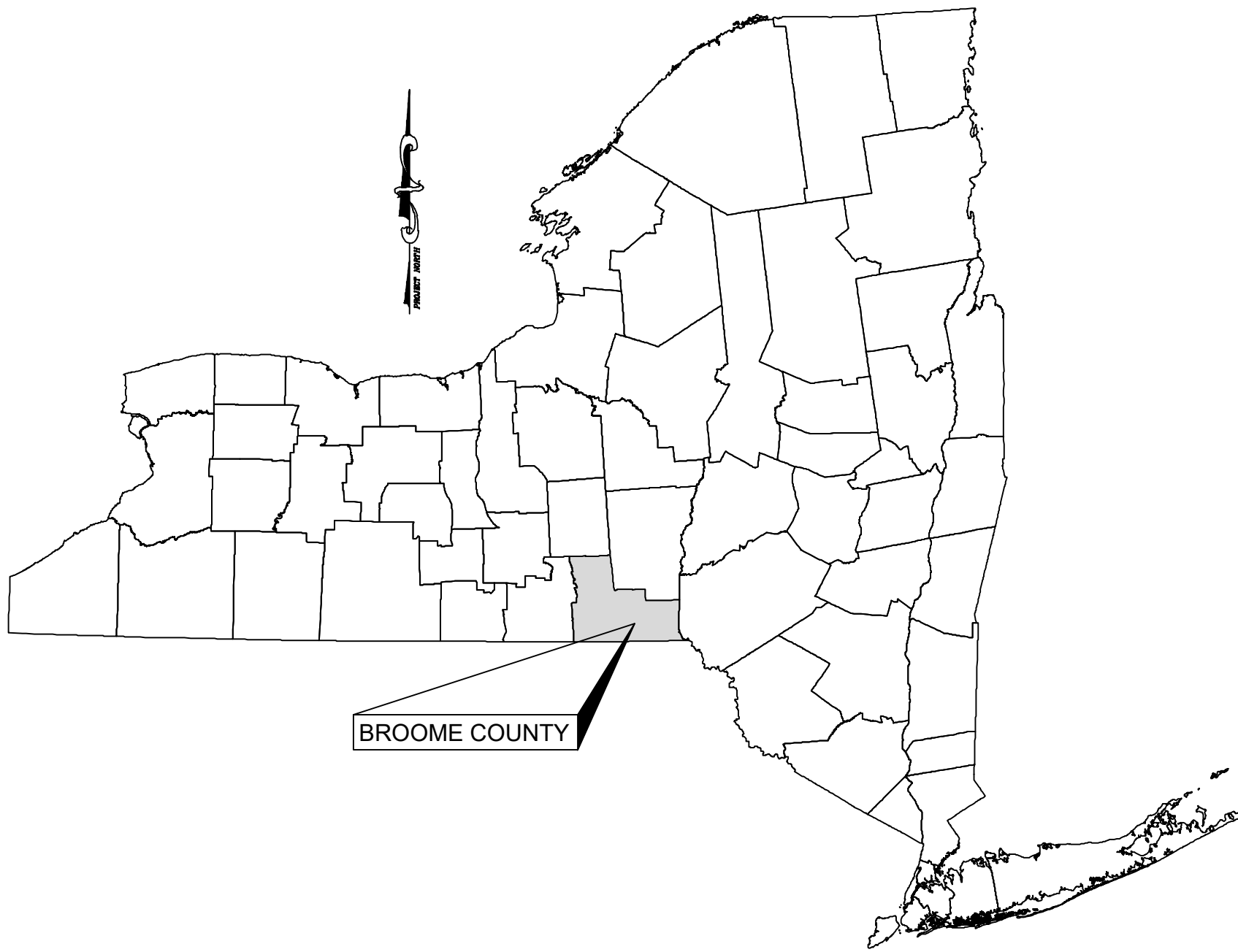


WATER AND SANITARY SEWER UTILITIES

THE RETREAT AT BUNN HILL

BUNN HILL ROAD

COUNTY OF BROOME TOWN OF VESTAL STATE OF NEW YORK

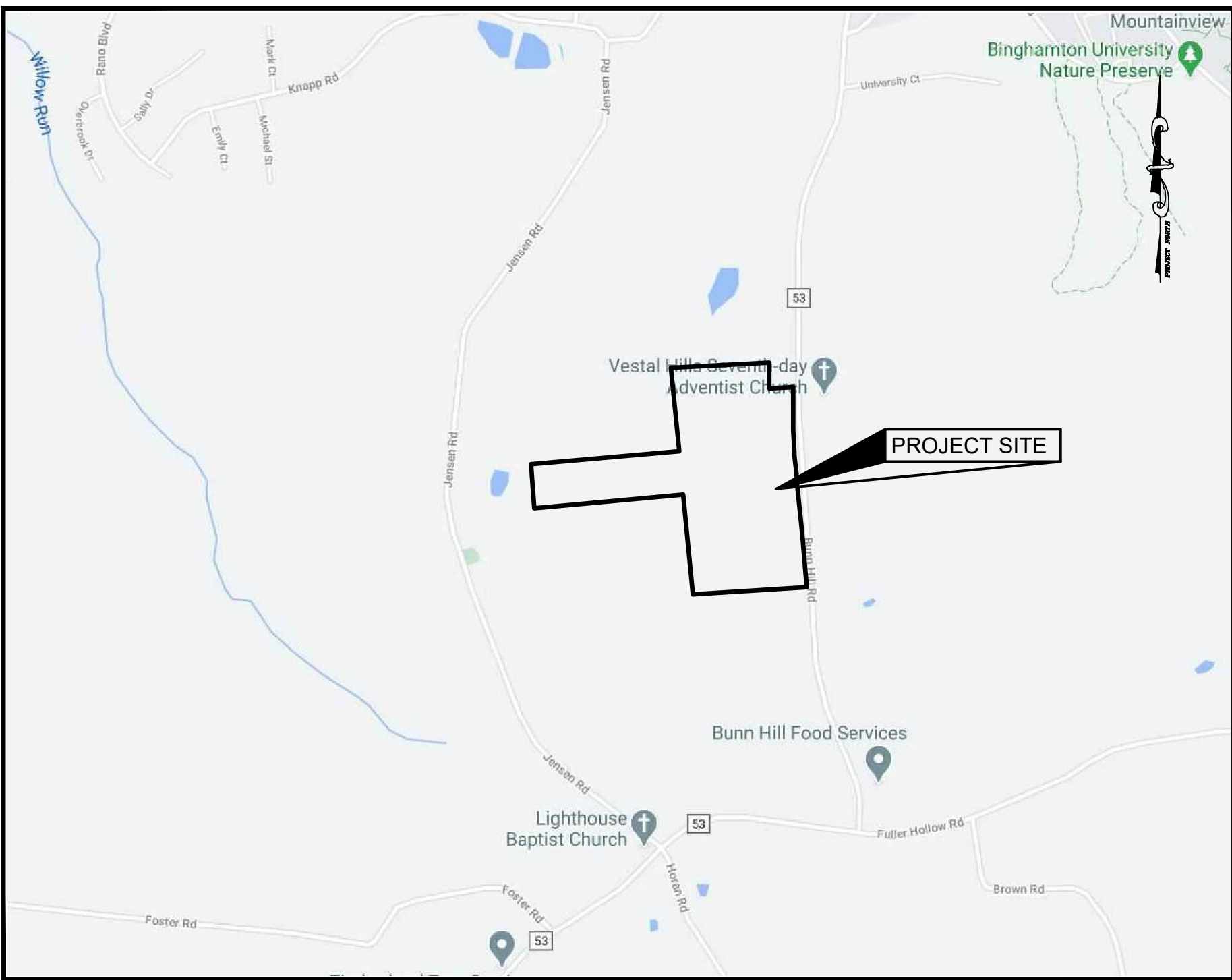


APPLICANT/DEVELOPER:

THE RETREAT AT BUNN HILL, LLC
315 OCONEE STREET
ATHENS, GA 30601
ATTN: ERIC LEATH

INDEX OF DRAWINGS

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C300	SPECIFICATIONS
94783-B-001.1	BOOSTER PUMP STATION



LOCATION MAP
SCALE: 1"=1,000'

DRAWINGS PREPARED BY



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PROJECT NO. 2983.08319
NOVEMBER 1, 2022



MARK W. PARKER, P.E. LIC. No. 093972
ALTERATIONS NOT CONFORMING TO SECTION 7209, SUBDIVISION 2,
NEW YORK STATE EDUCATION LAW ARE PROHIBITED BY LAW.

LEGEND

- 5/8" REBAR SET "KEYSTONE BING NY"
● IRON FOUND AND NOTED
TM# TAX MAP NUMBER
N/F NOW OR FORMERLY
○ UTILITY POLE
* CONIFEROUS TREE
○ TREE WITH WIRE FENCE REMNANTS
— OHW — OVERHEAD UTILITIES
— — — — — PROPERTY LINE
— — — — — EASEMENT LINE
- - - - - TAX MAP LINE
- - - - - WOOD RAIL FENCE
- X - X - WIRE FENCE
○○○○○○ STONE WALL
▨ PERMANENT WETLAND DISTURBANCE AREA
▨ TEMPORARY WETLAND DISTURBANCE AREA TO BE RE-ESTABLISHED
[] SNOW REMOVAL AREA
A — A STORMWATER SECTIONS, REFER TO SHEET C200

ZONING NOTES

CURRENT ZONING DISTRICT: PDD — PLANNED DEVELOPMENT DISTRICT FOR TAX MAP NOS.:
174.12-1-4 (LESS AND EXCEPT 1.69± AC) (833 BUNN HILL RD)
174.12-1-5 (817 BUNN HILL RD)
174.12-1-6 (813 BUNN HILL RD)
174.12-1-7 (803 BUNN HILL RD)
174.12-1-8 (791 BUNN HILL RD)
174.12-1-10 (765B JENSEN RD)

	REQUIRED	ACTUAL
MINIMUM LOT SIZE:		
MULTIFAMILY (3,000 SF/FAMILY) (161 UNITS) (700 BEDS)	11.09± AC	42.373± AC
MINIMUM LOT FRONTAGE:	100 LF	1409.68 LF

MINIMUM YARD DIMENSIONS:

PRINCIPAL:

FRONT	30 LF	32.3 LF
REAR	35 LF	197.5 LF
SIDE	7 LF	22.7 LF

BUILDING LIMITATIONS:

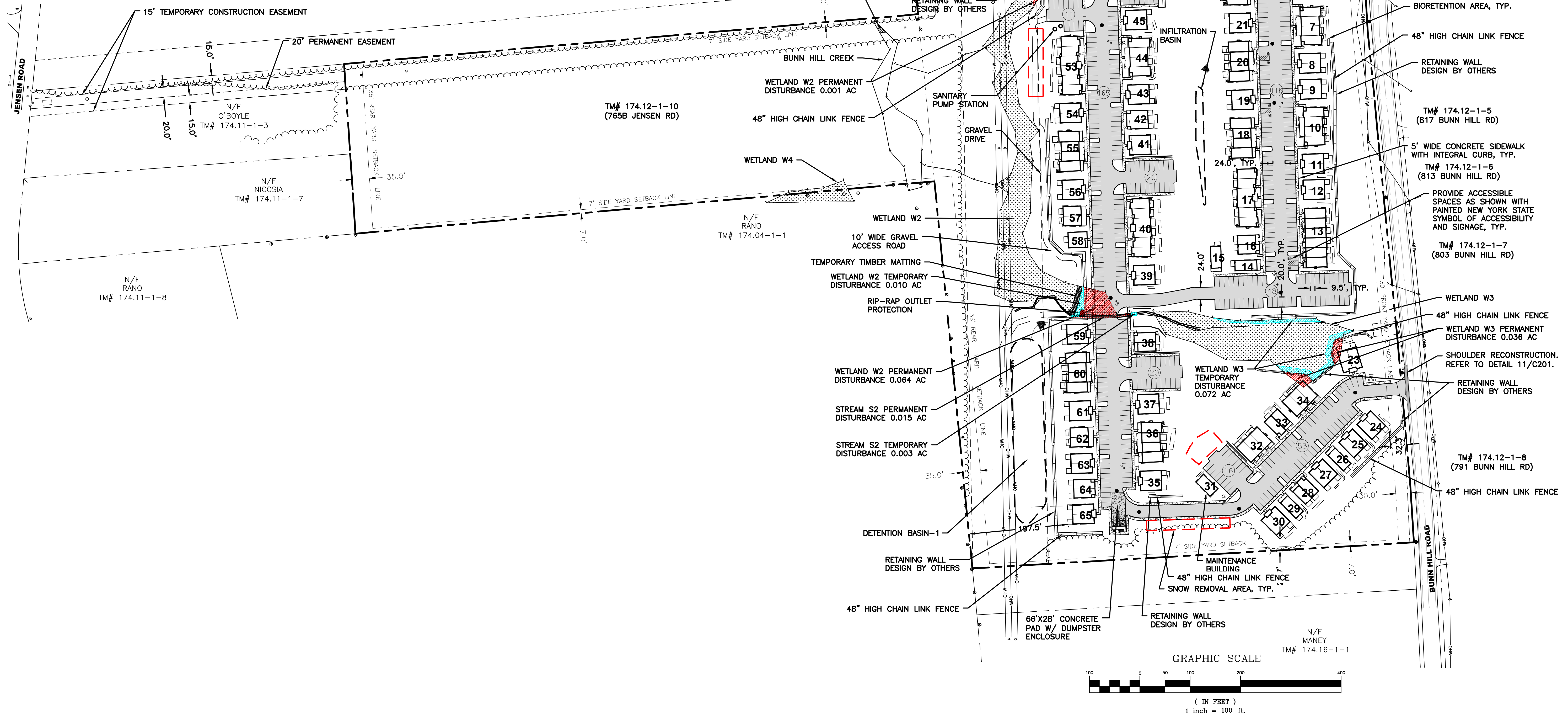
LIVING SPACE	3-STORIES	2 & 3-STORIES
MAXIMUM HEIGHT	40 FT	38± FT
LIVING SPACE/UNIT	750 SF	1,000+ SF

OFF STREET PARKING:

2 PER RESIDENCE	322	560
-----------------	-----	-----

CLUB HOUSE

NOTE: BULK TABLE BASED ON RC — MULTIPLE RESIDENTIAL DISTRICT FOR INFORMATIONAL PURPOSES



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WATER AND SANITARY SEWER UTILITIES
THE RETREAT AT BUNN HILL
BUNN HILL ROAD
TOWN OF VESTAL
BROOME COUNTY, NY
LAYOUT MASTER PLAN

SHEET NO.

C100

PROJECT NO.

2983.08319

DATE: 11/01/2022

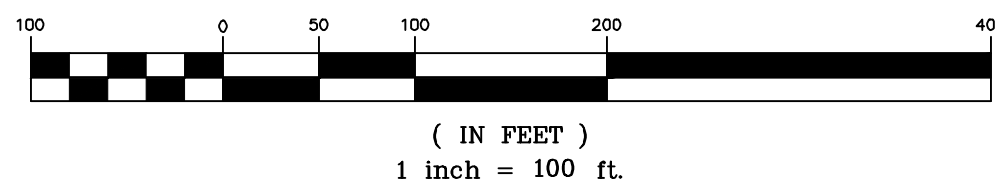
DRAWING NO. 298308319-SITE

for report

LEGEND

- 5/8" REBAR SET "KEYSTONE BING NY"
- IRON FOUND AND NOTED
- TM# TAX MAP NUMBER
- N/F NOW OR FORMERLY
- UTILITY POLE
- * CONIFEROUS TREE
- TREE WITH WIRE FENCE REMNANTS
- OHW — OVERHEAD UTILITIES
- — — — — PROPERTY LINE
- — — — — EASEMENT LINE
- — — — — TAX MAP LINE
- □ — □ — WOOD RAIL FENCE
- X — X — WIRE FENCE
- ○ ○ ○ ○ STONE WALL

GRAPHIC SCALE



DETENTION BASIN-2

SAND FILTER NO. 2

SANITARY PUMP STATION

SAND FILTER NO. 3

DETENTION BASIN-1

SAND FILTER NO. 1

STORM SEWER, TYP.

WATER BOOSTER PUMP STATION

SANITARY FORCEMAIN 7

WATER MAIN, TYP.

SAND FILTER NO. 4

SANITARY SEWER MAIN, TYP.

SANITARY FORCEMAIN

C125

C123

SANITARY SEWER MAIN, TYP.

