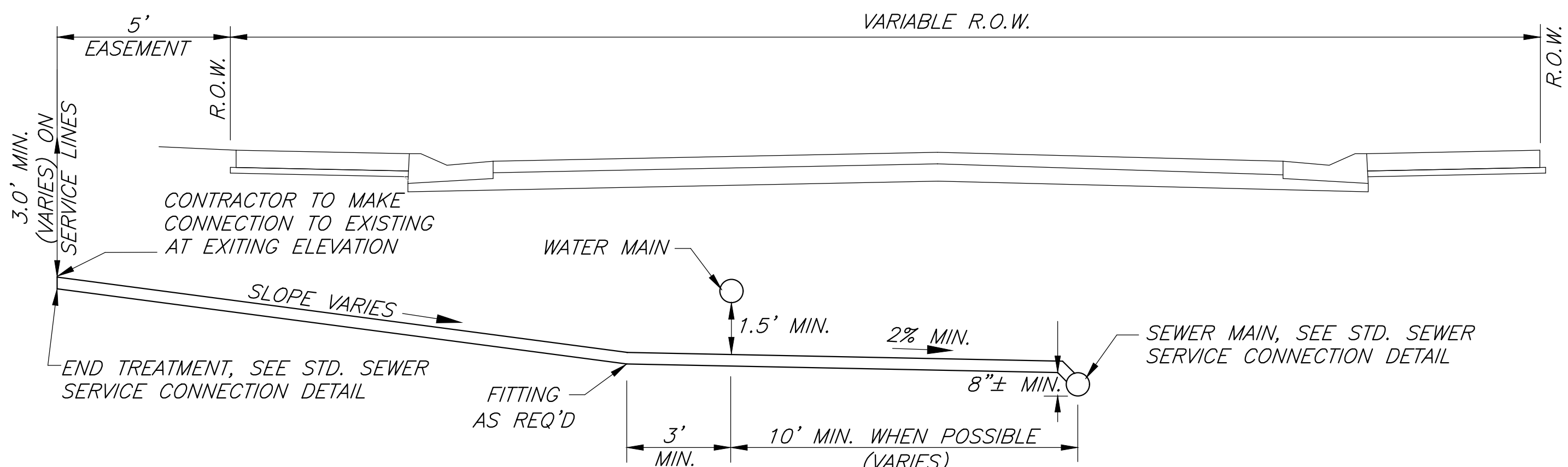
SECTION B - B

- NOTES:**
1. ALL BASES SHALL BE CAST IN PLACE OR PRECAST CONCRETE; USE #4 REBAR ON 12" C-C BOTH WAYS IN POURED BASES.
 2. JOINT TO BE LOCATED ON EACH SIDE OF ALL MANHOLES, MAXIMUM OF 24" FROM INSIDE FACE.
 3. WHERE AVAILABLE FROM PIPE MANUFACTURER, USE EXPANDABLE WATER STOP OR SPECIAL SLEEVE AS PER MANUFACTURER'S SPECIFICATIONS.
 4. STOPS TO BE LOCATED ON SIDE OF BENCH OR OVER UPSTREAM PIPE.
 5. USE PREFORMED GASKET (2 LAYERS) OR GROUT IN PLACE BETWEEN ALL BOTTOM SECTION, BARREL SECTIONS, CONCRETE GRADE RINGS, AND TOP CASTINGS.
 6. BACKFILL WITHIN 24" OF MANHOLE CLASS 6 AGGREGATE OR NATIVE MATERIALS WITH LESS THAN 3" SIZE, COMPACTION TO 95% PER ASTM D698.
 7. PRECAST RINGS OR METAL RISER RING COURSE SHALL BE UTILIZED WHERE REQUIRED WITH 2 COURSES MINIMUM AND 12 COURSES MAXIMUM (2 MINIMUM, 12" MAXIMUM HEIGHT).
 8. GRADE ADJUSTMENT AS FOLLOWS: GREATER THAN, OR EQUAL TO, 1 FOOT, CONCRETE BARREL SECTIONS; LESS THAN 1 FOOT, CONCRETE OR METAL GRADE RINGS.
 9. FINISH GRADE AS FOLLOWS: ASPHALT OR CONCRETE PAVEMENTS 1/4" BELOW GRADE; BASE COURSE SURFACE OR DIRT/TOPSOIL - 3" BELOW GRADE. RING & COVER TO MATCH LONGITUDINAL AND CROSS SLOPE OF PAVEMENT.
 10. CLASS 6 ABC OR EQUAL COMPACTION TO 95% PER ASTM D698

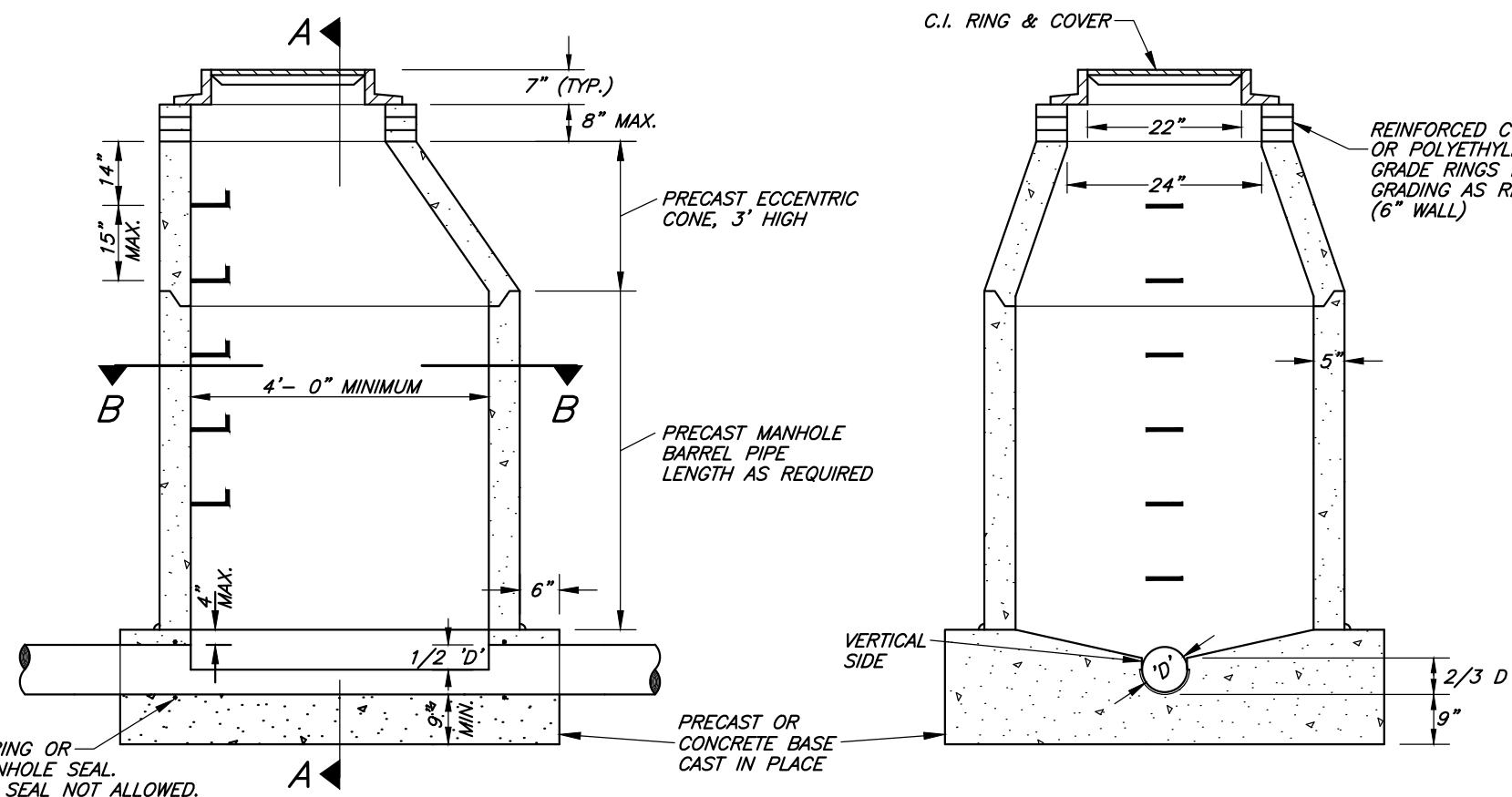


DROP CONNECTION TO STANDARD MANHOLE

NOT TO SCALE

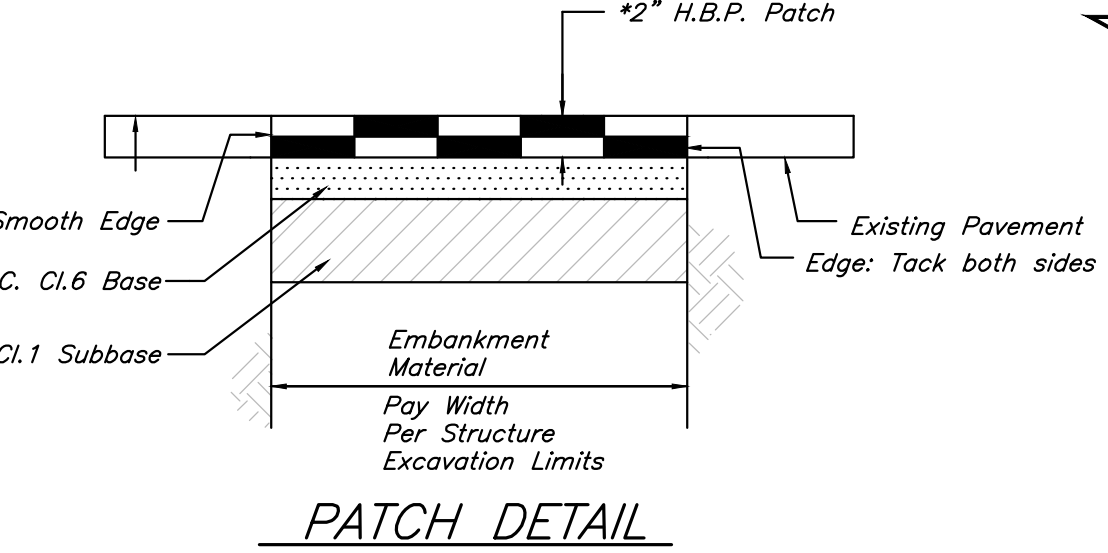
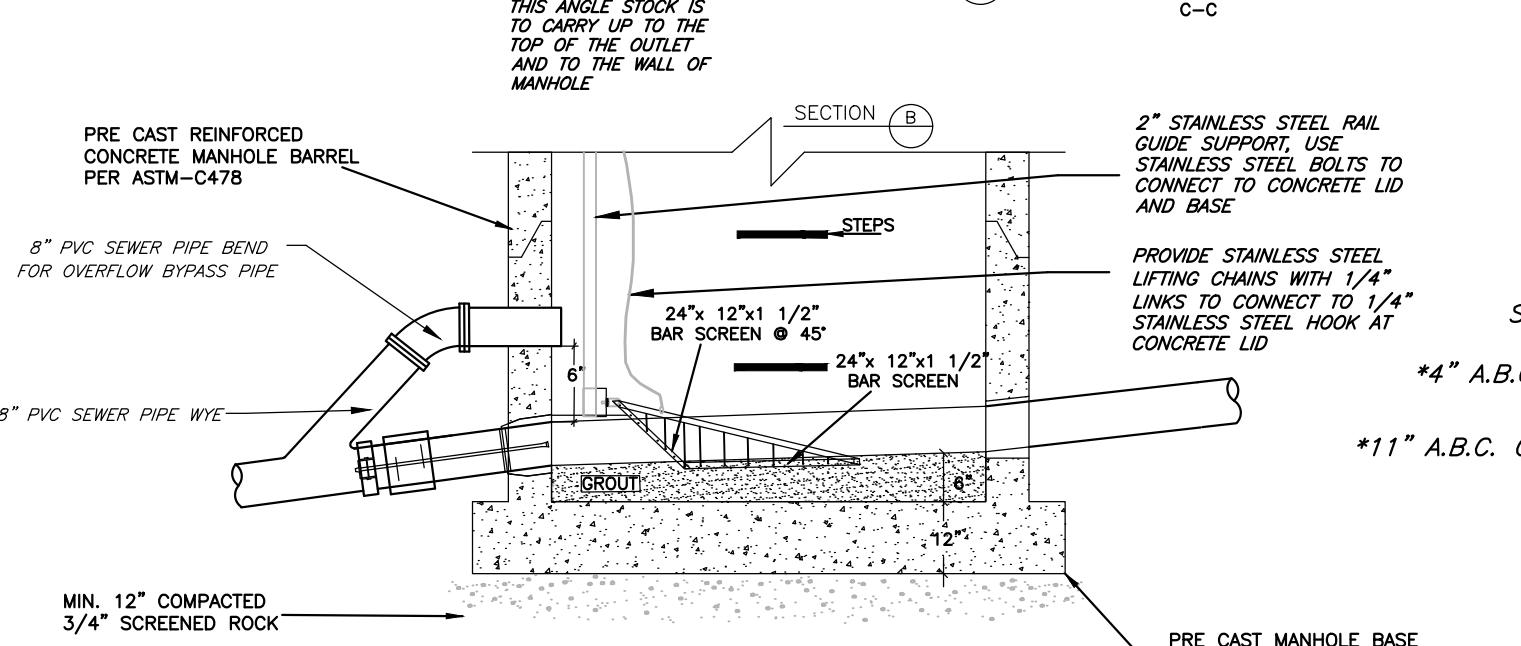
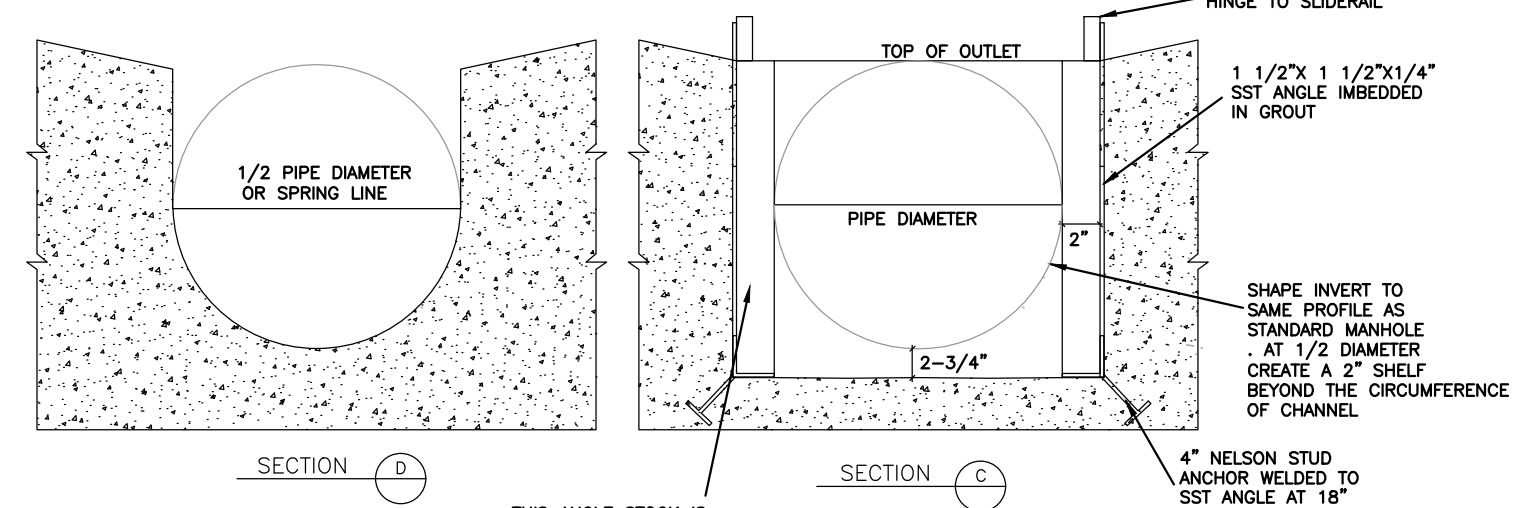