C124

C120

BUNN HILL ROAD

BUNN HILL ROAD

BUNN HILL ROAD

BUNN HILL ROAD

BUNN HILL ROAD

BUNN HILL ROAD

BUNN HILL ROAD

BUNN HILL ROAD

WATER AND SNITARY SEWER UTILITIES
THE RETREAT AT BUNN HILL
BUNN HILL ROAD
TOWN OF VESTAL
BROOME COUNTY, NY

ON-SITE UTILITIES MASTER PLAN

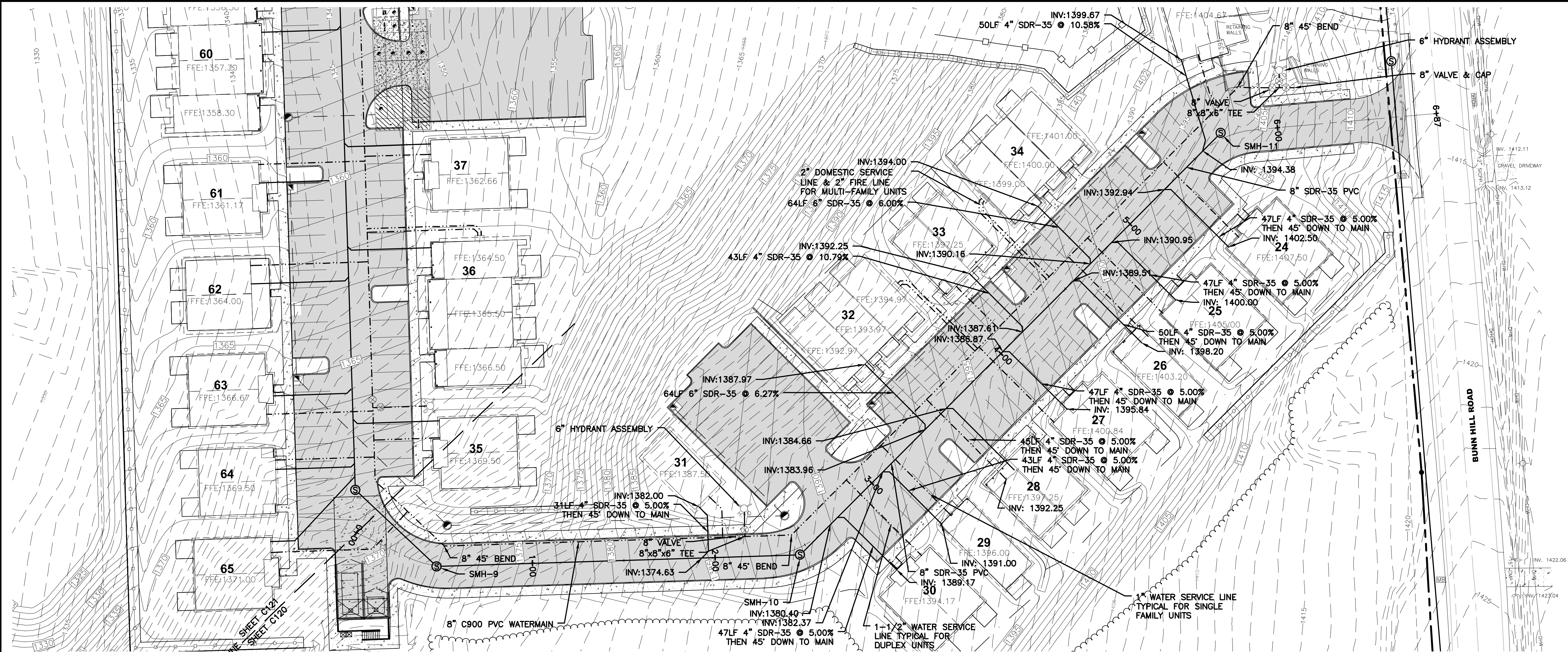
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C110
PROJECT NO.
2983.08319
DATE
11/01/2022
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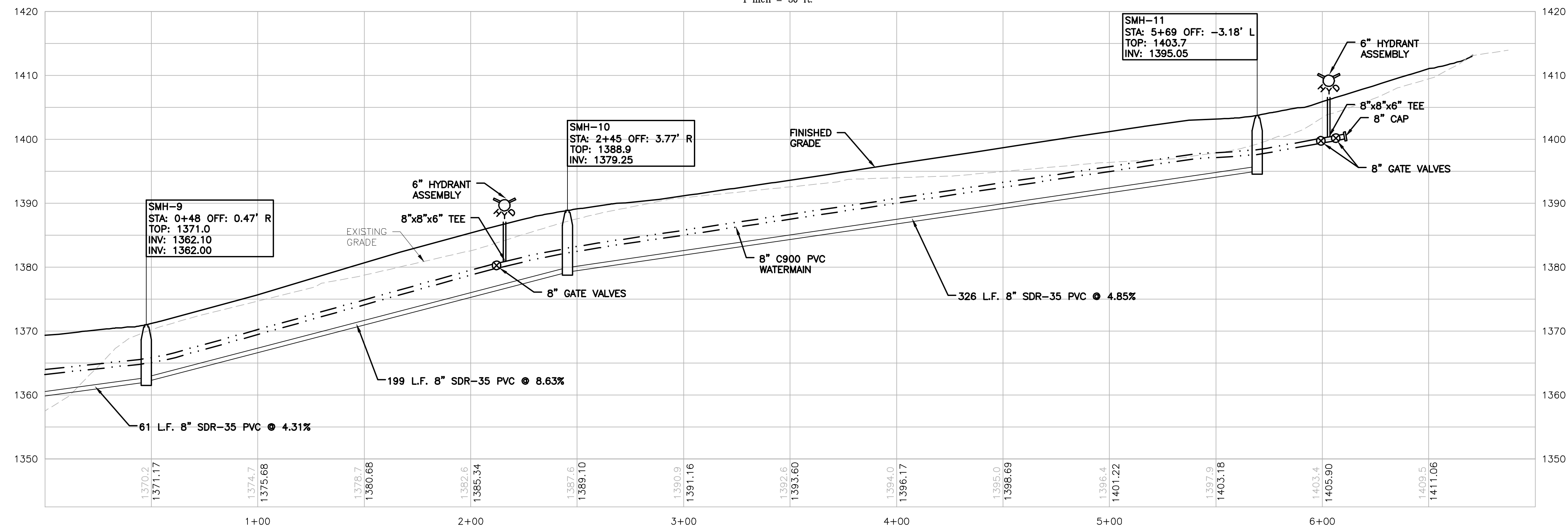
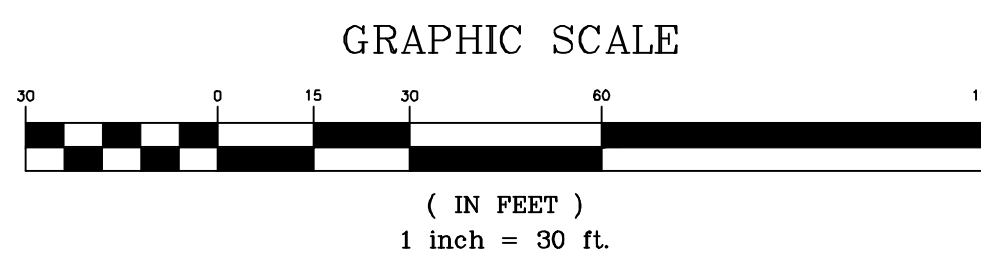


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SOUTHERN ACCESS PLAN STA: 0+00 - STA: 6+87



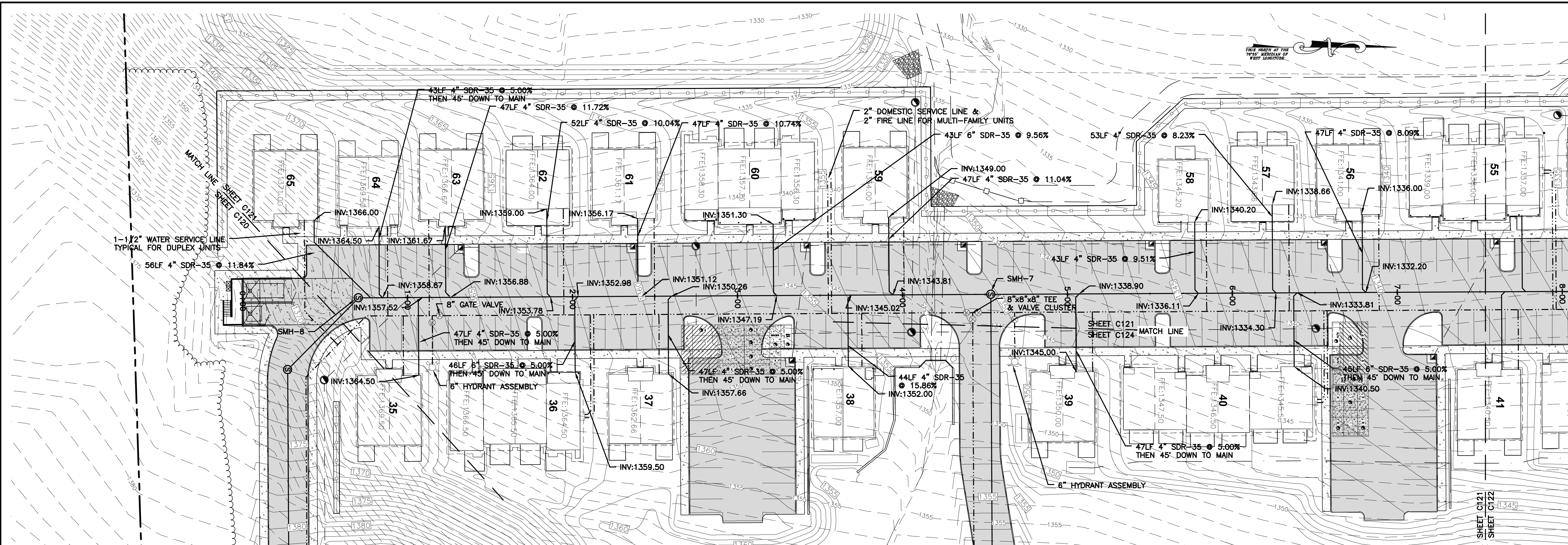
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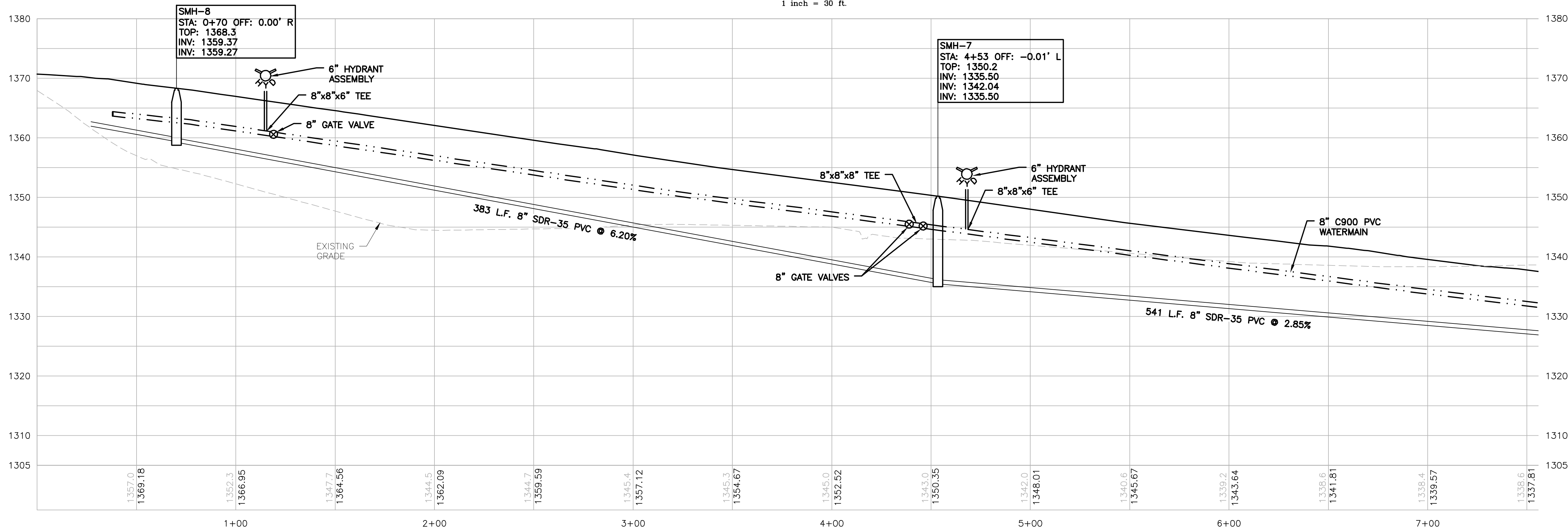
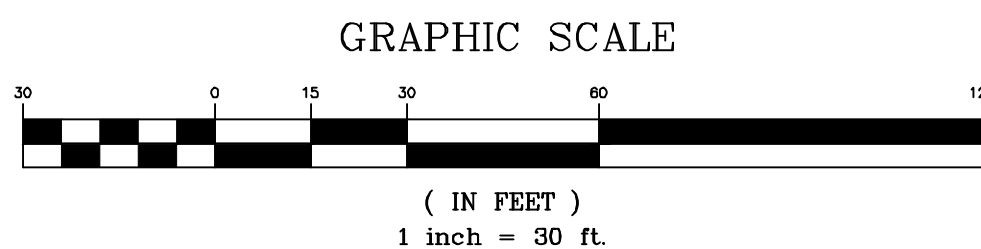


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UTILITY PLAN AND PROFILE	
SHEET NO. C120	
PROJECT NO. 2983.08319	
DATE: 11/01/2022	
DRAWING NO. 298308319-PROFILES	

WATER AND SANITARY SEWER UTILITIES
THE RETREAT AT BUNN HILL
BUNN HILL ROAD
TOWN OF VESTAL
BROOME COUNTY, NY



WESTERN ACCESS PLAN STA: 0+00 - STA: 7+50



WESTERN ACCESS PROFILE STA: 0+00 - STA: 7+50

SCALE: HORIZ: 1"=30'
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WATER AND SANITARY SEWER UTILITIES
THE RETREAT AT BUNN HILL
BUNN HILL ROAD
TOWN OF VESTAL
BROOME COUNTY, NY

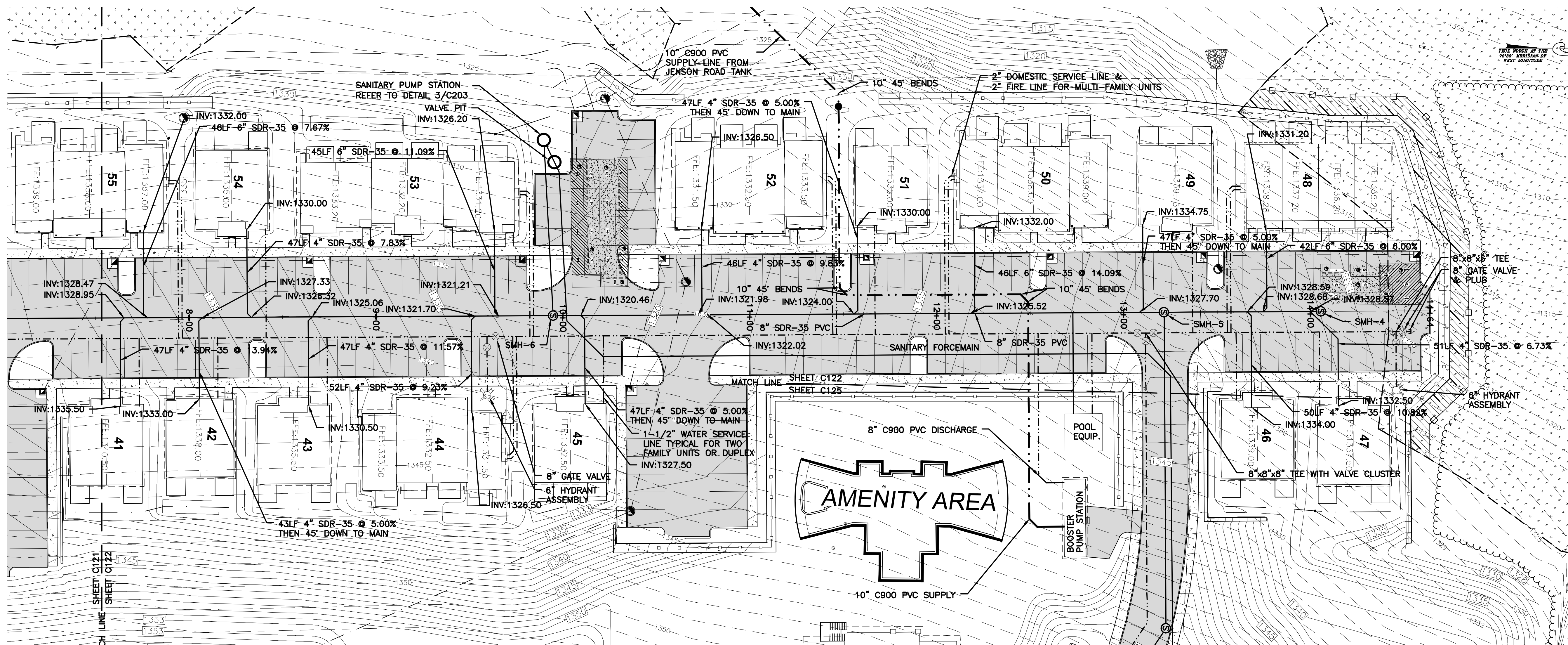
UTILITY PLAN AND PROFILE

SHEET NO.
C121

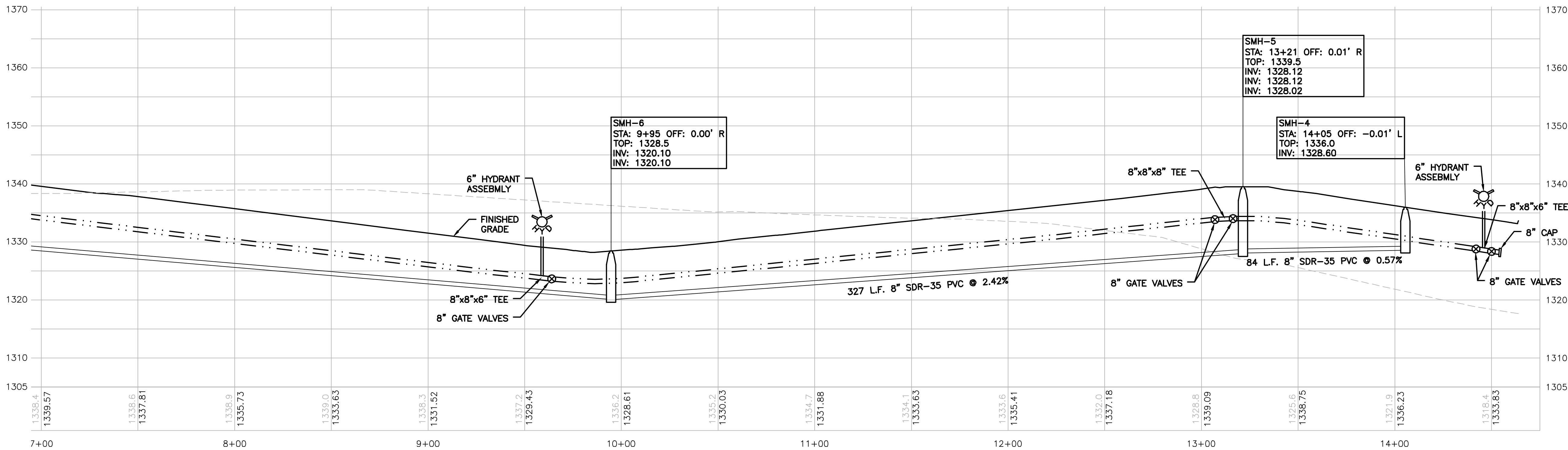
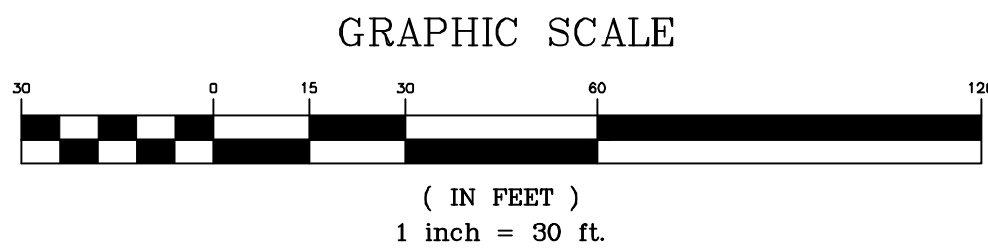
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2983.08319

DATE: 11/01/2022

DRAWING NO. 298308319-SITE



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WESTERN ACCESS PROFILE STA: 7+50 - STA: 14+64

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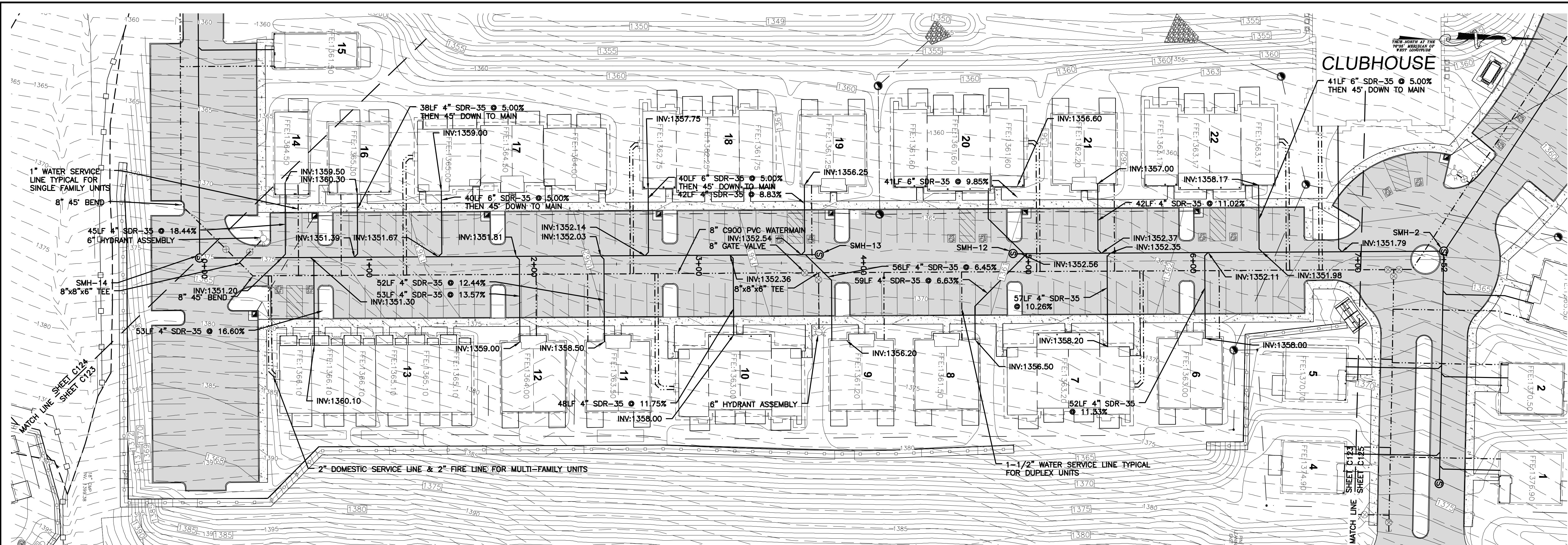
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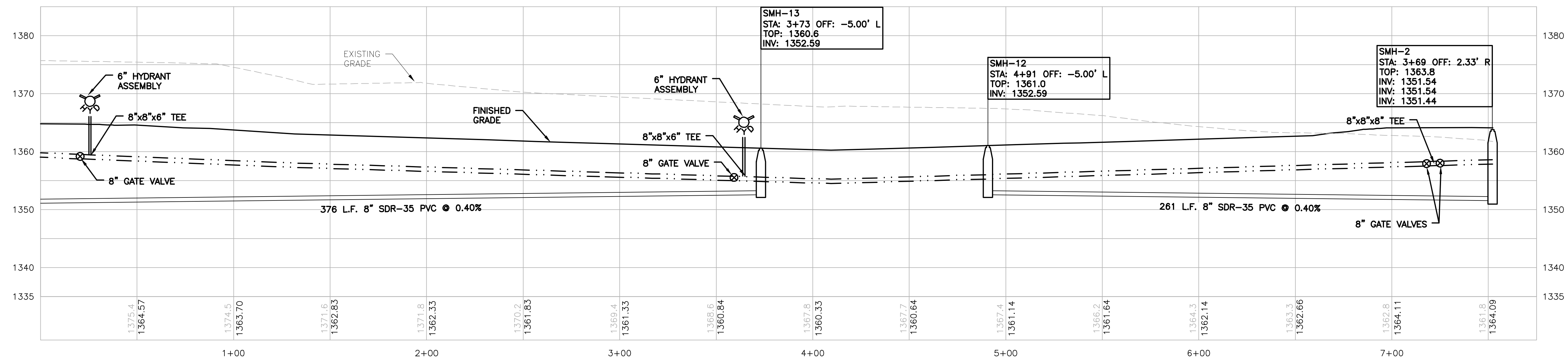
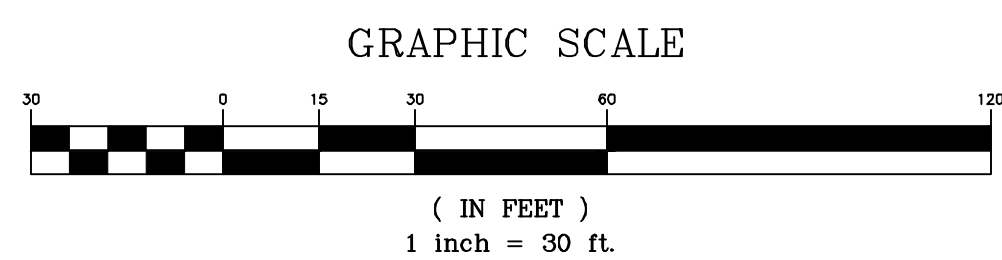
WATER AND SANITARY SEWER UTILITIES
THE RETREAT AT BUNN HILL
BUNN HILL ROAD
TOWN OF VESTAL
BROOME COUNTY, NY

UTILITY PLAN AND PROFILE

SHEET NO.	C122
PROJECT NO.	2983.08319
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DWG FILE NO.	298308319-SITE



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EASTERN ACCESS PROFILE STA: 0+00 - STA: 7+52

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UTILITY PLAN AND PROFILE

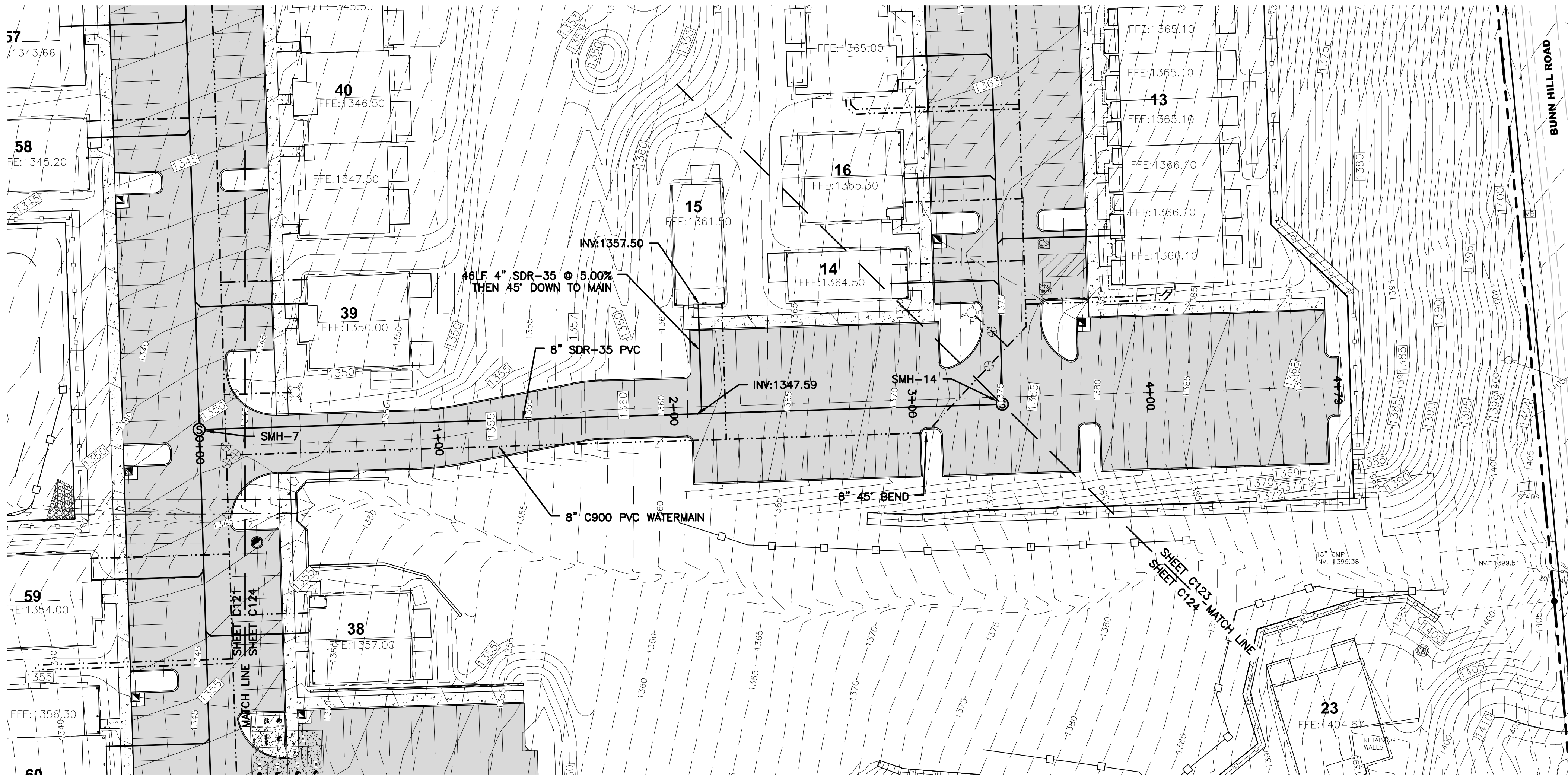
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PROJECT NO.
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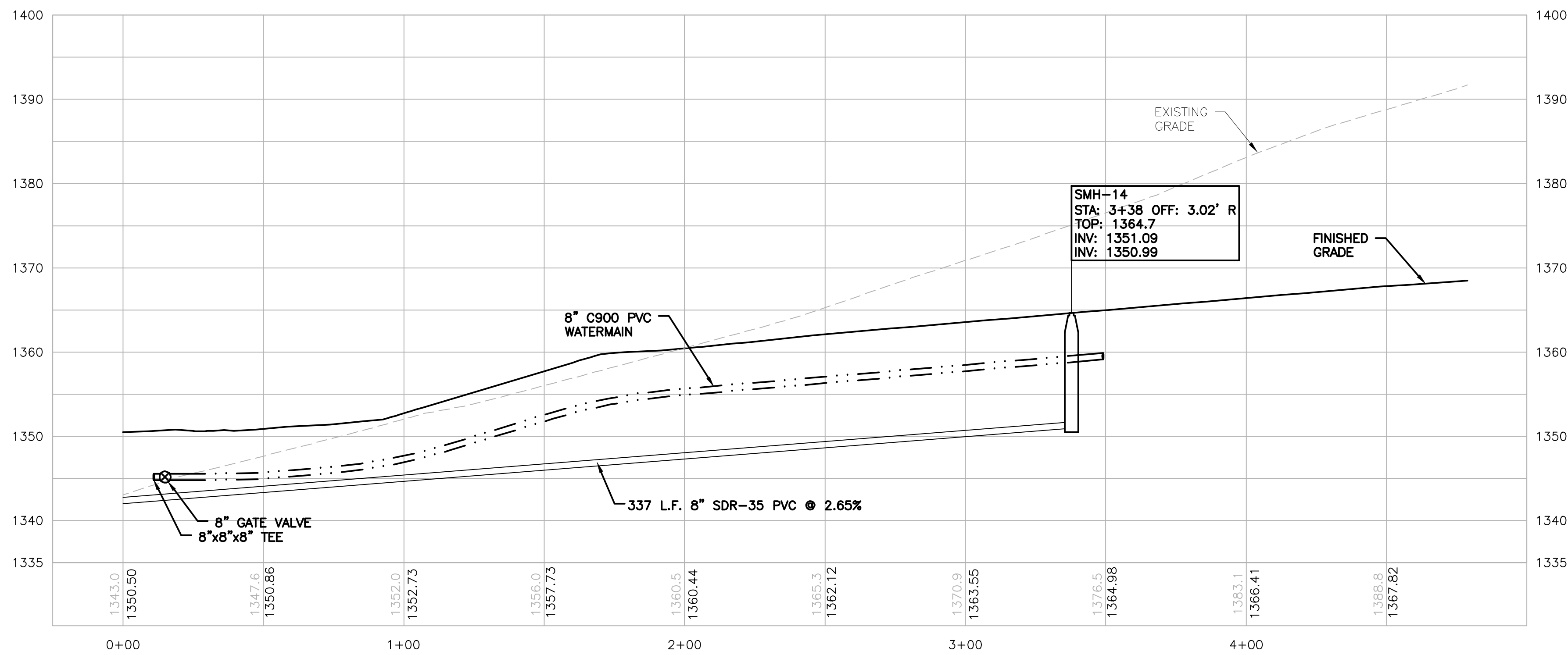
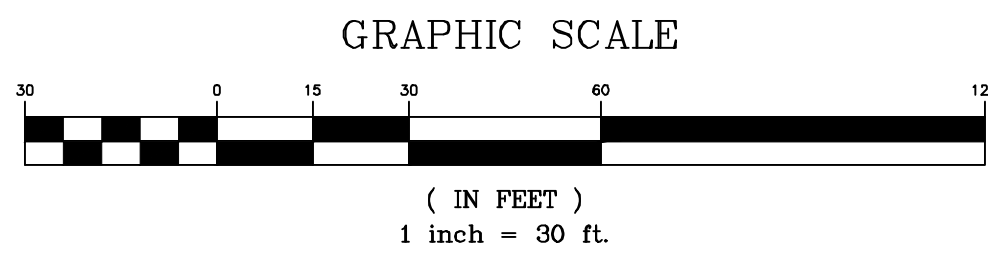
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DWG FILE NO: 298308319-PROFILES

WATER AND SANITARY SEWER UTILITIES
THE RETREAT AT BUNN HILL
BUNN HILL ROAD
TOWN OF VESTAL
BROOME COUNTY, NY



CENTRAL ACCESS PLAN STA: 0+00 - STA: 4+79



CENTRAL ACCESS PROFILE STA: 0+00 - STA: 4+79

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WATER AND SNITARY SEWER UTILITIES
THE RETREAT AT BUNN HILL
BUNN HILL ROAD
TOWN OF VESTAL
BROOME COUNTY, NY

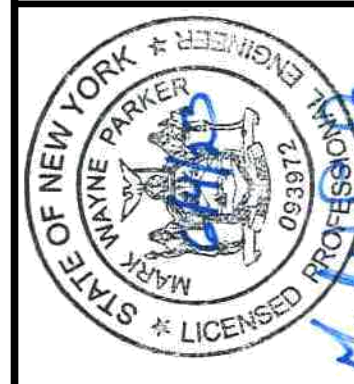
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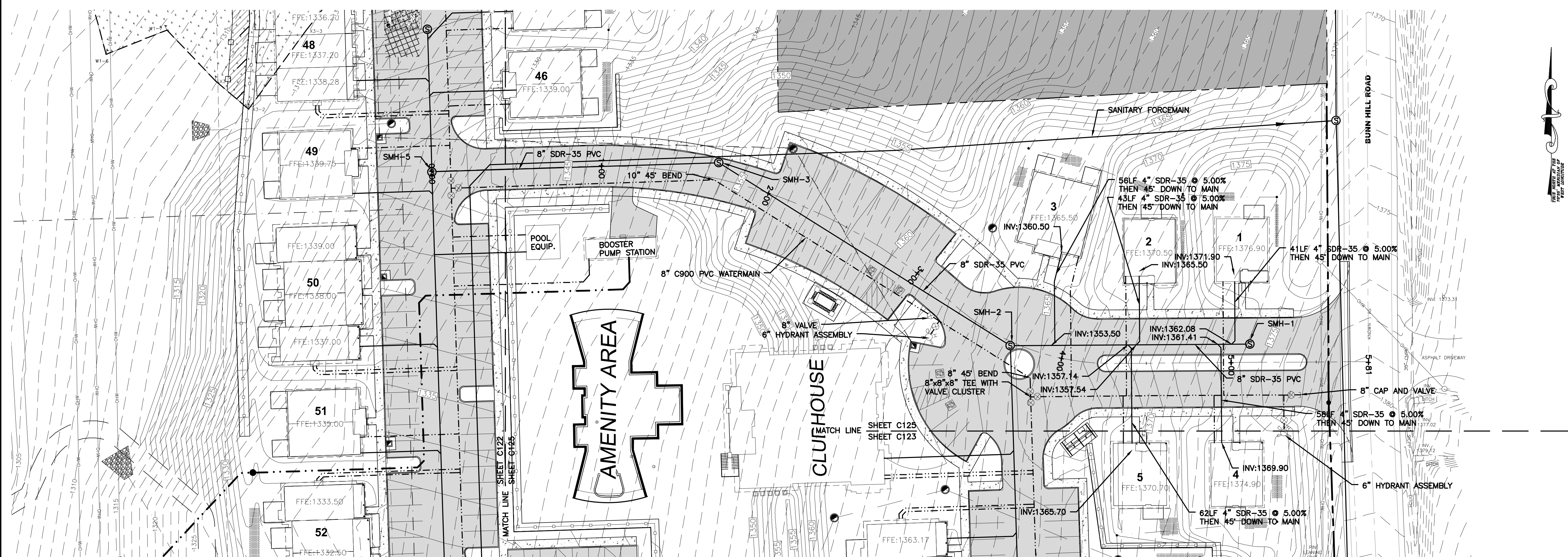
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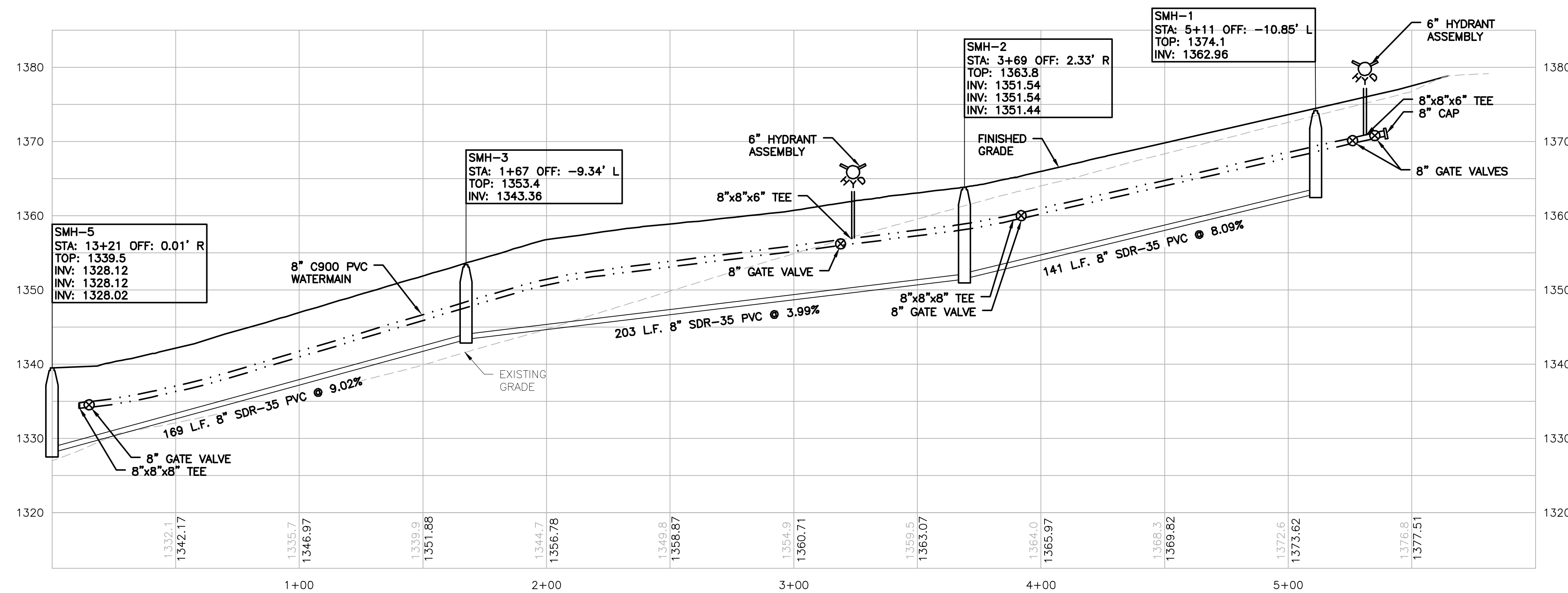
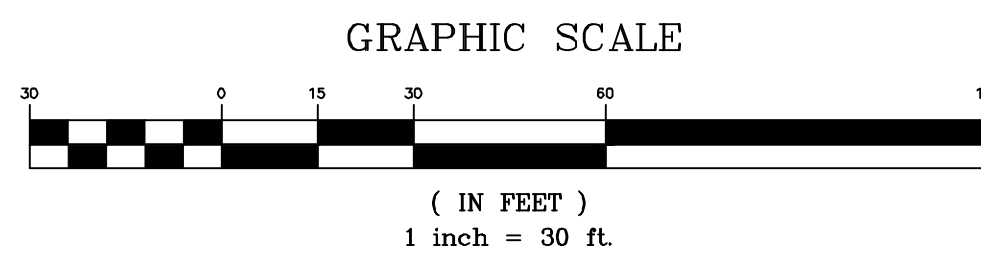


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NORTHERN ACCESS PLAN STA: 0+00 - STA: 5+81



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WATER AND SANITARY SEWER UTILITIES
THE RETREAT AT BUNN HILL
BUNN HILL ROAD
TOWN OF VESTAL
BROOME COUNTY, NY