SEWER SERVICE PASSING UNDER WATER MAIN

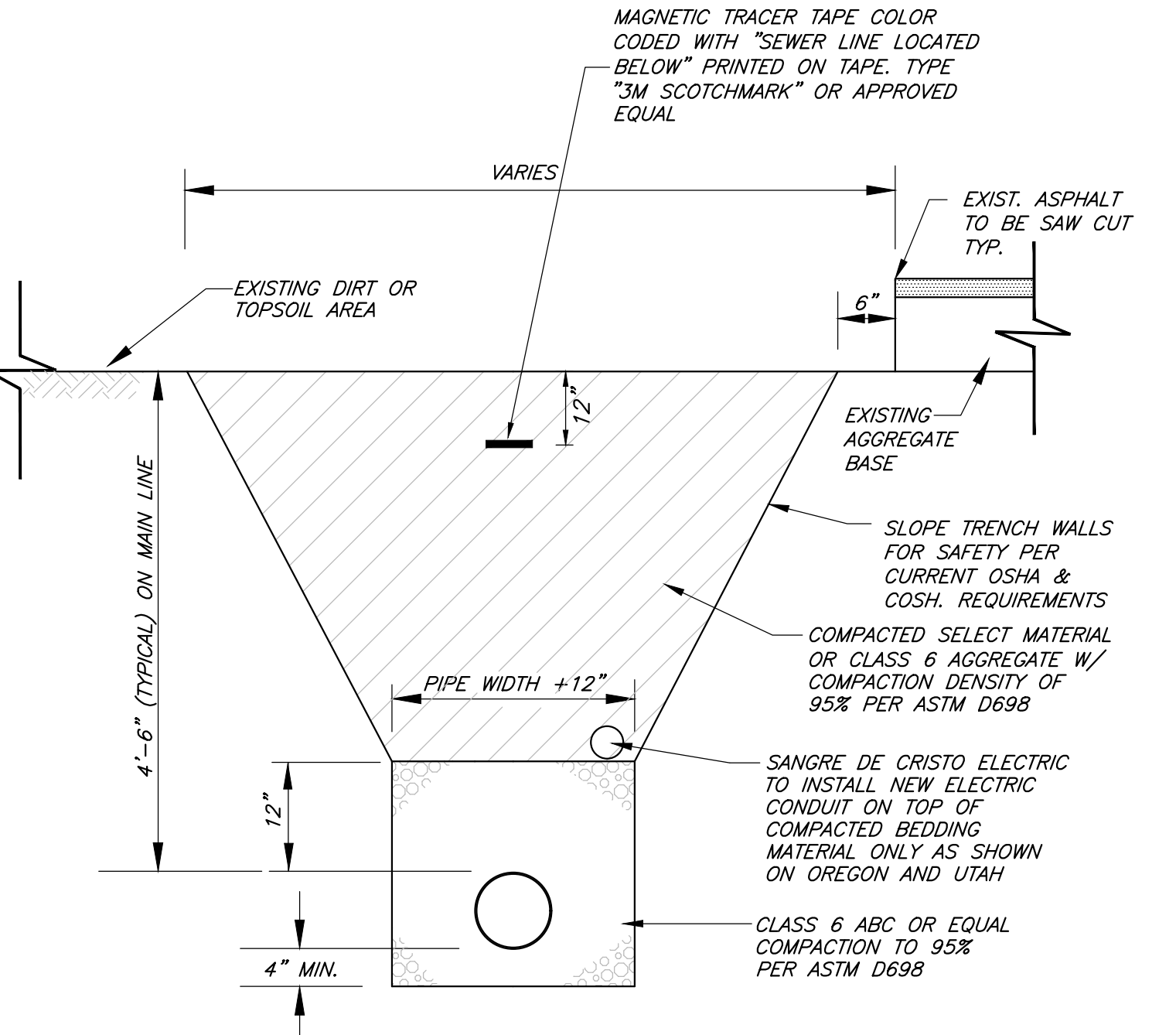


STANDARD MANHOLE DETAIL

NOT TO SCALE



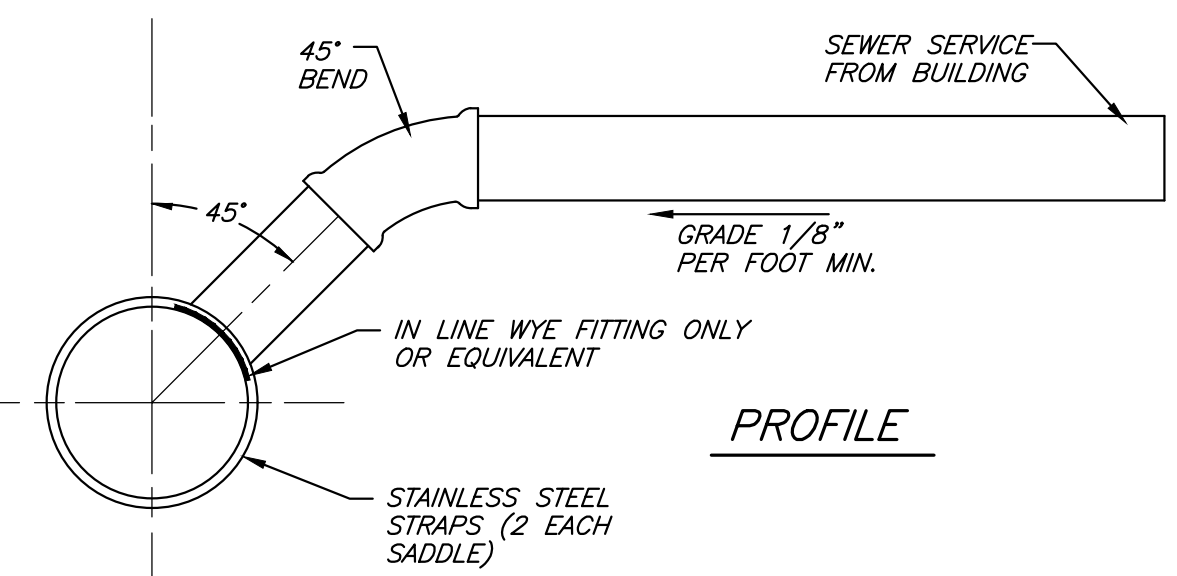
PATCH DETAIL



SEWER TRENCH w/TRACER TAPE CROSS SECTION

SCALE: 3/4" = 1'-0"

- 1) PAVEMENT REPLACEMENT SHALL MEET EXISTING THICKNESS AND KIND WITH THE FOLLOWING MINIMUMS: ASPHALT SURFACING = 3" MIN., AGGREGATE BASE COURSE = 6" MIN.
- 2) BASE COURSE REPLACEMENT SHALL MEET EXISTING THICKNESS WITH THE FOLLOWING MINIMUMS: AGGREGATE BASE COURSE = 6" MIN.
- 3) DIRT / TOPSOIL PLACEMENT SHALL MEET EXISTING THICKNESS AND KIND WITH THE FOLLOWING MINIMUMS: 4" TOPSOIL.
- 4) SELECT MATERIAL AS FOLLOWS: 6" MAXIMUM SIZE IN TOP 12" OF BACKFILL, 12" MAXIMUM SIZE IN REMAINDER OF BACKFILL.

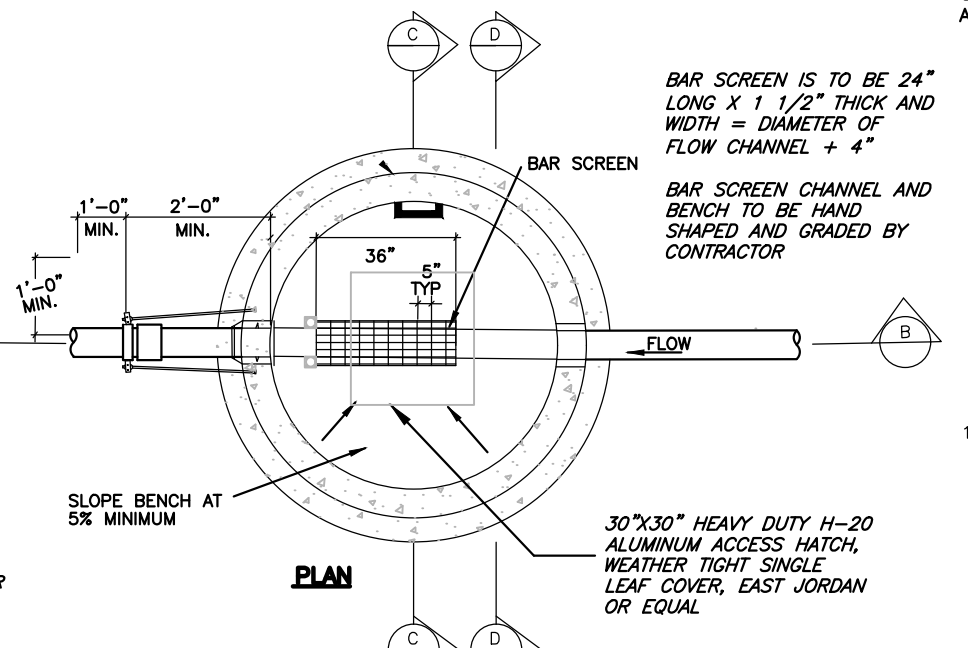


STANDARD SEWER SERVICE CONNECTION DETAIL

NOT TO SCALE

- 1) BACKFILL UNDER WYE TO BE SCREENED ROCK OR CLASS 6 AGGREGATE, 95% COMPACTION DENSITY PER ASTM D-698.
- 2) MINIMUM COVER - 4.5 FEET ON MAIN LIN 3.0 FEET ON SERVICE LINE.