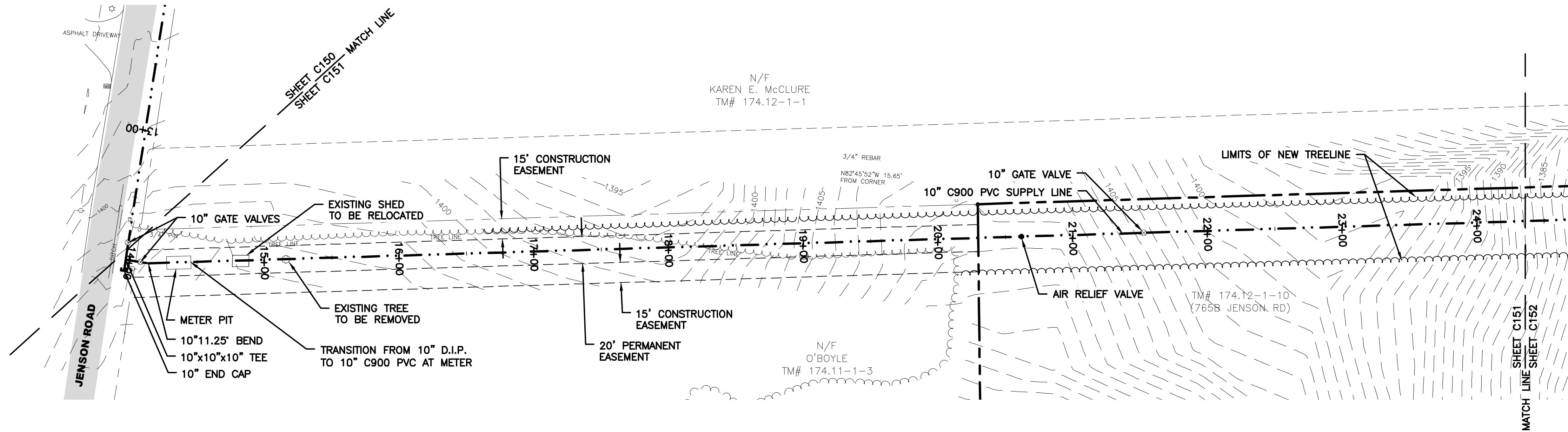
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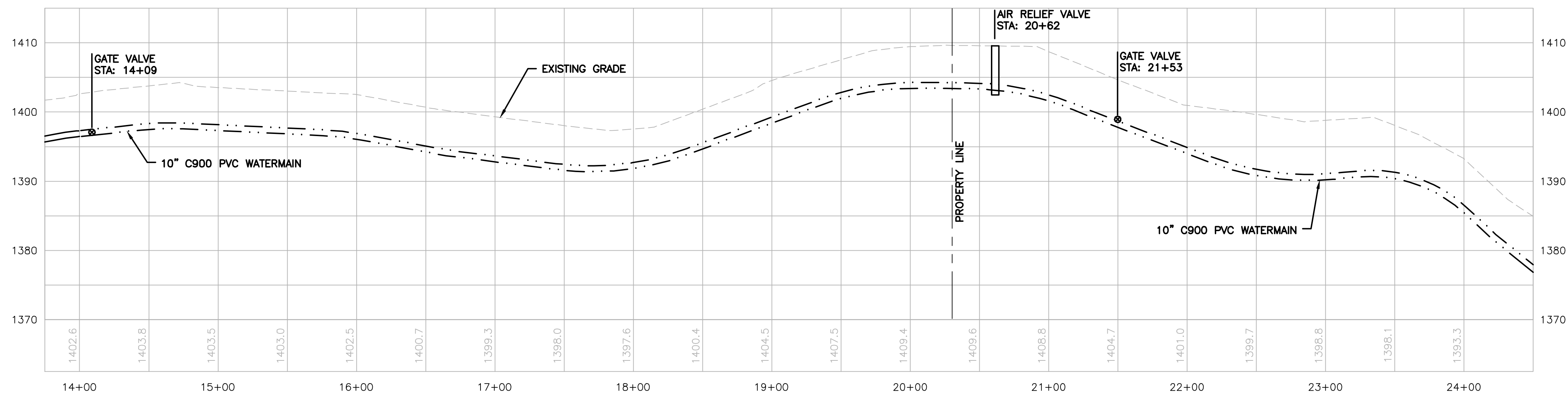
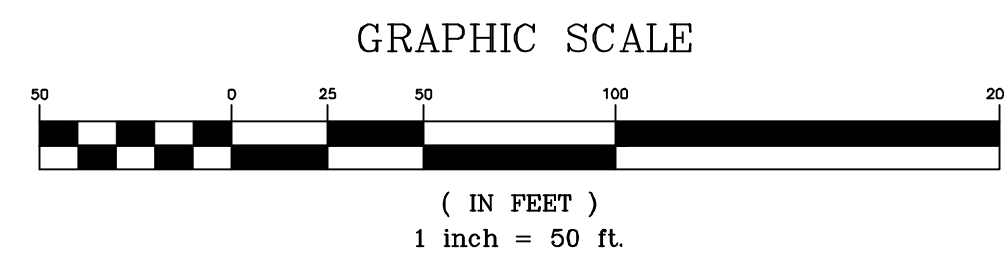
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DRAWING NO. 298308319-SITE



OFF-SITE WATER PLAN STA: 13+89 - STA: 24+27



OFF-SITE WATER PROFILE STA: 13+89 - STA: 24+27

SCALE: HORIZ: 1"=50'
VERT: 1"=10'



WATER AND SNITARY SEWER UTILITIES
THE RETREAT AT BUNN HILL
BUNN HILL ROAD
TOWN OF VESTAL
BROOME COUNTY, NY

OFF-SITE UTILITIES - WATER

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C151

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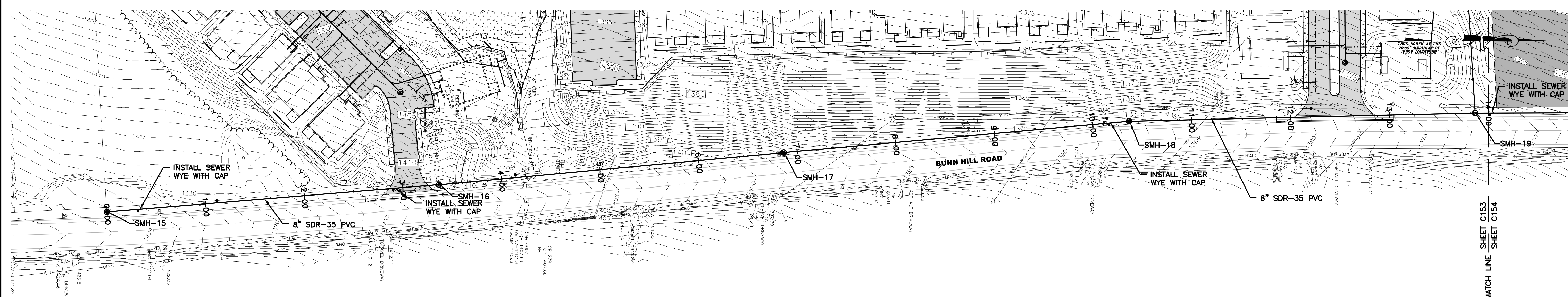


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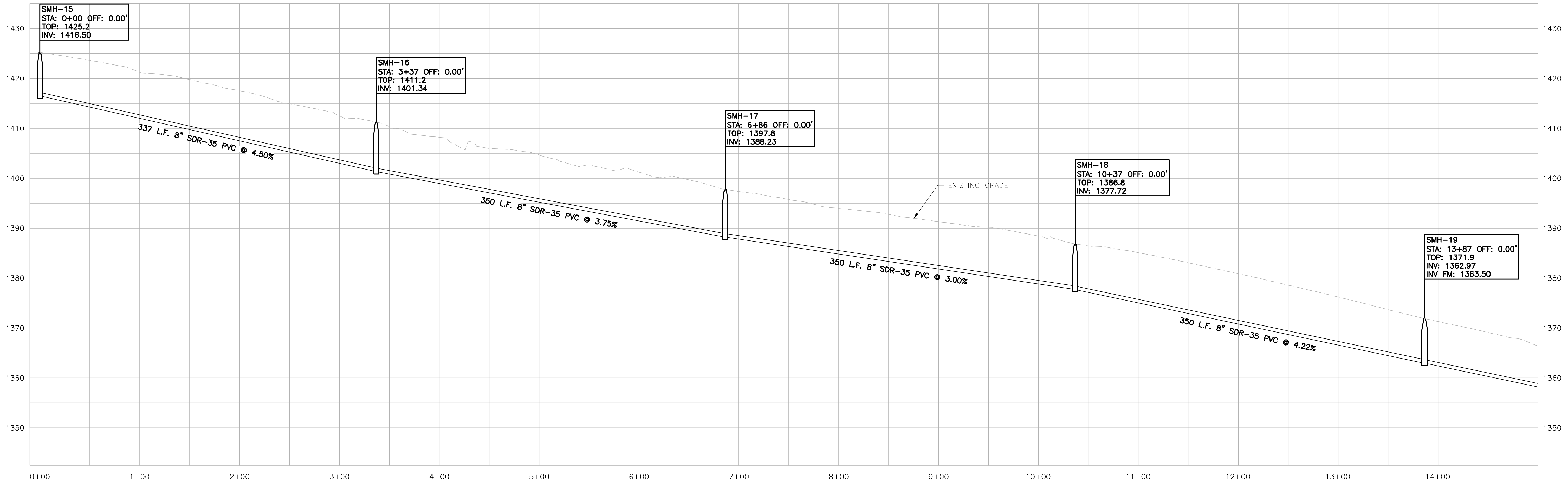
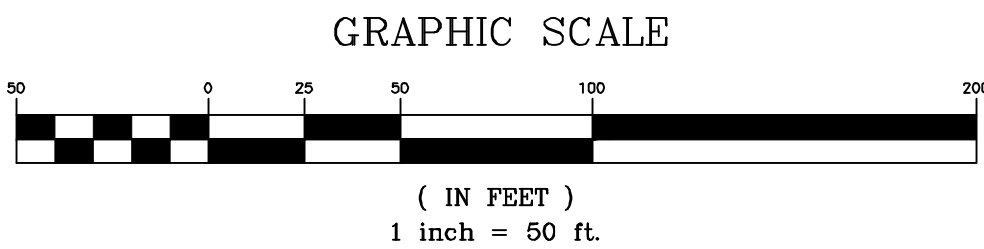
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VERT: 1"=10'



OFF-SITE SANITARY PLAN SMH-19 - SMH-24



OFF-SITE SANITARY PROFILE SMH-19 - SMH-24

SCALE: HORIZ: 1"=50'
VERT: 1"=10'

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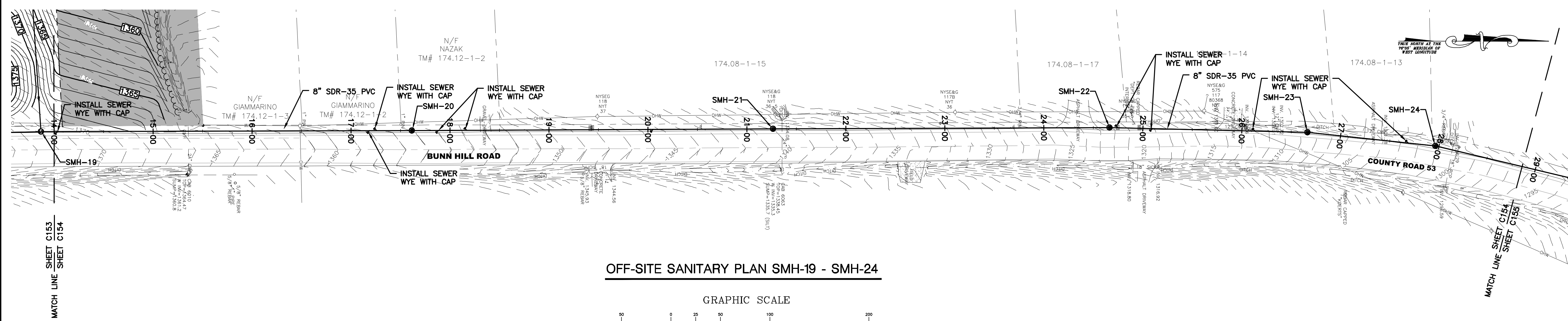


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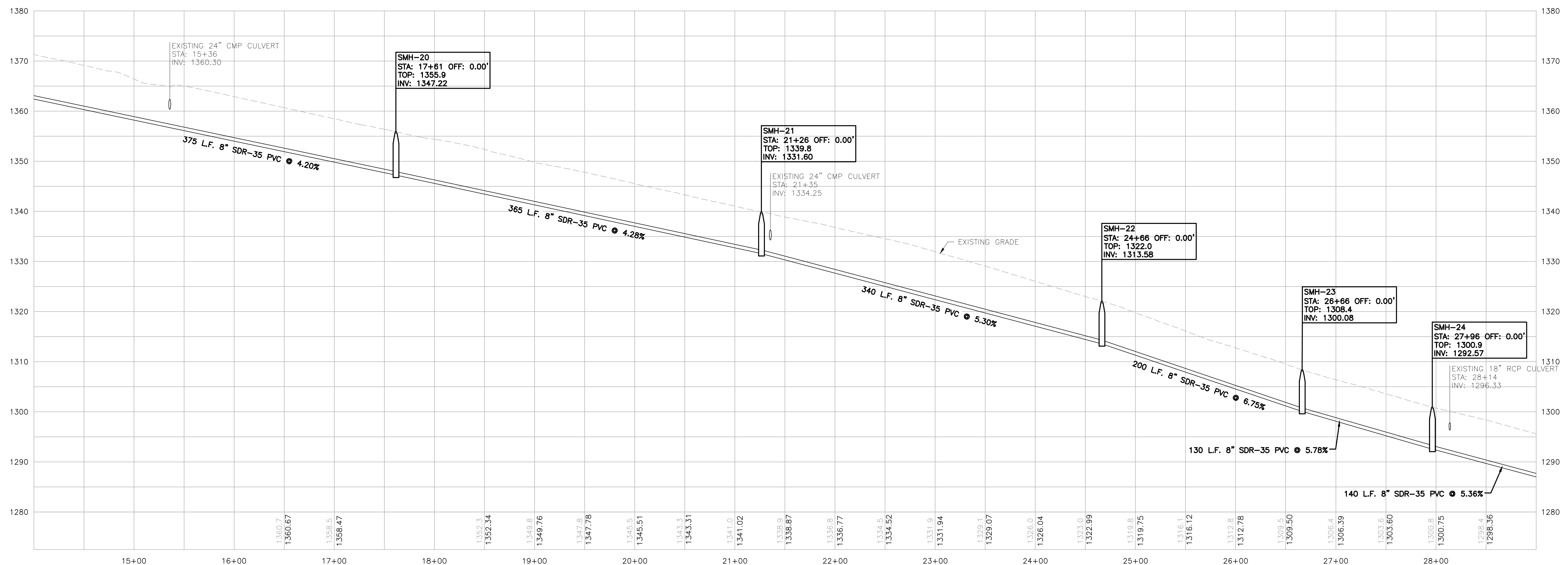
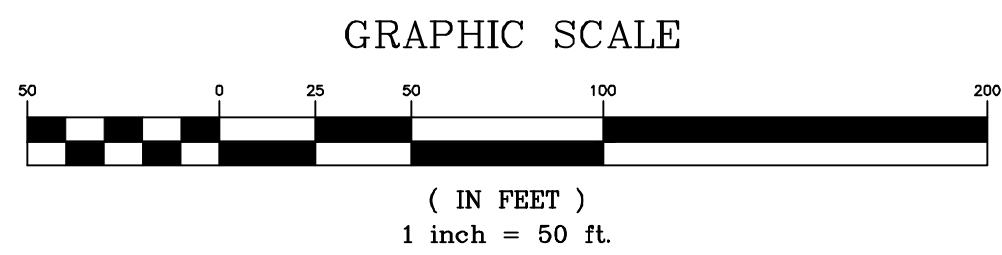
NO.	REVISION AND DESCRIPTION	DATE

WATER AND SNITARY SEWER UTILITIES
THE RETREAT AT BUNN HILL
BUNN HILL ROAD
TOWN OF VESTAL
BROOME COUNTY, NY
OFF-SITE UTILITIES - SANITARY

SHEET NO.
C153
PROJECT NO.
2983.08319
DATE: 11/01/2022
DAD FILE NO. 298308319-SITE



OFF-SITE SANITARY PLAN SMH-19 - SMH-24



OFF-SITE SANITARY PROFILE SMH-19 - SMH-24

SCALE: HORIZ: 1"=50'
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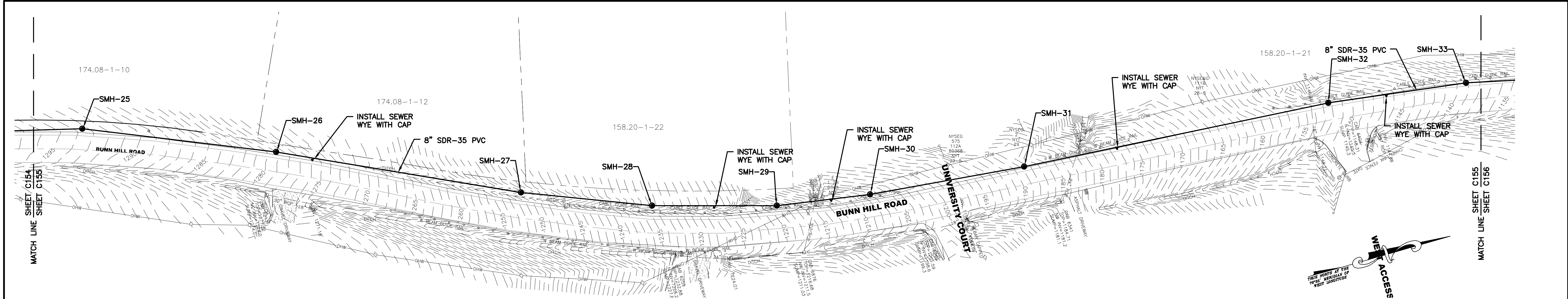


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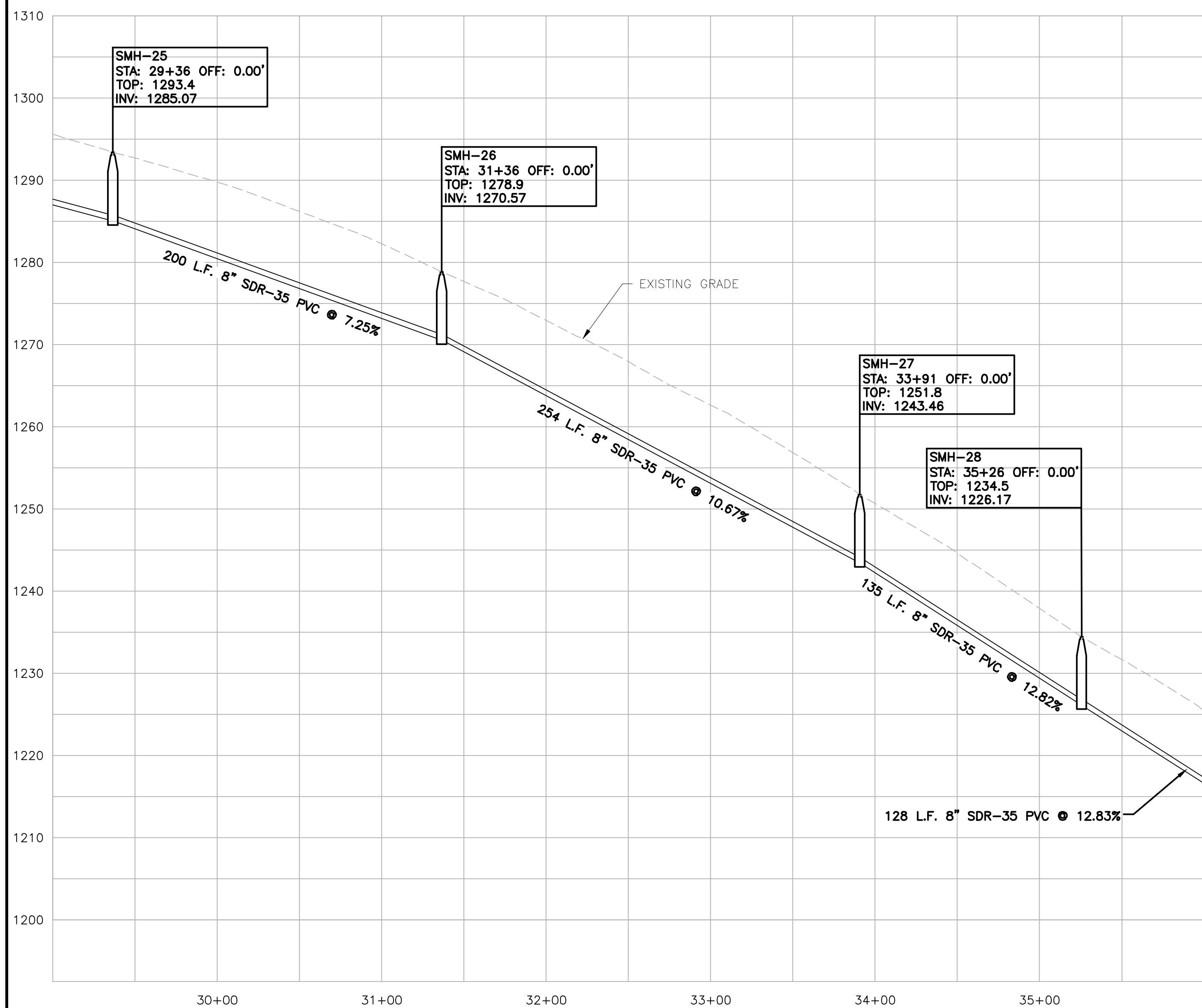
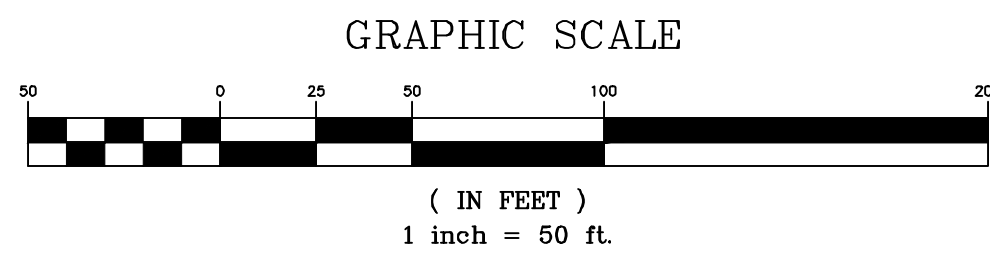
NO.	REVISION AND DESCRIPTION	DATE