- 3) CONTRACTOR TO VERIFY AND RE-CONNECT IN ALL EXISTING SEWER SERVICES. CONTRACTOR RESPONSIBLE FOR ALL FITTING AND ADAPTATIONS REQUIRED TO FULLY MAKE THE SERVICE LINE CONNECTIONS.

- GENERAL NOTES:**
1. 5" DIAMETER MANHOLES SHALL BE ALLOWED FOR STRAIGHT THROUGH BARSCREENS. SLOPE TO BE 0.25" MIN.
 2. 6" MANHOLES SHALL BE REQUIRED FOR 3-WAY AND/OR CHANGES OF DIRECTION. SLOPE TO BE 0.30" MIN.



BAR SCREEN MANHOLE

NOT TO SCALE

| # | Revision | Date | By |
|---|--------------------|---------|-----|
| 1 | PRELIMINARY DESIGN | 12/7/12 | DK |
| 2 | FINAL DESIGN SET | 7/12/13 | DK |
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| 5 | RECORD SET | 10/3/17 | CG |

Details

| | |
|-----------|--------------------------|
| Job No. | 2008-234.003 |
| Drawn by: | DK |
| Date: | 12/12/2012 |
| QC: | RM PE: TH |
| File: | Chat_Chap 04-Def Rec Set |

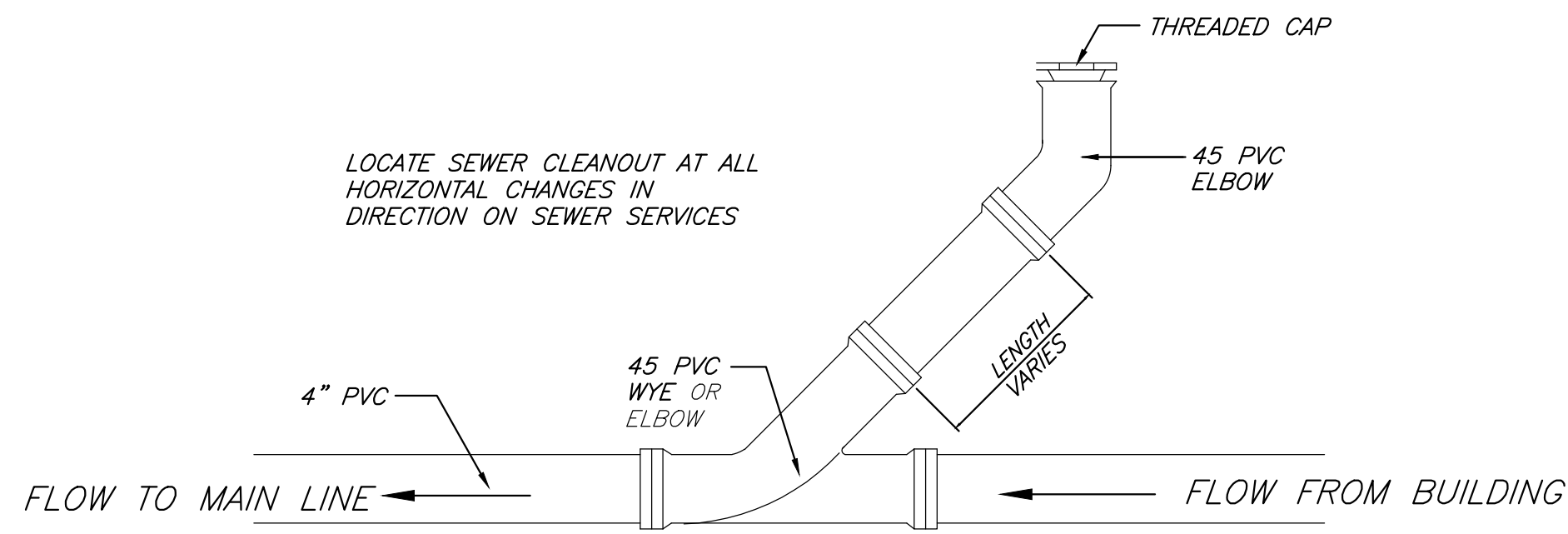
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Record Set