WATER AND SANITARY SEWER UTILITIES
THE RETREAT AT BUNN HILL
BUNN HILL ROAD
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BROOME COUNTY, NY
OFF-SITE UTILITIES - SANITARY

SHEET NO.
C154
PROJECT NO.
2983.08319
DATE: 11/01/2022
DAD FILE NO. 298308319-SITE

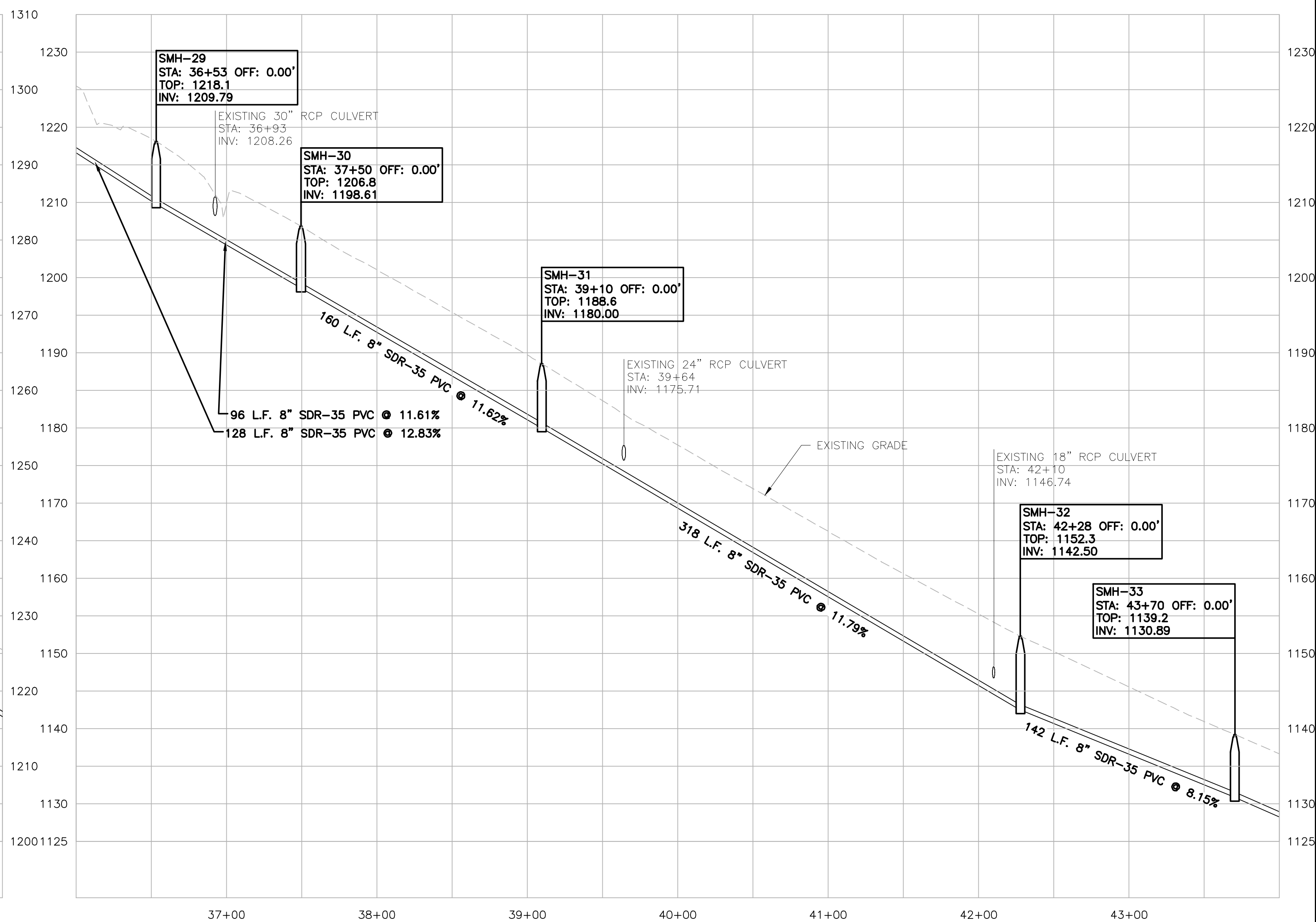


OFF-SITE SANITARY PLAN SMH-25 - SMH-33



OFF-SITE SANITARY PROFILE SMH-25 - SMH-28

SCALE: HORIZ: 1"=50'
VERT: 1"=10'



OFF-SITE SANITARY PROFILE SMH-29 - SMH-33

SCALE: HORIZ: 1"=50'
VERT: 1"=10'

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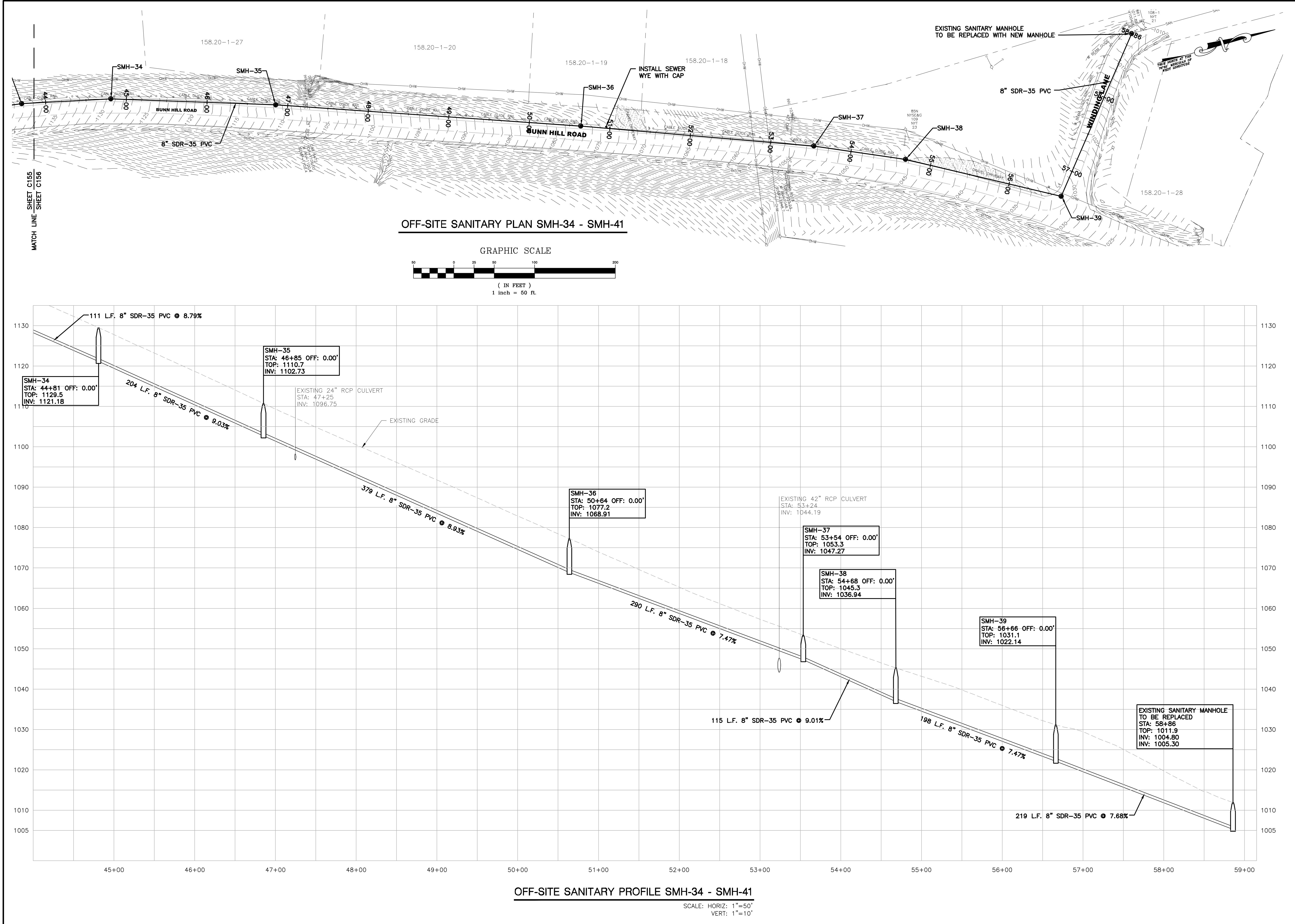


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DATE	REVISIONS AND DESCRIPTIONS	BY

WATER AND SANITARY SEWER UTILITIES
THE RETREAT AT BUNN HILL
BUNN HILL ROAD
TOWN OF VESTAL
BROOME COUNTY, NY
OFF-SITE UTILITIES - SANITARY

SHEET NO.
C155
PROJECT NO.
2983.08319
DATE: 11/01/2022
SHEET FILE NO. 298308319-SITE



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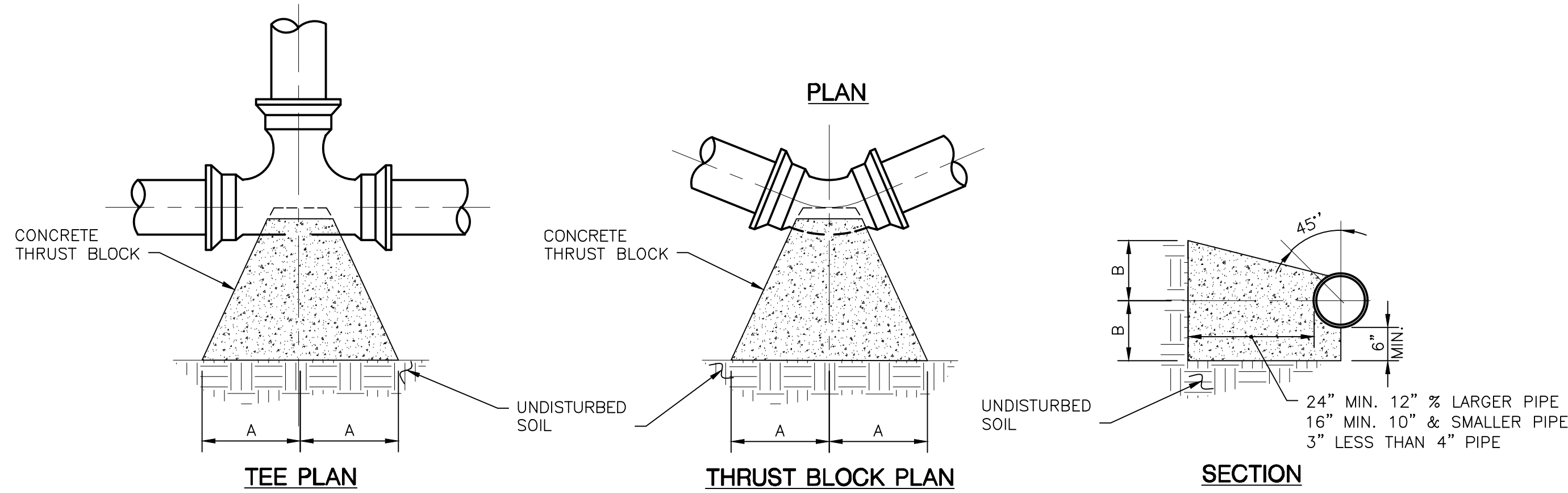
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DATE: 11/01/2022
SHEET NO. **C156**
PROJECT NO. 2983.08319
DATE: 11/01/2022
SHEET NO. 298308319-SITE

WATER AND SNITARY SEWER UTILITIES
THE RETREAT AT BUNN HILL
BUNN HILL ROAD
TOWN OF VESTAL
BROOME COUNTY, NY

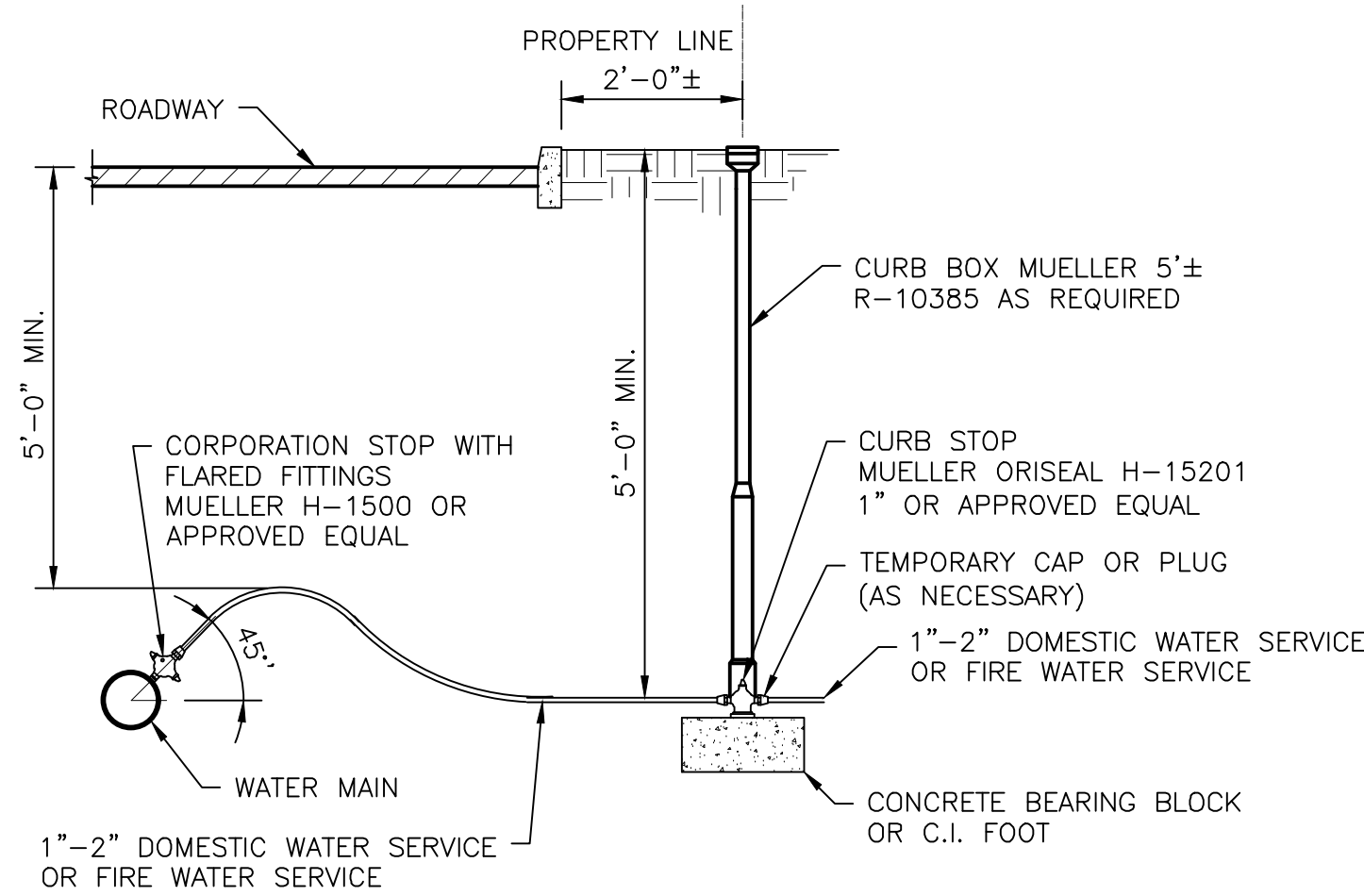
OFF-SITE UTILITIES - SANITARY



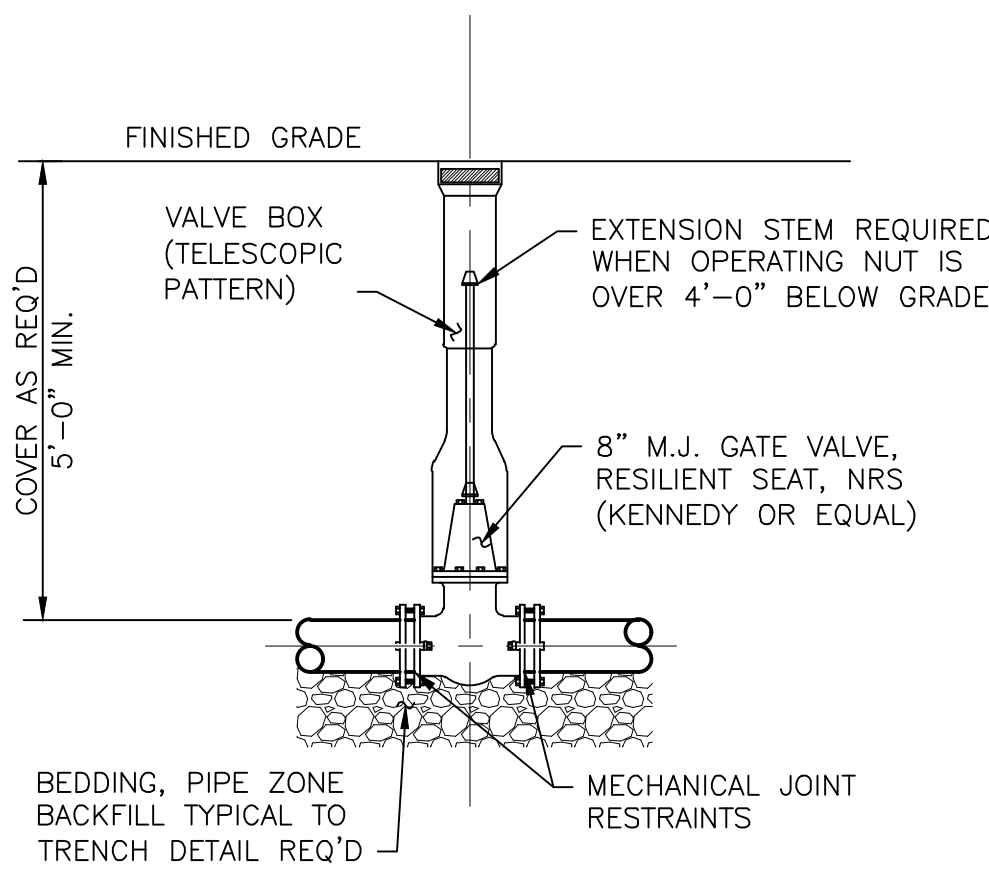
- NOTES:
1. ALL BEARING SURFACES TO BE CARRIED TO UNDISTURBED SOIL.
 2. TABLE SHOW MINIMUM SIZE THRUST BLOCKS FOR GRANULAR SOIL (AASHTO CLASSIFICATION A1 THROUGH A3, CLEAN SAND AND GRAVELS).
 3. POOR SOIL (AASHTO CLASSIFICATION A4 THROUGH A8, SILTY SOILS, CLAYS, MUCK, AND PEAT) WILL REQUIRE LARGER THRUST BLOCKS.
 4. WHEN POSSIBLE JOINTS TO BE TIED WITH 3 - 3/4" RODS TO RESTRAINER ON STRAIGHT PIPE IN LIEU OF THRUST BLOCKING.
 5. QUANTITY OF CONCRETE USED FOR THRUST BLOCKING SHALL BE SUFFICIENT TO CREATE A BLOCK WITH BEARING AREA OF DIMENSIONS SHOWN AGAINST UNDISTURBED EARTH.

SIZE OF WATER MAIN	TEE		90° BEND		45° BEND		22 1/2° BEND		11 1/4° BEND	
	A	B	A	B	A	B	A	B	A	B
<4"	9"	6"	5"	5"	4"	4"	4"	4"	4"	4"
4"	9"	6"	13"	6"	6"	6"	6"	6"	6"	6"
6"	10"	12"	16"	10"	9"	10"	6"	8"	6"	8"
8"	13"	16"	22"	13"	12"	13"	8"	10"	8"	10"
10"	16"	20"	26"	17"	14"	17"	10"	13"	10"	13"
12"	18"	24"	29"	21"	16"	21"	11"	16"	11"	16"
16"	20"	28"	31"	26"	18"	25"	12"	19"	12"	19"

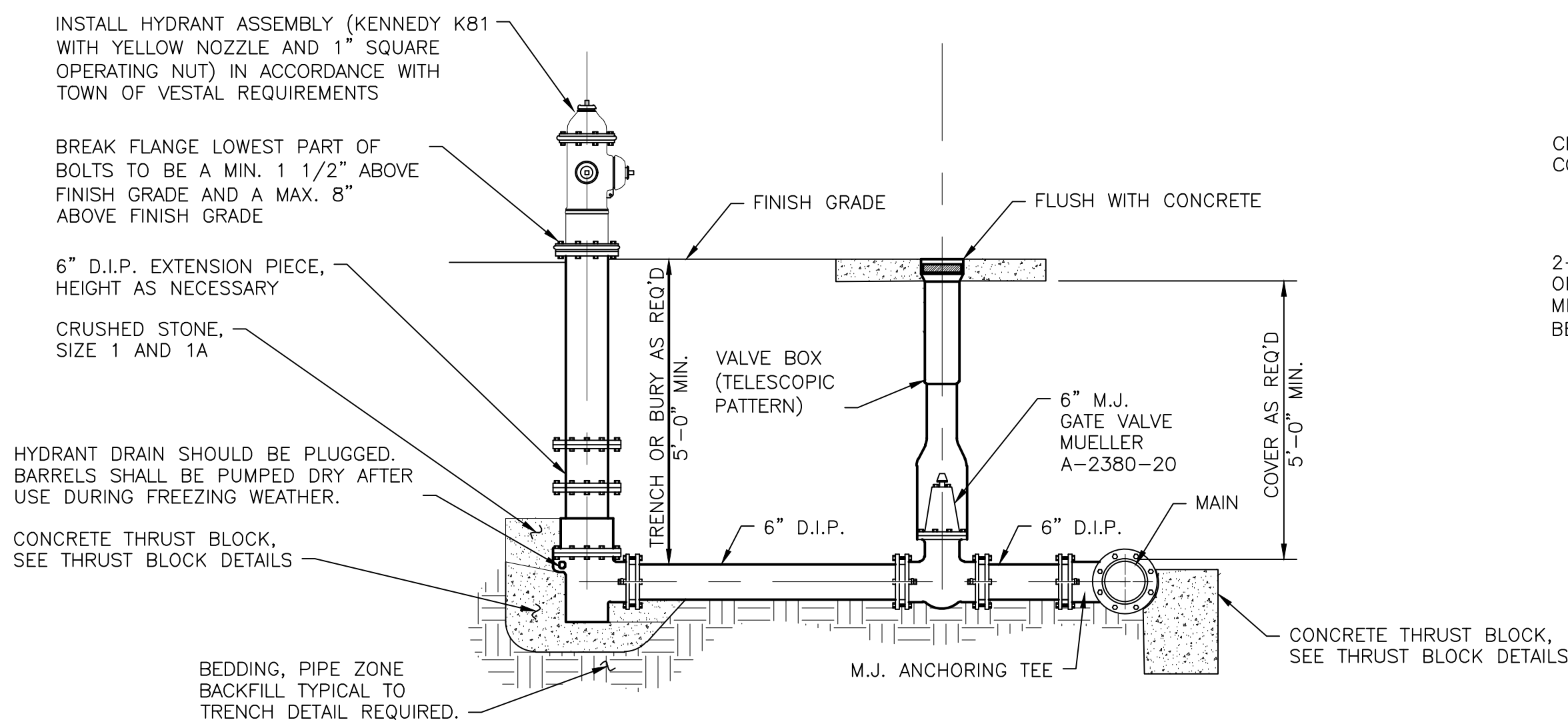
1 TEE ANCHOR/THRUST BLOCK DETAIL
C202 N.T.S.



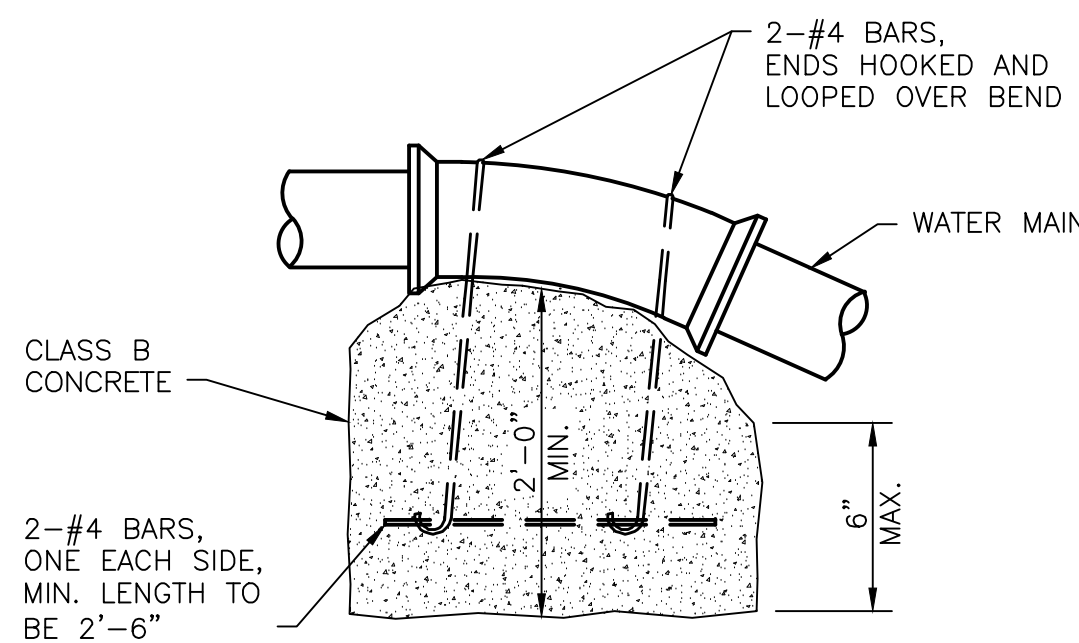
2 WATER SERVICE DETAIL
C202 N.T.S.



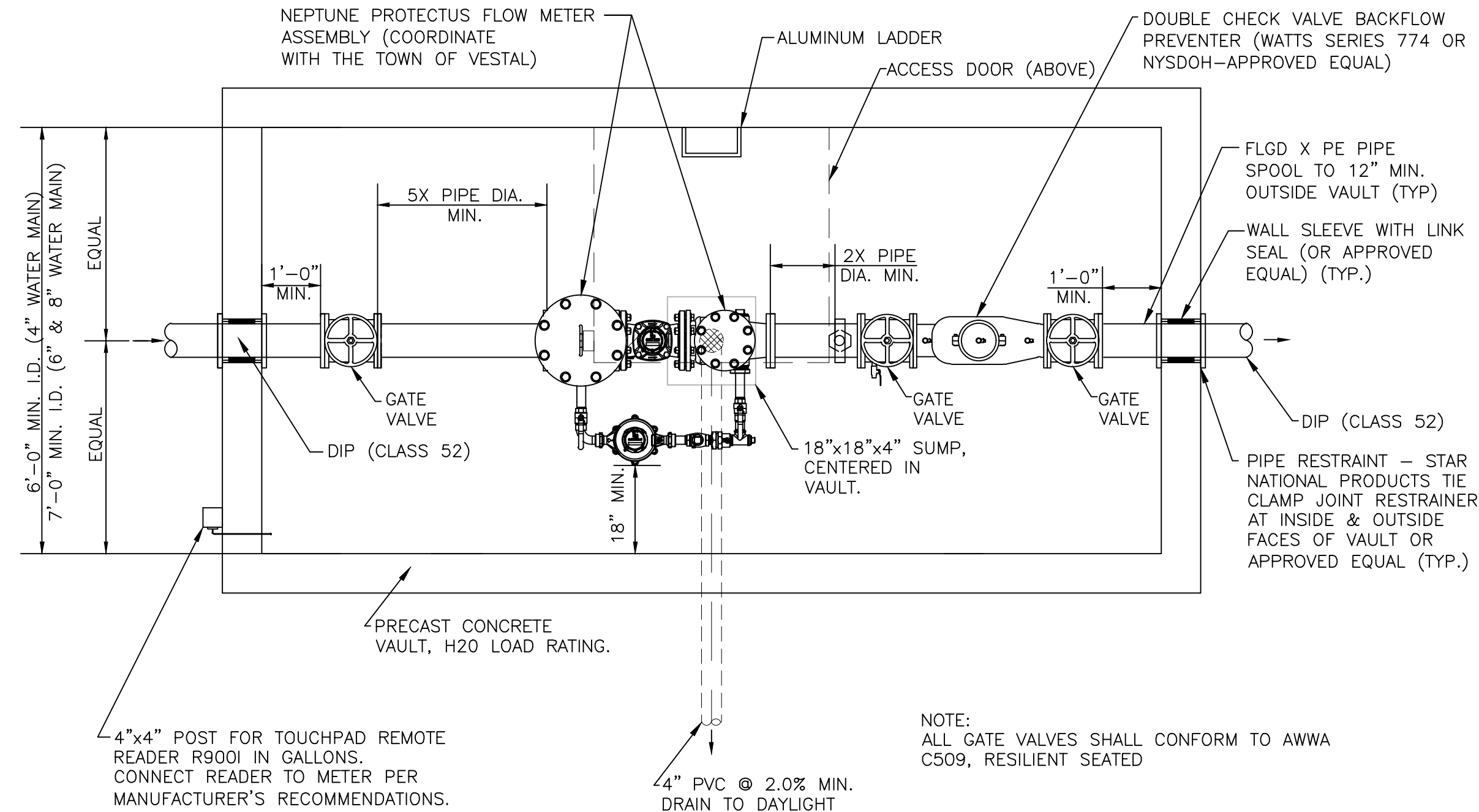
3 VALVE BOX DETAIL
C202 N.T.S.



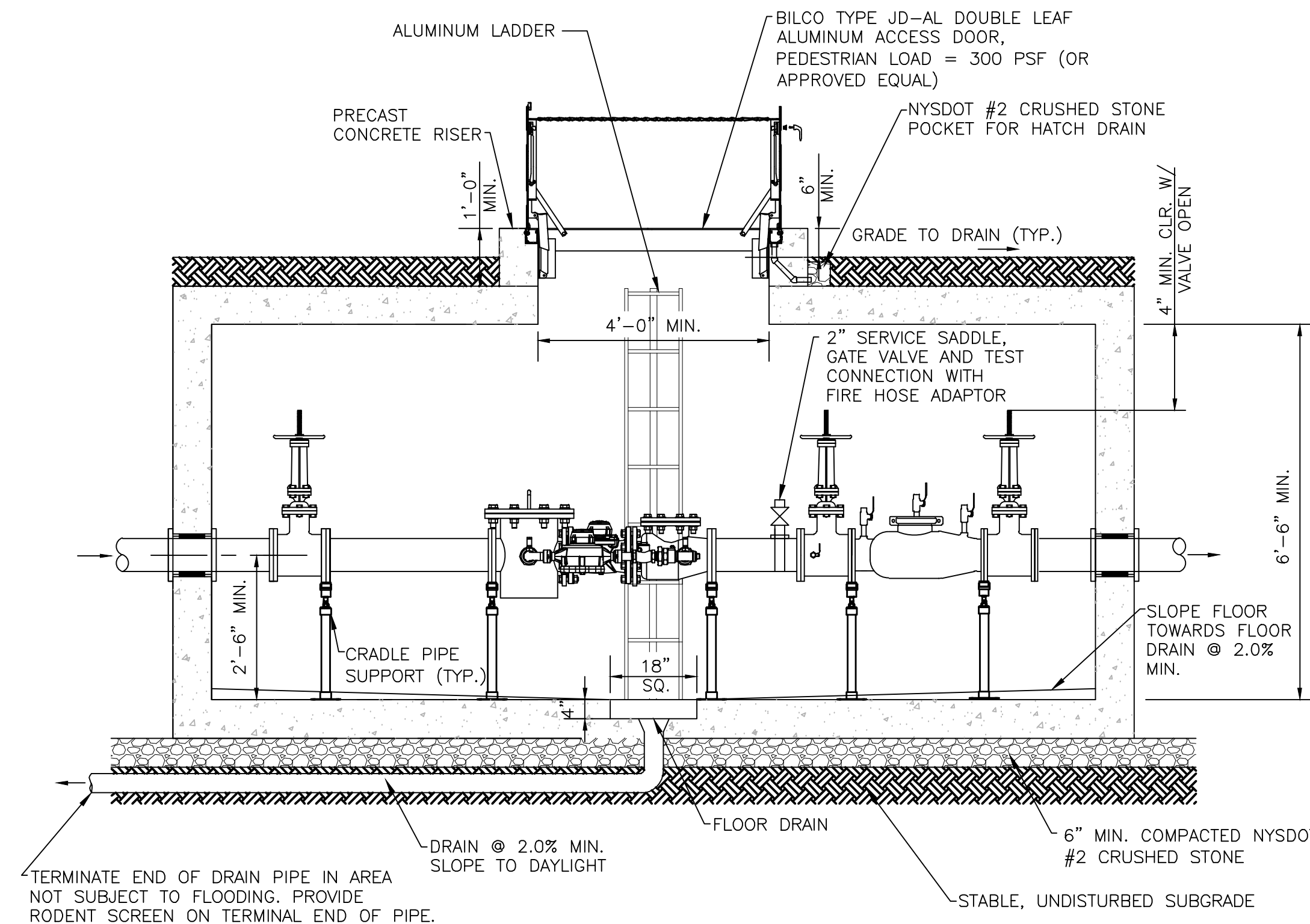
4 HYDRANT ASSEMBLY DETAIL
C202 N.T.S.



5 CONCRETE ANCHOR DETAIL
C202 N.T.S.



INTERIOR PLAN

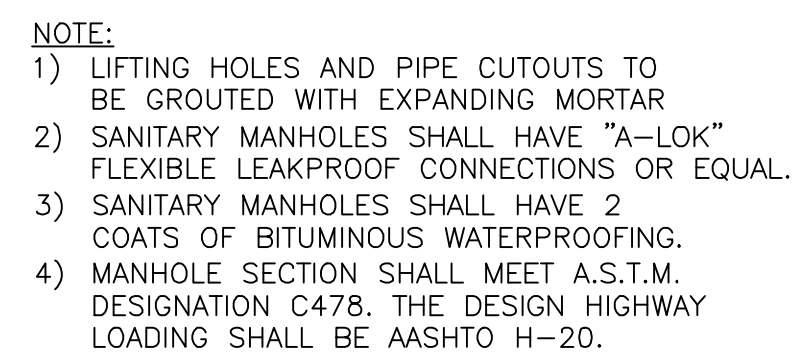


ELEVATION

NOTES:

1. DETAIL APPLICABLE FOR NON-HEALTH HAZARD APPLICATIONS ONLY. DETAIL NOT APPLICABLE FOR HEALTH HAZARD APPLICATIONS WHERE REDUCED PRESSURE ZONE (RPZ) BACKFLOW PREVENTER IS REQUIRED BY AUTHORITY HAVING JURISDICTION.
2. METER AND BACKFLOW PREVENTER MANUFACTURER & MODEL NUMBER TO BE APPROVED BY AUTHORITY HAVING JURISDICTION.
3. SUMP PUMP WITH BACKUP SUMP PUMP WITH 12" DEEP SUMP SHALL BE USED WHERE GRAVITY DRAINAGE TO DAYLIGHT IS NOT POSSIBLE.
4. DOOR MUST OPEN AWAY FROM RUNGS OR LADDER. FIRST RUNG SHOULD BE NO MORE THAN 16" FROM TOP.

6 METER/BACKFLOW PREVENTER VAULT
C202 N.T.S.

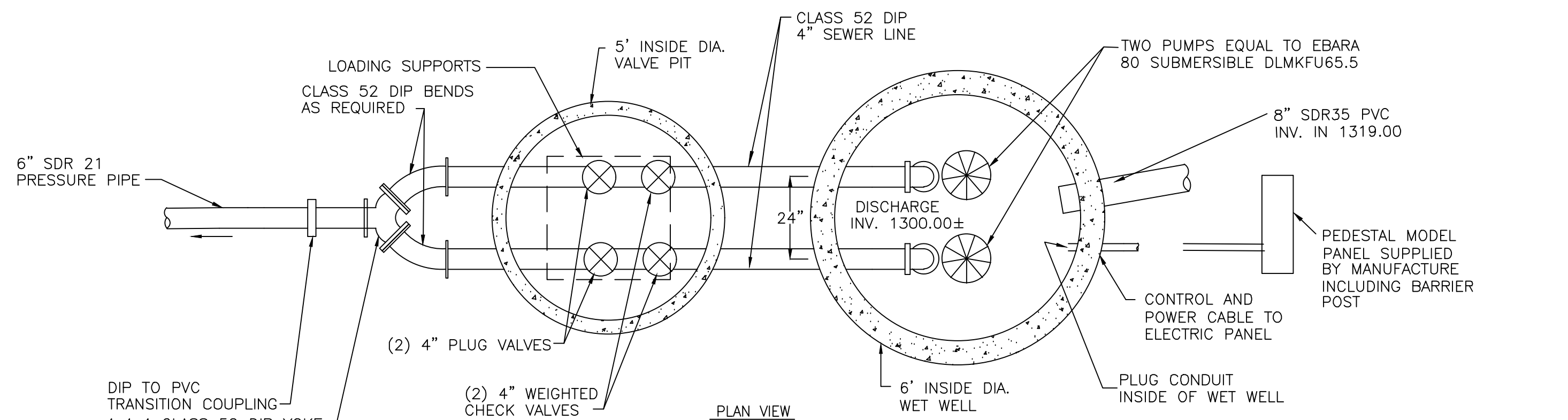


N.T.S.



1. CONCRETE ENCASEMENT NOT REQUIRED IF VERTICAL SEPARATION IS 18" OR GREATER.
2. WATER MAINS CROSSING SEWERS SHALL BE LAID TO PROVIDE A MINIMUM VERTICAL DISTANCE OF 18 INCHES BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF THE SEWER. THIS SHALL BE THE CASE WHERE THE WATER MAIN IS EITHER ABOVE OR BELOW THE SEWER. AT CROSSINGS ONE FULL LENGTH OF SEWER PIPE SHALL BE LOCATED SO BOTH JOINTS WILL BE AS FAR FROM THE SEWER AS POSSIBLE. SPECIAL STRUCTURAL SUPPORT FOR THE WATER AND SEWER PIPES MAY BE REQUIRED.