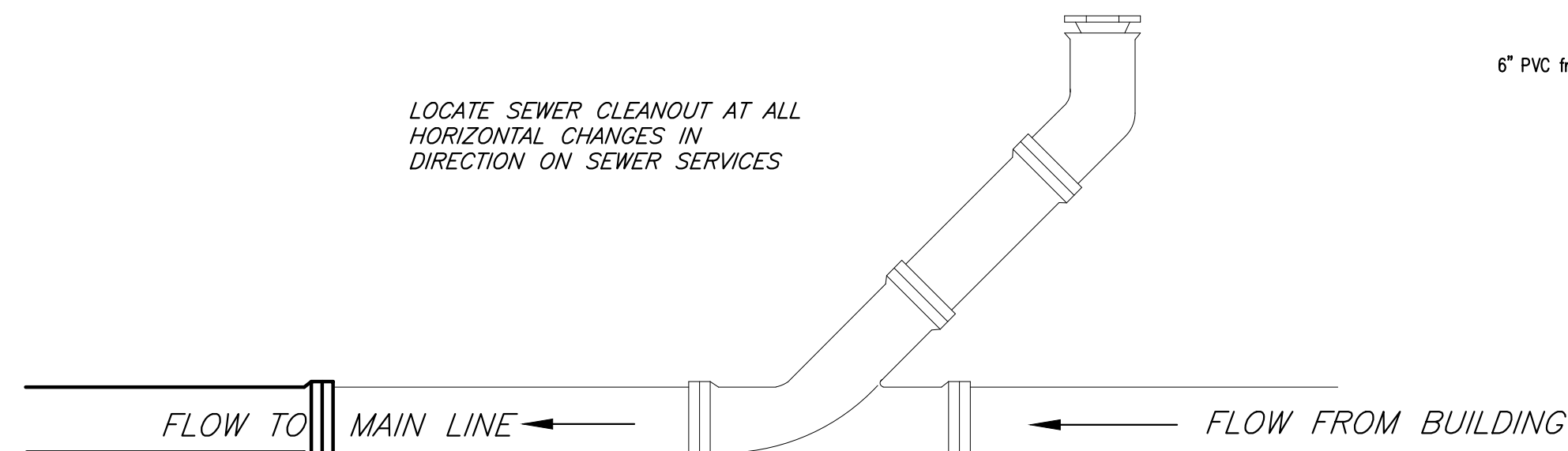
SGM
103 W. Tomichi Ave., Suite A
Gunnison, CO 81230
970.641.5355 www.sgm-inc.com