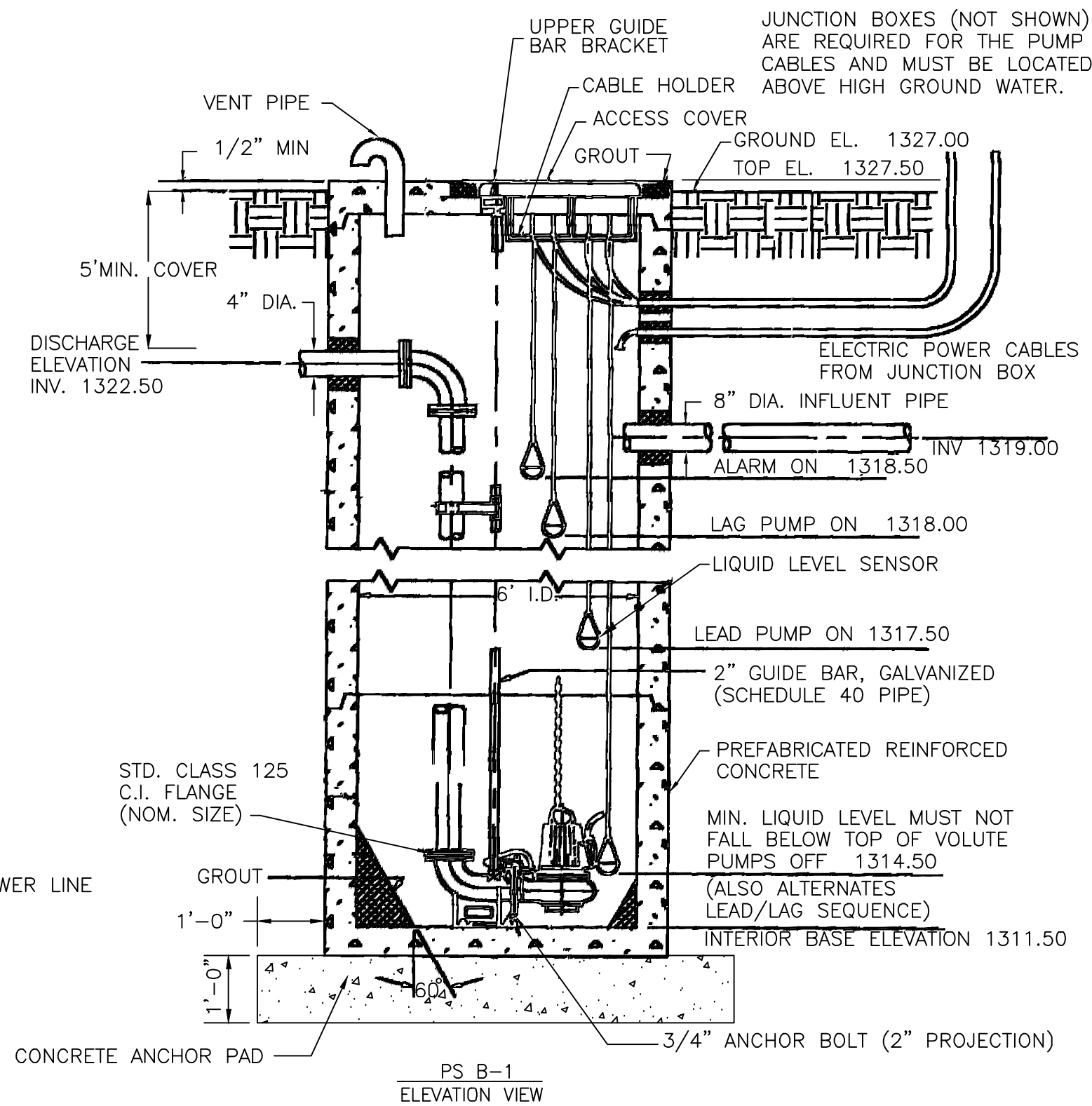
N.T.S.



NOTES:

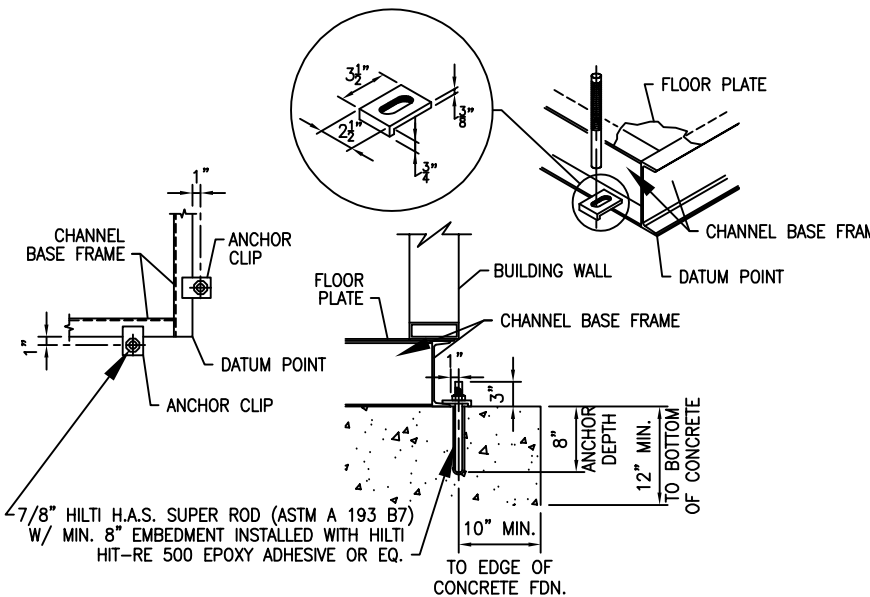
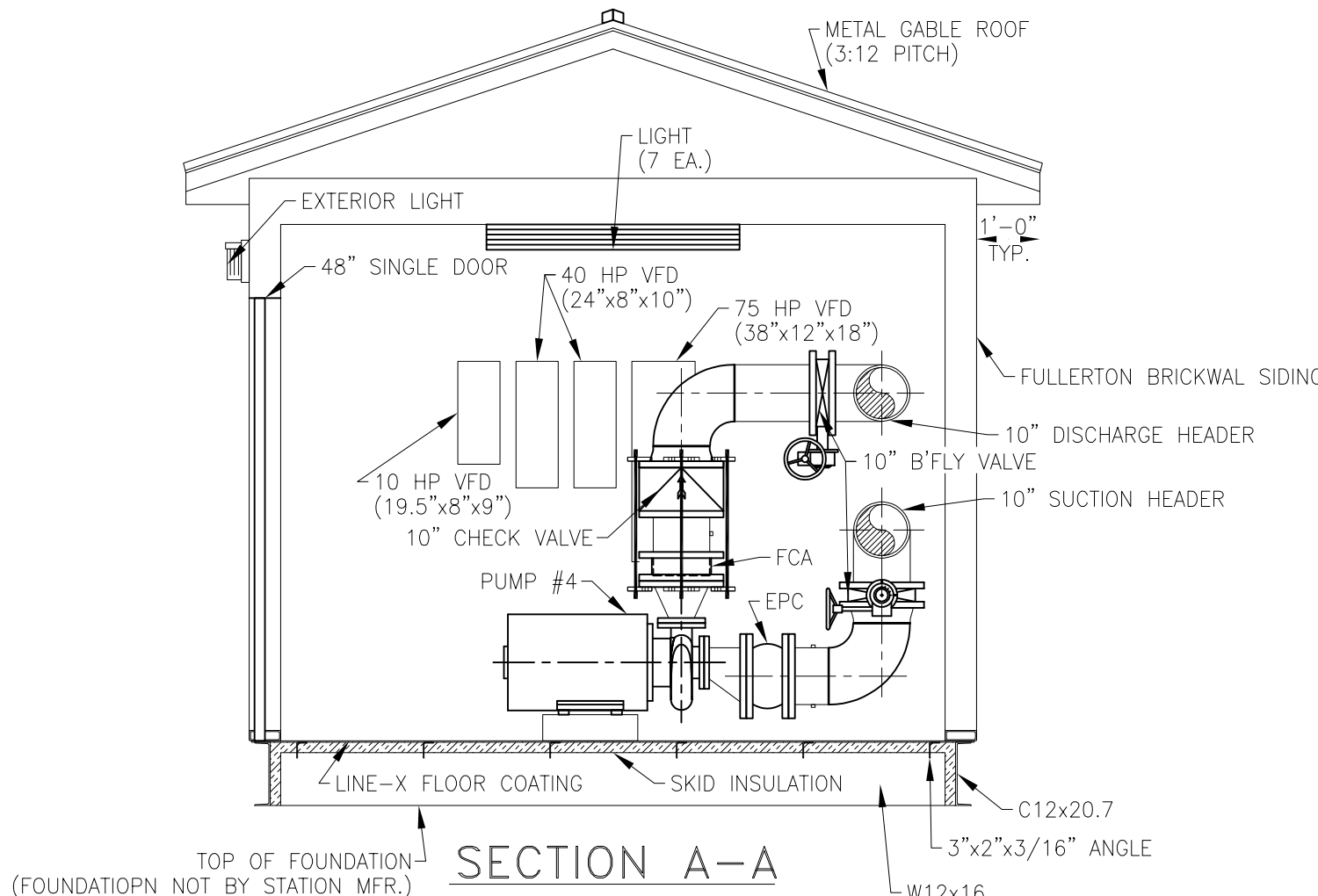
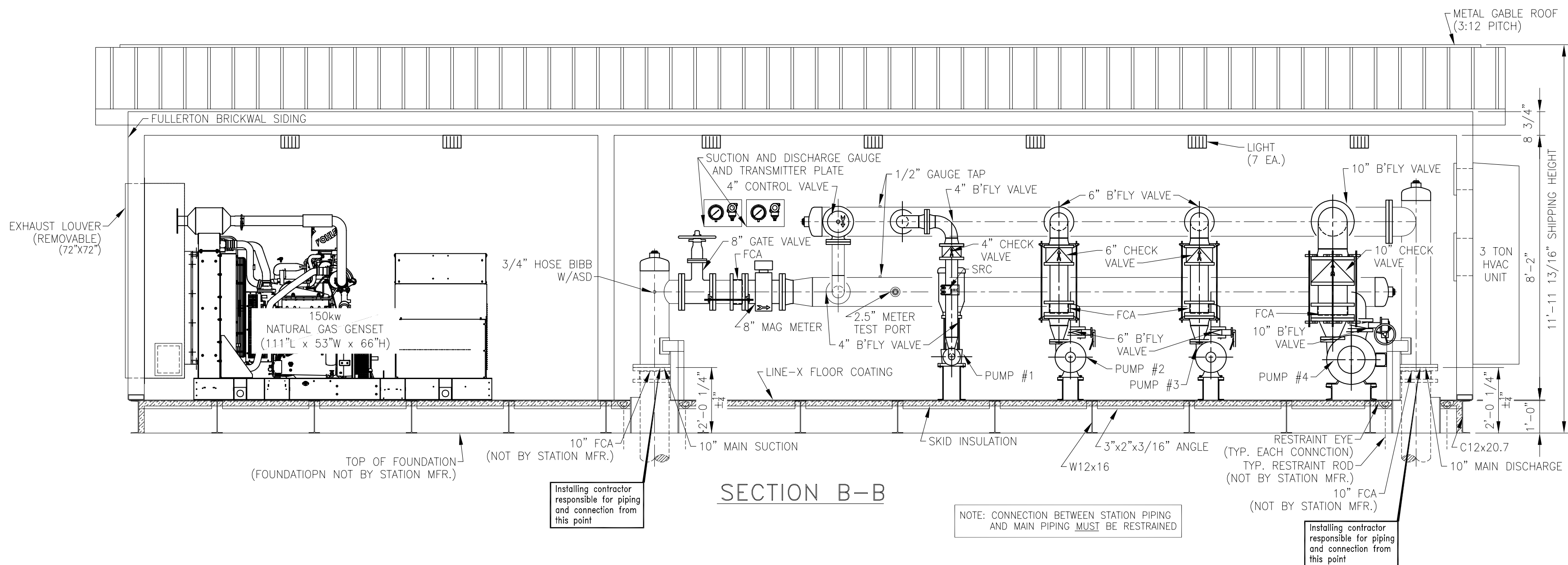
1. PUMPS EQUAL TO EBARA 80 SUBMERSIBLE LLMKFU65.5
2. ALL SEWER OPENINGS TO BE SEALED WITH A-LOK FLEXIBLE SEALS OR EQUIVALENT
3. SEWER LINES AND POWER CABLE MAY NOT BE SHOWN IN EXACT LOCATIONS
4. ACCESS COVER SHALL BE HEAVY DUTY AND SUPPLIED BY PUMP MANUFACTURER. SIZE SHALL BE AS RECOMMENDED BY PUMP MNF. MIN. CAPABILITY A.A.S.H.T.O. HS-20 LOADING SUPPORTS
5. PEDESTAL MOUNTED CONTROL PANEL FURNISHED BY PUMP MNF. SHALL BE REQUIRED
6. CONTRACTOR SHALL CONSTRUCT 3,000 PSI, FIBERGLASS REINFORCED CONCRETE PAD 4'x4'x6" DEPTH OVER 18" GRAVEL BASE IN FRONT OF EACH CONTROL PANEL. INCLUDE COST IN PUMPING STATION PRICE ON PROPOSAL SHEET.
7. CONTRACTOR SHALL PROVIDE A COMPLETE ELECTRICAL INSTALLATION, REQUIRED FOR FURNISHING POWER AND COMMUNICATION SYSTEM REQUIRED FOR ALARMS. COST INCLUDING POLES (IF REQUIRED) CONDUIT, CABLES, CONDUCTORS, UTILITY COMPANY CHARGES, INSPECTIONS, AND ALL CHARGES OF ANY NATURE ARE CONTRACTORS RESPONSIBILITY AND SHALL BE INCLUDED IN THE UNIT PRICE PROPOSAL FOR PUMPING STATIONS.
8. ALL PUMP ACCESSORIES, GUIDE BRACKETS, GUIDE BARS, FLOATS, CABLES, SEALS, VENT PIPE, CABLE HOLDER, AND OTHERS REQUIRED FOR PUMP OPERATION SHALL EITHER BE FURNISHED BY PUMP MNF. OR PUMP SUPPLIER IF AVAILABLE. ACCESSORIES NOT AVAILABLE SHALL CONFORM TO PUMP MNF. SUPPLIER RECOMMENDATIONS.

N.T.S.