Chateau Chaparral Owners Assoc.
2014 Sewer System Upgrades, Nathrop, CO

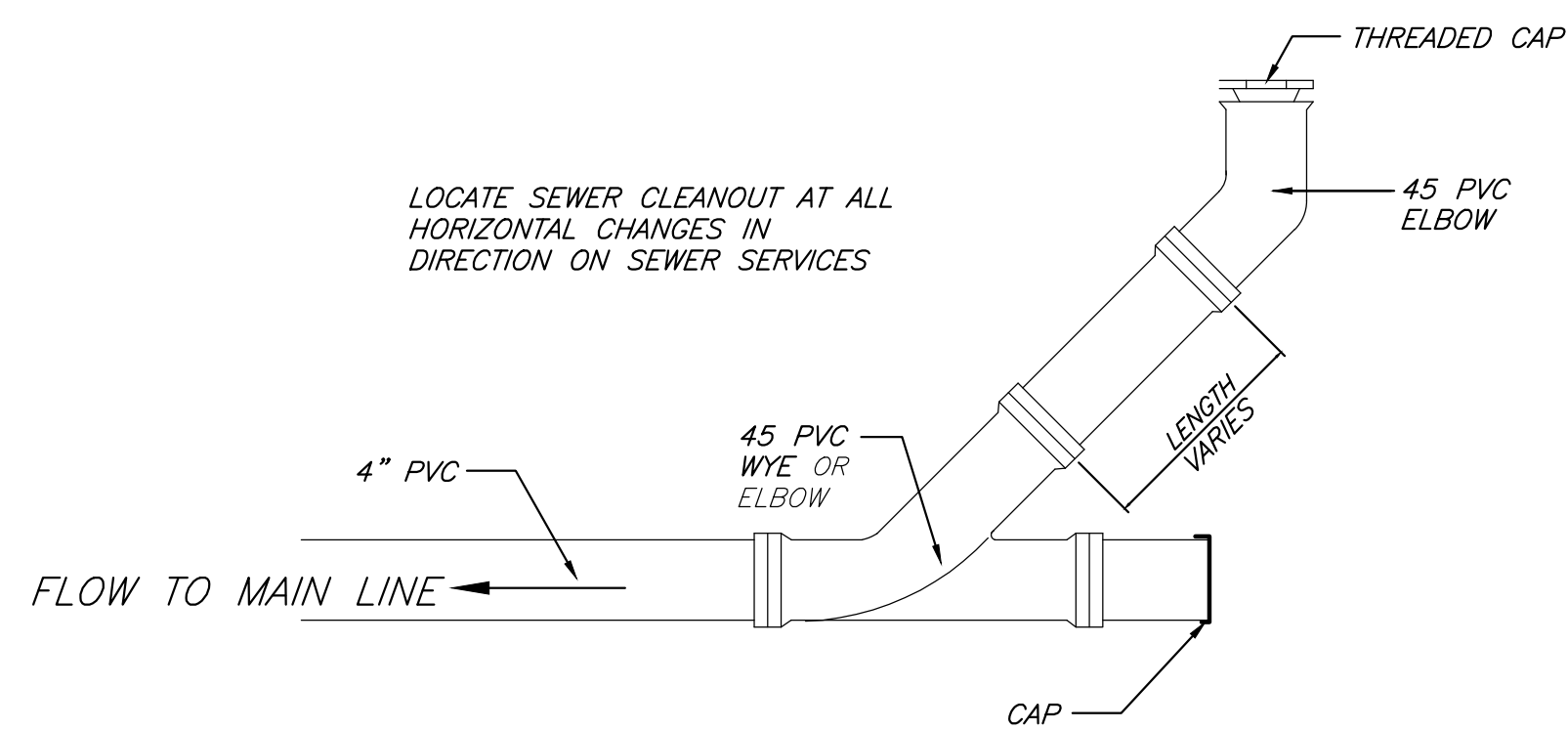
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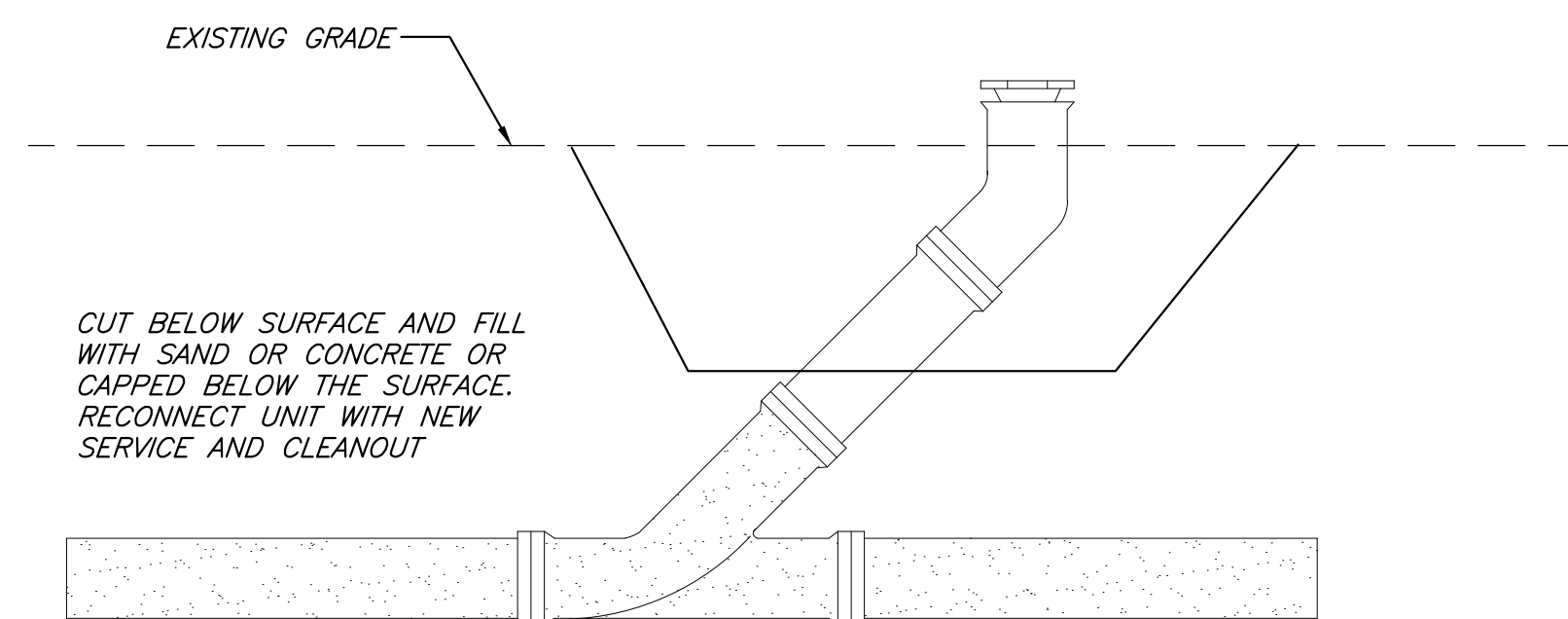
CLEAN-OUT DETAIL



1. LOT WITH EXIST. UNIT CURRENTLY DIRECTLY CONNECTED

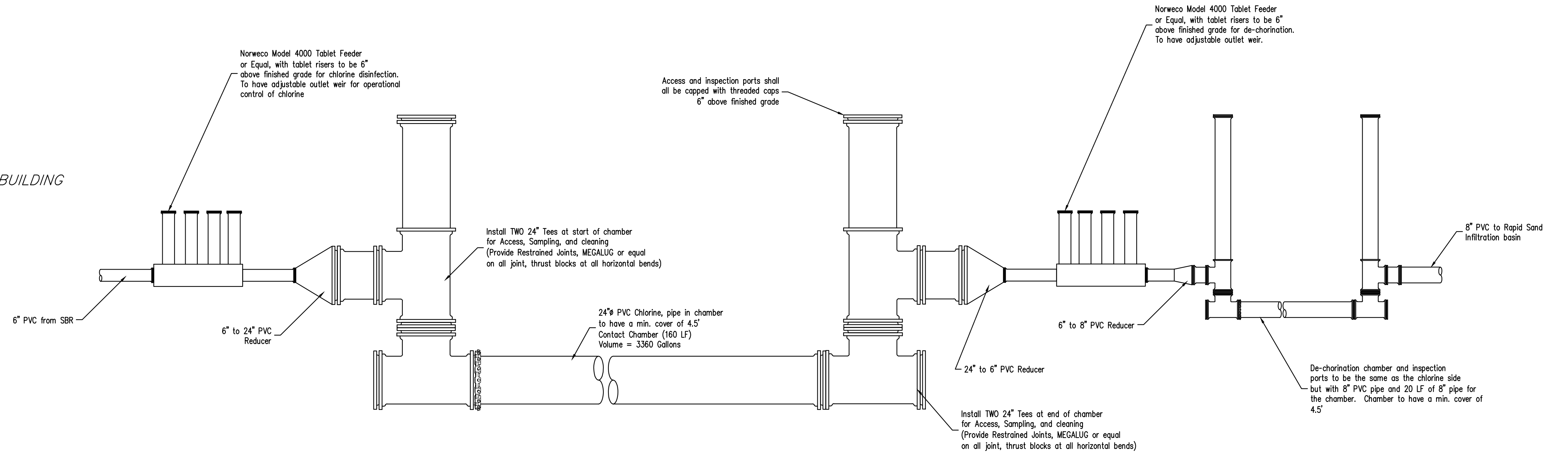


2. LOT THAT CONNECTS SEWER SERVICE THROUGH CLEANOUT



3. EXISTING CLEANOUT TO BE REMOVED WHEN NEW INSTALLED

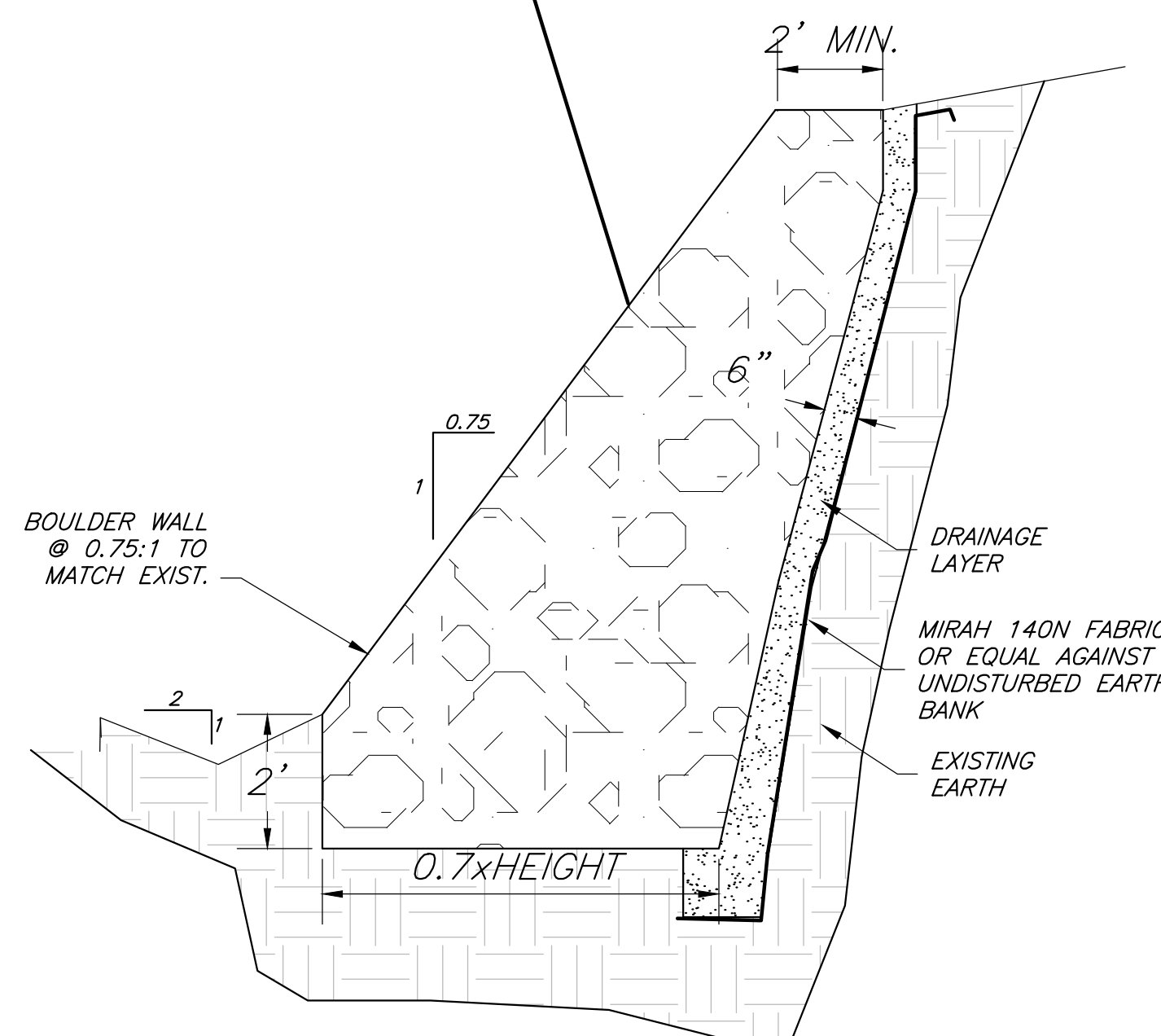
SERVICE CONNECTION SCENARIOS



CHLORINE TABLET DISINFECTION SYSTEM

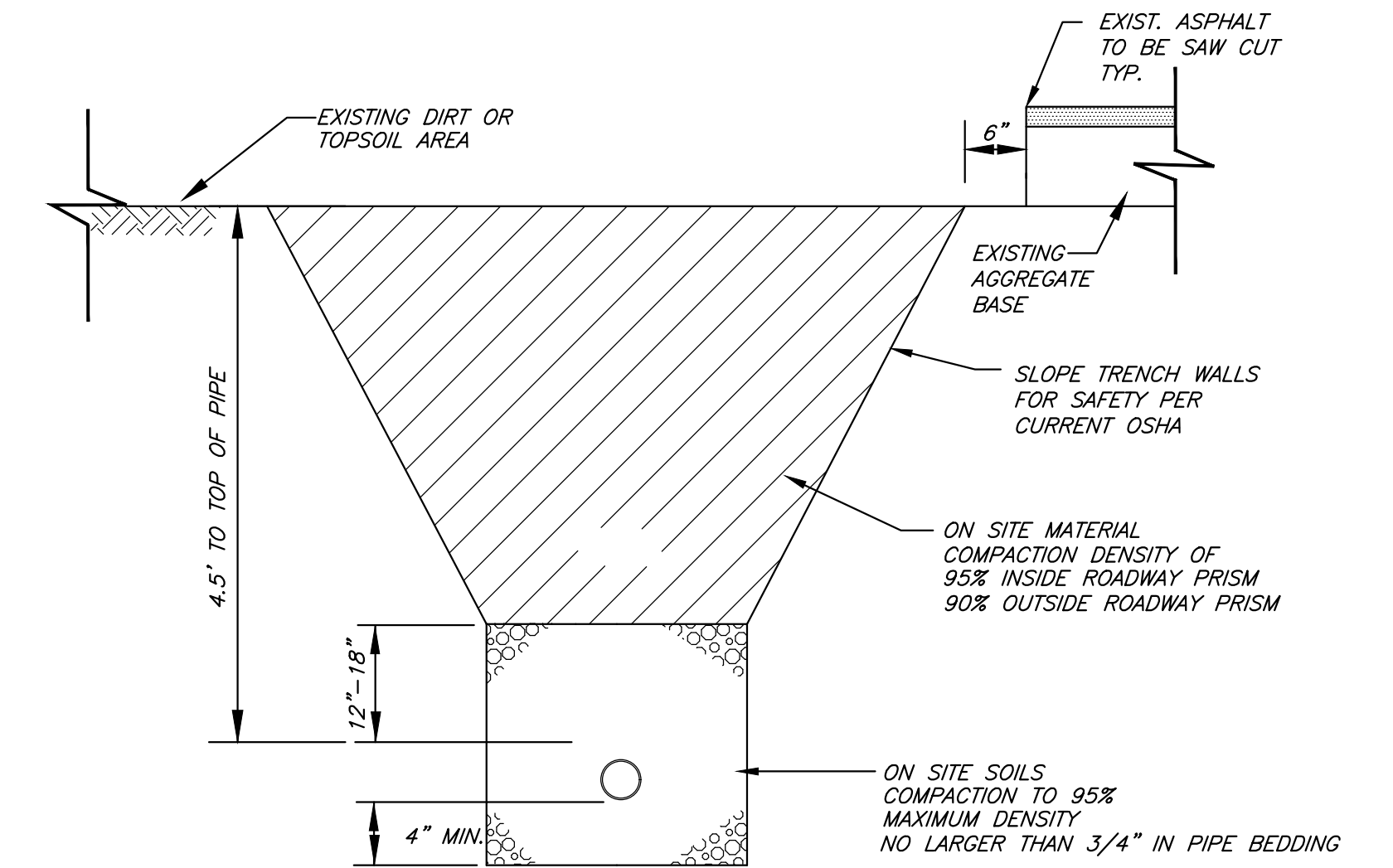
NTS

- BOULDER WALL CONSTRUCTION NOTES:**
- 1 THE BASE WIDTH OF THE NEW ROCK BUTTRESS WALL SHOULD NOT BE LESS THAN 0.7 TIMES THE VERTICAL DISTANCE BETWEEN THE BOTTOM OF DITCH AND THE TOP ROW OF EMBEDDED BOULDERS;
 - 2 THE BOTTOM COURSE OF ROCKS FOR THE BUTTRESS WALL MUST BE EMBEDDED UNDER THE GROUND SURFACE. THE DEPTH OF EMBEDMENT SHOULD BE AT LEAST 2 FEET;
 - 3 ROCKS SHOULD HAVE A WEIGHT GREATER THAN 500LB AND BE ANGULAR IN SHAPE. SMALLER OR ROUNDED ROCK USAGE SHOULD BE LIMITED;
 - 4 ROCKS SHOULD BE PLACED IN FAIRLY UNIFORM LIFTS, AND INFILLED WITH A GRANULAR MATERIAL SUCH AS AN AGGREGATE BASE COURSE OR SCREENED ROCK. THE INFILLING SHOULD BE COMPLETED PRIOR TO PLACING THE NEXT LIFT OF ROCKS.
 - 5 THE ROCKS HAVE A MINIMUM LENGTH OF 2 FEET. GENERALLY, THE LARGER THE ROCK, THE BETTER.
 - 6 GRAVEL USED FOR THE DRAINAGE LAYER SHOULD BE WASHED 3/4-INCH TO NO. 4 SCREEN MATERIAL WITH LESS THAN 3 PERCENT PASSING THE NO. 200 SIEVE.



BOULDER WALL DETAIL

NTS



- 1) PAVEMENT REPLACEMENT SHALL MEET EXISTING THICKNESS AND KIND WITH THE FOLLOWING MINIMUMS: ASPHALT SURFACING = 3" MIN., AGGREGATE BASE COURSE = 6" MIN.
- 2) 1.5" HDPE SHALL BE BUTT FUSION WELDED AND HAVE A CONTINUOUS POSITIVE GRADE NO LOW POINTS OR HIGH POINTS FROM LIFT STATION TO CONNECTION MANHOLE

FORCE MAIN TRENCH CROSS SECTION

NTS

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Record Set

SGM
103 W. Tomichi Ave., Suite A
Gunnison, CO 81230
970.641.5355 www.sgm-inc.com

Chateau Chaparral Owners Assoc.
2014 Sewer System Upgrades, Nathrop, CO

| # | Revision | Date | By |
|---|--------------------|---------|----|
| 1 | PRELIMINARY DESIGN | 12/7/12 | DK |
| 2 | FINAL DESIGN SET | 7/12/13 | DK |
| 3 | FINAL BID SET | 2/3/14 | TH |
| 4 | CONSTRUCTION SET | 10/3/14 | LS |
| 5 | RECORD SET | 10/3/17 | CG |

Details

| | |
|-----------|-------------------------|
| Job No. | 2008-234.003 |
| Drawn by: | DK |
| Date: | 12/12/2012 |
| QC: | RM PE: TH |
| File: | Chat_Chap_04-Def-RecSet |

28

28

CONDUCTOR SCHEDULE

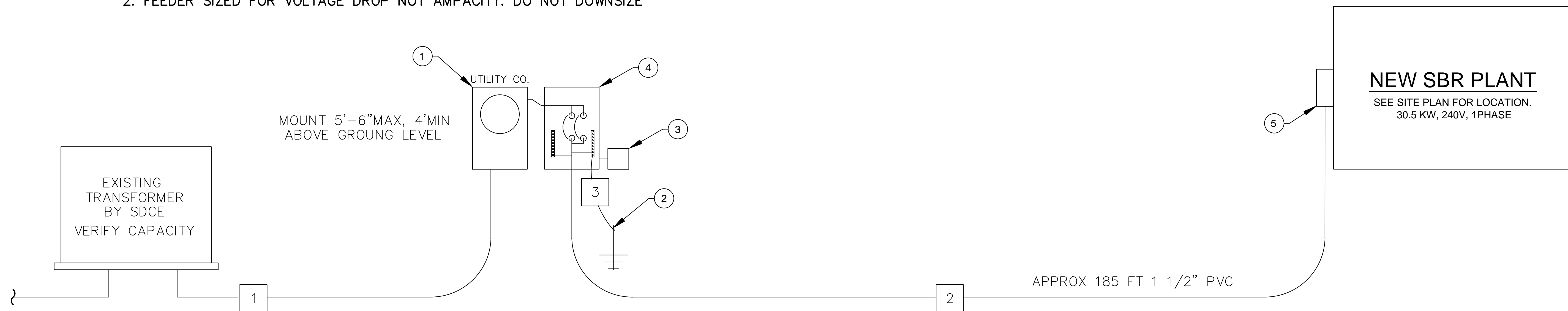
| SYM | DESCRIPTION | V/PH/A | COND. | GROUND | CONDUIT | # OF PARRALLEL | WIRE TYPE | NOTES |
|-----|-------------------------------|-----------|-------|--------|---------|----------------|-----------|-----------------|
| 1 | SERVICE ENTRANCE CONDUCTORS | 240/1/200 | 3 | 3/0 | 1.5 | 1 | THHN | EXISTING VERIFY |
| 2 | UNDERGROUND FEEDER TO SBR | 240/1/150 | 3 | #1/0 | 1.5 | 1 | THHN | NEW |
| 3 | GROUNDING ELECTRODE CONDUCTOR | | | 4 | | | SOLID CU | EXISTING VERIFY |
| | | | | | | | | |
| | | | | | | | | |

PLAN NOTES:

CALLOUT USED FOR NOTE DESIGNATION

- ①. EXISTING METER PEDESTAL. REBUILD AS NECESSARY TO MEET CRITERIA SHOWN, CURRENT NEC REQUIREMENTS AND CURRENT SANGRE DE CRISTO ELECTRIC STANDARDS
- ②. GROUNDING ROD AND GROUNDING CONDUCTOR.
- ③. NEW LIGHTNING ARRESTOR
- ④. NEW 150A ¹²⁰/₂₄₀V 1P SERVICE RATED PANEL WITH 150A 2P MAIN BREAKER.
- ⑤. NEW SBR PLANT. SINGLE POINT ELECTRICAL CONNECTION AND DISCONNECT.

- NOTE 1. VERIFY AMPACITY OF EXISTING CONDUCTOR FOR CONDITIONS INDICATED
 2. FEEDER SIZED FOR VOLTAGE DROP NOT AMPACITY. DO NOT DOWNSIZE



ELECTRICAL SERVICE ONE-LINE

SCALE: NTS

Record Set



Chateau Chaparral Owners Assoc.
2014 Sewer System Upgrades, Nathrop, CO

| # | Revision | Date | By |
|---|------------------|----------|----|
| 1 | FINAL BID SET | 2/6/14 | JG |
| 2 | CONSTRUCTION SET | 10/03/14 | LS |
| 3 | RECORD SET | 10/3/17 | CG |

SBR One Line Diagram

| | |
|-----------|--------------|
| Job No. | 2008-234.003 |
| Drawn by: | JG |
| Date: | 02-06-2014 |
| QC: | PE: JG |

E-1
of 1

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