GENERAL CONSTRUCTION CONDITIONS		1. THE TERM OF OWNER AS USED IN THESE SPECIFICATIONS AND NOTES SHALL INCLUDE THE OWNER OF THE PROPERTY, THE COMPANY OR PARTY THAT HIRED THE CONTRACTOR, THE COMPANY OR PARTY THAT SIGNED THE CONTRACT FOR THIS WORK AND THE AGENTS OF EACH. THE OWNER'S REPRESENTATIVE SHALL BE THE INDIVIDUAL OR PARTY ASSIGNED BY THE OWNER TO BE THE OWNER'S REPRESENTATIVE.		2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY PERMITS, CONNECTION PERMITS, FEES, INSPECTIONS AND RECORD KEEPING REQUIRED BY ALL MUNICIPAL, UTILITY, HEALTH, ENVIRONMENTAL AGENCIES AND/OR OTHER AGENCIES. IF FURTHERMORE, THE CONTRACTOR SHALL BE RESPONSIBLE TO MEET OR EXCEED ALL REQUIREMENTS OF THE AGENCIES OR AUTHORITIES HAVING JURISDICTION OVER HIS WORK. ALL CONFLICTS IN REQUIREMENTS OF DIFFERENT AGENCIES, AUTHORITIES AND/OR THE DESIGN SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE BEFORE PROCEEDING.		3. THE CONTRACTOR SHALL BE RESPONSIBLE TO LOCATE AND MAINTAIN THE PROPERTY AND PROJECT LIMITS THROUGHOUT THE PROJECT. ALL CONFLICTS BETWEEN THE DESIGN AND THE PROJECT/PROPERTY LIMITS SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE BEFORE PROCEEDING. UNLESS DESCRIBED IN THE CONTRACT DOCUMENTS OR SHOWN ON THE DRAWINGS THE OWNER HAS NOT SECURED ANY RIGHT OF WAYS, EASEMENTS OR AGREEMENTS WITH OTHER PROPERTY OWNERS OR PROPERTY USERS. THEREFORE, IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO SECURE AND MAINTAIN ANY TEMPORARY RIGHT OF WAYS, EASEMENTS, PERMITS OR AGREEMENTS THAT MAY BE NEEDED TO PERFORM HIS WORK. ALL SUCH AGREEMENTS SHALL HOLD THE OWNER, ENGINEER AND HIS AGENTS HARMLESS AND IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO BEAR ALL COSTS. THE CONTRACTOR SHALL COPY THE OWNER ON RELEASES OF ALL AGREEMENTS PRIOR TO FINAL PAYMENT BY THE OWNER TO THE CONTRACTOR.		4. UNLESS OTHERWISE NOTED ON THE DRAWINGS OR IN THE CONTRACT DOCUMENTS THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION SURVEY, LAYOUT AND RECORD DRAWINGS FOR THIS CONTRACT. ANY CONFLICTS IN SURVEY/LAYOUT AND THE DESIGN OR AGENCIES REQUIREMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER'S REPRESENTATIVE PRIOR TO PROCEEDING WITH THE WORK. THE CONTRACTOR SHALL PROTECT AND SAFEGUARD ALL EXISTING SURVEY MONUMENTS, CONTROL AND TIE-DOWNS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COST ASSOCIATED WITH ERRORS IN THE STAKE-OUT AND LOCATION OF HIS WORK. THE CONTRACTOR SHALL PAY ALL COSTS TO REPAIR OR REPLACE DAMAGED SURVEY MONUMENTS, CONTROL AND TIE-DOWNS.		5. NO CHANGES TO THE DESIGN OR MATERIALS SPECIFIED MAY BE MADE WITHOUT WRITTEN AUTHORIZATION BY THE ENGINEER OR IN THE CASE OF UTILITIES OR ROAD WORK TO BE DEDICATED, THE AUTHORITY RECEIVING DEDICATION. THE CONTRACTOR SHALL PROVIDE TO THE OWNER AT THE END OF THE CONTRACT A RECORD SET OF DRAWING REFLECTING ALL CHANGES MADE BY THE CONTRACTOR DURING CONSTRUCTION.		6. EROSION CONTROL IS NECESSARY WHEN SEDIMENT, DUST, EROSION, OR CONTAMINATED RUN-OFF MAY OCCUR. THE CONTRACTOR SHALL BE RESPONSIBLE TO PLACE AND MAINTAIN EROSION CONTROL OR RUN-OFF PROTECTION AS REQUIRED TO PROTECT HIS WORK, THE WORK OF HIS SUBCONTRACTORS, OR OTHER PARTIES ASSOCIATED WITH THE PROJECT, ADJACENT PROPERTIES AND THE HEALTH AND WELL BEING OF THE WORKERS, PUBLIC AND SURROUNDING NATURAL RESOURCES. THE CONTRACTOR SHALL MAINTAIN AND OPERATE ALL STATE AND LOCAL REQUIREMENTS REGARDING EROSION AND RUN-OFF CONTROL AND SHALL SIGN A CERTIFICATION STATEMENT INDICATING THAT HE UNDERSTANDS AND WILL COMPLY WITH THE SITE'S STORMWATER POLLUTION PREVENTION PLAN IF ONE WAS PREPARED FOR THE PROJECT.		7. THE CONTRACTOR SHALL BE FAMILIAR WITH THE PROJECT SITE AND ALL ADJACENT PEDESTRIAN, TRAFFIC AND BUSINESS USES. THE CONTRACTOR SHALL TAKE WHAT EVER PRECAUTIONS AND STEPS NECESSARY TO MAINTAIN AND OPERATE THESE USES IN ACCORDANCE WITH FEDERAL, STATE, COUNTY AND LOCAL REQUIREMENTS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COSTS AND DAMAGES CAUSED FROM HIS FAILURE TO TAKE PROPER AND ADEQUATE PRECAUTIONS. THE CONTRACTOR SHALL BE FAMILIAR WITH ALL FEDERAL, STATE AND LOCAL REQUIREMENTS REGARDING THESE USES INCLUDING BUT NOT LIMITED TO THE MAINTENANCE AND PROTECTION OF TRAFFIC REQUIRED BY THE STATE DEPARTMENT OF TRANSPORTATION.		8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COSTS AND DELAYS ASSOCIATED WITH WEATHER, GROUNDWATER, AND OTHER OCCURRENCES THAT COULD BE EXPECTED OR ARE COMMON WITH THIS TYPE WORK. THE CONTRACTOR SHALL REVIEW ALL PERTINENT DOCUMENTS INCLUDING SOILS REPORTS, SOILS BORINGS AND OTHER SOIL OR SITE DATA.		9. THE CONTRACTOR SHALL BE RESPONSIBLE TO SAVE AND PROTECT HIS WORK THROUGHOUT THE CONTRACT. ANY DAMAGES REQUIRING REPAIRS OR REPLACEMENT SHALL BE CORRECTED BY THE CONTRACTOR AT HIS EXPENSE.		10. WHEN WORK IS DONE WITHIN A ROAD, UTILITY OR PRIVATE EASEMENT, RIGHT-OF-WAY, OR OTHER PROPERTY AGREEMENT THE CONTRACTOR SHALL DO ALL WORK WITHIN THAT AREA PER THE AUTHORITY HAVING JURISDICTION.		11. WHEN SEPARATE SITE AND BUILDING CONTRACTS ARE PERFORMED THE SITE CONTRACTOR SHALL BE RESPONSIBLE TO BRING UTILITIES TO WITHIN 5 FEET OF BUILDING FACE UNLESS NOTED OTHERWISE ON DRAWINGS OR CONTRACT DOCUMENTS.		12. ALL EXISTING UTILITIES ARE SHOWN PER SURFACE SURVEYS AND/OR RECORD MAPS AND MAY VARY FROM ACTUAL IN FIELD LOCATIONS. THE CONTRACTOR IS RESPONSIBLE FOR ALL UTILITY STAKEOUTS AND LOCATING UTILITIES PRIOR TO COMMENCING WORK. ANY DAMAGE TO UTILITIES DUE TO IMPROPER STAKEOUT, LACK OF STAKEOUT OR THE FAILURE TO VERIFY DIFFERENCES BETWEEN DRAWINGS AND ACTUAL FIELD CONDITIONS WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR/REPLACE AND NOT EXEMPT FROM PAYMENT TO THE CONTRACTOR.		13. THE CONTRACTOR SHALL FURNISH AND APPLY WATER AND/OR CALCIUM CHLORIDE AS NECESSARY TO CORRECT DUSTY CONDITIONS RESULTING FROM LOCAL TRAFFIC ON THE STREET OR CONTRACTORS OPERATIONS.		14. REFER TO PROJECT MANUAL, IF APPLICABLE, FOR ADDITIONAL CONTRACT REQUIREMENTS AND SPECIFICATIONS.		CLEAR AND GRUB		1. THE CONTRACTOR SHALL REVIEW PLANS AND IDENTIFY AND SAFELY MARK ALL PLANTS AND TREES TO BE SAVED. THE CONTRACTOR SHALL PROTECT ALL PLANTS AND TREES TO BE SAVED THROUGHOUT THE CONTRACT. THIS SHALL INCLUDE PROHIBITING ANY WORK WITHIN THE DRIP LINE OF THE TREE EXCEPT UNDER THE SUPERVISION OF A LICENSED LANDSCAPE ARCHITECT.		2. ALL AREAS TO BE CLEARED AND GRUBBED SHALL BE SURVEYED IN THE FIELD TO ESTABLISH THE APPROPRIATE LIMITS OF WORK.		3. THE CONTRACTOR SHALL TAKE WHATEVER MEASURES NECESSARY TO LOCATE AND PROTECT EXISTING UTILITIES, STRUCTURES, AND OTHER FACILITIES TO REMAIN.		4. ALL TREES, SHRUBS, STUMPS, ROOTS AND OTHER DEBRIS SHALL BE REMOVED FROM SITE AND DISPOSED OF IN A LEGAL MANNER.		5. NO BURNING OR BURYING WILL BE ALLOWED ON SITE.		EARTHWORK		1. PRIOR TO STARTING ANY CUTS OR FILLS THE CONTRACTOR SHALL STRIP AND STOCKPILE ALL TOPSOIL. STRIPPING OF TOPSOIL CAN ONLY COMMENCE AFTER THE CLEAR AND GRUB OPERATIONS ARE COMPLETE IN THAT AREA. TOPSOIL SHALL BE STOCKPILED IN AREAS DESIGNATED ON THE PLANS OR APPROVED BY THE OWNER'S REPRESENTATIVE. THE CONTRACTOR SHALL REVIEW THE SOILS REPORTS, BORING LOGS AND WHEN NECESSARY HIS OWN FIELD VERIFICATION SO AS TO BE FAMILIAR WITH THE DEPTH OF TOPSOIL. THE CONTRACTOR SHALL TAKE ALL REASONABLE PRECAUTIONS TO PREVENT OVER AND UNDER REMOVAL OF TOPSOIL.		2. THE GRADES SHOWN ON THE PLANS UNLESS OTHERWISE NOTED ARE FINISHED GRADES, THEREFORE, PAVEMENT, FLOORS, SUBBASE AND OTHER IMPROVEMENTS MUST BE SUBTRACTED TO CALCULATE SUBGRADE ELEVATIONS.		3. THE CONTRACTOR SHALL MAINTAIN A SURVEY GRID OF NOT LESS THAN 100' X 100' OR OTHER MEANS ACCEPTABLE TO THE OWNER'S REPRESENTATIVE THAT WILL INDICATE LOCATION AND AMOUNT OF CUT OR FILLS REMAINING. AT SUBGRADE THIS GRID SHALL BE 50' X 50' WITH LOCATION AND FINAL GRADE MARKED CLEARLY OR SURVEY SHALL BE COMPLETED DEMONSTRATING THAT THE SUBGRADE IS ±0.1FEET OF REQUIRED SUBGRADE.		4. UNLESS OTHERWISE NOTED ON THE DRAWINGS OR IN THE CONTRACT DOCUMENTS THE CONTRACTOR SHALL RETAIN AND PAY ALL COST FOR SOIL COMPACTION TESTING TO BE PERFORMED BY AN INDEPENDENT TESTING LABORATORY. TESTING FOR COMPACTION SHALL BE DONE EVERY 1000 SQ. FT. EACH LIFT. IN TRENCHES COMPACTION TESTING SHALL BE DONE EVERY 100 LF. EVERY OTHER LIFT, BUT NOT LESS THAN 1 TEST EVERY OTHER LIFT.		5. COMPACTION REQUIREMENTS FOR THOSE OUTLINED IN THE SOILS REPORT. IF THE SOILS REPORT IS NOT CLEAR OR DOES NOT GIVE REQUIREMENTS THE FOLLOWING WILL BE USED, UNDER AND TO 20 FEET OUTSIDE THE BUILDING ENVELOPE THE SOILS SHALL BE COMPACTED TO A MINIMUM OF 95% MAXIMUM DRY DENSITY PER ASTM D1557 (MODIFIED PROCTOR). UNDER PROPOSED OR FUTURE PAVEMENT AREAS INCLUDING 10 FEET OUTSIDE SUCH AREAS THE SOIL SHALL BE COMPACTED TO A MINIMUM OF 95% MAXIMUM DRY DENSITY PER ASTM D1557 (MODIFIED PROCTOR). ALL LANDSCAPE AND LAWN AREAS SHALL BE COMPACTED TO 90% MAXIMUM DRY DENSITY PER ASTM D1557 (MODIFIED PROCTOR). THE TESTING LAB SHALL TEST SOILS IN ACCORDANCE WITH ASTM D2922 (NUCLEAR METHOD) WITH PROCTORS FOR EACH SOIL TYPE.		6. UNLESS OTHERWISE NOTED IN THE SOILS REPORT OR ON THE DRAWINGS THE ON SITE MATERIAL SHALL BE USED TO MAKE FILLS. ALL MATERIAL TO BE USED FOR FILL SHALL BE FREE OF ORGANICS, FROZEN MATERIAL, CONTAMINATED MATERIAL, DEBRIS AND ANY ROCKS LARGER THAN 4 INCHES. FOR FILL PLACED WITHIN 1 FOOT OF SUBGRADE NO ROCK SHALL BE GREATER THAN 2 INCHES IN DIAMETER. THE CONTRACTOR SHALL BEAR ALL COST ASSOCIATED WITH DRYING, SEGREGATING OR OTHER REQUIRED METHODS TO TREAT SOILS TO MEET COMPACTION AND OTHER REQUIREMENTS.		7. FILLS SHALL BE PLACED IN LIFTS NOT TO EXCEED 1 FOOT IN MASS FILLS AND 8 INCHES IN TRENCH OR RESTRICTED AREAS.		8. IF IMPORTED MATERIAL IS REQUIRED THE SOURCE AND A RANDOM COMPOSITE SAMPLE SHALL BE REVIEWED BY THE TESTING LABORATORY PRIOR TO BEING BROUGHT TO SITE. IMPORTED MATERIAL SHALL HAVE THE TOP 18" OF THE MATERIAL TESTED FOR THE FOLLOWING: 10% PASSING THE NO. 100 SIEVE, 10% PASSING THE NO. 200 SIEVE, 10% PASSING THE NO. 40 SIEVE AND 15% PASSING THE NO. 200 SIEVE. WAIVERS TO THESE REQUIREMENTS ONLY BE GIVEN JOINTLY BY THE OWNER AND THE GEOTECHNICAL ENGINEER THAT PREPARED THE SOILS REPORT.		9. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EARTHWORK OPERATIONS AND WEATHER AND GROUND WATER INCLUDING KEEPING POSITIVE DRAINAGE, DIVERT DRAINAGE, DEWATERING, AND SEALING DISTURBED AREAS WITH A STEEL DRUM ROLLER PRIOR TO INCOLEMENT WEATHER.		10. PRIOR TO PLACEMENT OF FILLS THE AREA SHALL BE PROOF ROLLED WITH A 10 TON ROLLER OR A LOADED 10 WHEEL PUMP TRUCK. SOFT AREAS SHALL BE SCARIFIED, DRIED, AND RECOMPACTED PRIOR TO FILL BEING PLACED. RETEST BY PROOF ROLL AS NECESSARY.		11. ALL FINAL SUBGRADE UNDER PROPOSED PAVEMENT, BUILDING OR OTHER STRUCTURE SHALL BE PROOF ROLLED AS DESCRIBED ABOVE FOR IDENTIFYING OF SOFT AREAS. AREAS FOUND TO BE UNACCEPTABLE SHALL BE SCARIFIED, DRIED, AND RECOMPACTED. RETEST BY PROOF ROLL AS NECESSARY.		12. TRENCH EXCAVATION REQUIRING SHEETING, SHORING, OR OTHER STABILIZING DEVICES SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER AND MEET ALL O.S.H.A. REQUIREMENTS. ALL EXCAVATIONS SHALL MAINTAIN SAFE SIDE SLOPES IN ACCORDANCE WITH LOCAL, STATE, AND O.S.H.A. REQUIREMENTS. NO STOCKING OF MATERIAL CLOSE TO AN OPEN CUT OR STEEP SLOPE WILL BE PERMITTED IN AN EFFORT TO PREVENT CAVE-INS.		13. TRENCH EXCAVATIONS SHALL BE MADE UNIFORM AND STRAIGHT TO THE FOLLOWING WIDTHS: (FOR PIPES 36 INCHES OR LESS THE TRENCH WIDTH SHALL BE THE DIAMETER PLUS 2 FEET), (FOR PIPES 42 INCHES OR GREATER THE TRENCH WIDTH SHALL BE THE DIAMETER PLUS 3 FEET) ADDITIONAL WIDTH WILL ONLY BE ALLOWED WHEN COMPACTION EQUIPMENT LIMITATIONS REQUIRE AND ONLY AFTER APPROVAL OF THE ENGINEER. NO MORE TRENCH SHALL BE OPEN IN ONE DAY THAN CAN BE PROPERLY BACKFILLED IN THAT SAME DAY TO MINIMIZE WEATHER AND SAFETY CONCERNS. WHEN BACKFILLING AROUND PIPES PROVIDE UNIFORM SUPPORT AT INVERT AND PROPER COMPACTION UNDER, ALONG AND OVER THE PIPE. CARE SHALL BE GIVEN WHILE BACKFILLING AROUND PIPES TO PREVENT DAMAGE TO THE PIPES INCLUDING PLACING BACKFILL/BEDDING BY HAND, USING HAND OPERATED PLATE TAMPS OR JUMPING JACKS AND OTHER LOAD RESTRICTIVE TECHNIQUES UNTIL FILLS ARE A MINIMUM OF 2 FEET, OR MANUFACTURER'S RECOMMEND DEPTH, WHICHEVER IS GREATER, ABOVE THE TOP OF THE PIPE. COMPACTION REQUIREMENTS ARE NOT RELIEVED IN THESE AREAS AND WILL REMAIN AS STATED ON THE DRAWINGS OR ABOVE.		14. IF ROCK IS ENCOUNTERED THAT WAS NOT INDICATED ON THE PLANS OR SOILS REPORT, THE AREA FOR REMOVAL SHOULD BE MEASURED AND REVIEWED WITH THE OWNER'S REPRESENTATIVE PRIOR TO ROCK REMOVAL. ROCK WILL BE REMOVED AS THE NATURAL EARTH MATERIALS THAT CAN NOT BE REMOVED WITH CONVENTIONAL EARTH WORKING EQUIPMENT.		15. WHERE ROCK IS ADJACENT TO A STRUCTURE OR UTILITY THE ROCK SHALL BE REMOVED TO A MINIMUM OF 6 INCHES BELOW AND 1 TIMES THE DIAMETER BUT NOT LESS THAN 1 FOOT OR GREATER THAN 3 FEET ON ANY SIDE OF THE UTILITY OR STRUCTURE.		16. NO EXPLOSIVES WILL BE ALLOWED UNTIL ALL PERMITS ARE GRANTED AND THE OWNER HAS SIGNED OFF. PRE AND POST BLAST RECORDS MUST BE KEPT AND RECORDED. ALL STRUCTURES WITHIN THE AREA OF THE BLAST MUST RECEIVE A PRE-BLAST SURVEY. ALL BLASTING MUST BE PERFORMED BY A LICENSED BLASTER.		17. UNLESS OTHERWISE NOTED ON THE PLANS, THE CONTRACTOR SHALL REMOVE ALL EXCESS TOPSOIL, CUT MATERIAL OR WASTE FROM SITE AND DISPOSE OF IN A LEGAL MANNER.		EROSION CONTROL		1. PRIOR TO CONSTRUCTION EQUIPMENT ENTERING OR EXITING THE SITE, A STABILIZED CONSTRUCTION ENTRANCE SHALL BE BUILT UNLESS EXISTING CONDITIONS PREVENT ANY TRACKING OF DIRT, MUD, OR DEBRIS OFF OF THE SITE. THE CONTRACTOR WILL BE RESPONSIBLE TO KEEP ALL ROADS, PARKING LOTS, SIDEWALKS AND ADJACENT PROPERTIES FREE OF DIRT, MUD OR OTHER DEBRIS. THIS WILL INCLUDE BUILDING THE CONSTRUCTION ENTRANCE, SWEEPING, SCRAPING AND WASHING THE PAVEMENT SURFACES WHENEVER NEEDED. THE CONSTRUCTION ENTRANCE SHALL BE CONSTRUCTED AS SHOWN ON THE PLANS. IF A DETAIL IS NOT PROVIDED CONSTRUCT THE ENTRANCE WITH CLEAN 2 TO 3 INCH STABILIZED OR CRUSHED GRAVEL OVER STABILIZED FABRIC TO THE DIMENSIONS OF 12 FEET WIDE (MINIMUM), BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS, AND 50 LONG. WIDTH SHALL BE 24 FEET IF SINGLE ENTRANCE TO SITE. LENGTH IS REDUCED TO 30 FEET IF FOR A SINGLE RESIDENCE. THE ENTRANCE SHOULD BE LOCATED SO THAT ALL VEHICLES LEAVING THE SITE WILL UTILIZE IT.		2. ALL EROSION CONTROL DEVICES SHALL BE PLACED AS SHOWN ON THE DRAWINGS AND IN ACCORDANCE WITH FEDERAL, STATE, LOCAL, AND MANUFACTURES RECOMMENDATIONS. THE CONTRACTOR SHALL PLACE AND MAINTAIN ALL EROSION CONTROL DEVICES AS NEEDED THROUGHOUT THE PROJECT.		3. SILT FENCE SHALL HAVE HARD WOOD STAKES 2X2 INCH AND 4 FEET LONG WOVEN INTO THE FABRIC. THE BASE OF THE SILT FENCE SHALL BE EXCAVATED SO AS TO PROVIDE AN AREA TO BURY THE BOTTOM OF THE FABRIC AT LEAST 6 INCHES INTO THE GROUND. THE STAKES SHALL BE DRIVEN TO A DEPTH THAT WILL PLACE THE BOTTOM FABRIC AT THE BOTTOM OF THE TRENCH. THEN BACKFILL THE BOTTOM FABRIC ON THE UPSTREAM SIDE WITH THE MATERIAL THAT WAS EXCAVATED.		4. SILT FENCE SHALL BE PLACED WHEREVER SURFACE DRAINAGE CAN LEAVE THE SITE.		5. STONE FILTERS SHALL BE PLACED IN ALL DRAINAGE WAYS BUT NOT IN STREAMS, CREEKS OR RIVERS. STONE FILTERS SHALL CONSIST OF A UNIFORM MIX OF 1/4 TO 3/4 INCH CLEAN STONE WRAPPED IN FILTER FABRIC AND COVERED WITH 4 INCH STONE.		6. SEDIMENT TRAPS SHALL BE PLACED AND MAINTAINED AS NEEDED. THEY SHALL BE SIZED TO PROVIDE ADEQUATE STORAGE TO ALLOW SEDIMENT TO PRECIPITATE OUT PRIOR DISCHARGING DOWN STREAM.		7. TEMPORARY SEEDING SHALL CONSIST OF LIME @ 1/2 TON PER ACRE, FERTILIZER 5-10-10 @ 600 POUNDS PER ACRE, RYEGRASS (ANNUAL OR PERENNIAL) @ 40 POUNDS PER ACRE AND STRAW MULCH @ 2 TON PER ACRE. JUTE MESH SHALL BE PLACED OVER MULCH AND STAKED WHENEVER WINDS OR SLOPE WILL CAUSE THE MULCH AND SEED TO BECOME DEPLETED OR ERODED. AREAS SHALL BE TEMPORARY SEEDED WHEN THEY ARE SUBJECT TO EROSION AND WILL BE DORMANT FOR A MONTH OR MORE.		WATER SYSTEMS AND SERVICES		1. THE WATER SYSTEMS AND SERVICES SHALL BE SUPPLIED AND PLACED IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REQUIREMENTS.		2. ALL WATER PIPING, FITTINGS AND APPURTENANCES SHALL BE PLACED A MINIMUM OF 6 INCHES BELOW FROST LINE OR 5 FEET WHICHEVER IS GREATER.		3. THE MINIMUM SEPARATION BETWEEN WATER SERVICES AND SEWER LINES SHALL BE 18 INCHES MEASURED VERTICALLY FROM OUTSIDE TO OUTSIDE OF PIPE AT THE CROSSING. A STANDARD LENGTH OF WATER PIPE SHALL BE CENTERED AT THE CROSSING TO MAXIMIZE THE DISTANCE BETWEEN THE CROSSING AND THE NEAREST WATER SERVICE PIPE JOINT. WHEN THE WATER SERVICE RUNS UNDER THE SEWER LINE A GRAVEL OR CRUSHED STONE BACKFILL MEETING THE REQUIREMENTS OF SUBBASE SHALL BE PLACED AND COMPACTED AROUND THE WATER PIPE UP HALF THE DIAMETER OF THE SEWER PIPE TO PROVIDE ADEQUATE SUPPORT TO THE SEWER LINE. WATER SERVICES AND SEWER LINES RUNNING PARALLEL SHALL HAVE A MINIMUM SEPARATION OF 10 FEET MEASURED FROM OUTSIDE OF PIPE TO OUTSIDE OF PIPE.		4. D.I.P. (DUCTILE IRON PIPE) PIPE SHALL BE FURNISHED IN ACCORDANCE WITH AWWA C600-93 AND ASTM STANDARDS. C900 DR18 PVC PIPE SHALL BE FURNISHED IN ACCORDANCE WITH AWWA C900-07 AND ASTM STANDARDS.		5. CURB STOPS SHALL HAVE A BRONZE BODY, GROUND KEY PLUG OR BALL WITH WIDE TEE HEAD. THE CURB STOP SHALL BE COMPATIBLE WITH ADJOINING PIPES. THE SERVICE BOX SHALL HAVE A TEE ADSCOPING TOP SECTION WHERE THE LIFT MANHOLE IS LOCATED. THE CURB STOP SHALL BE BURIED TO THE APPROPRIATE DEPTH. THE SERVICE BOX SHALL BE OF A SIZE AND TYPE THAT IS COMPATIBLE WITH THE CURB STOP. THE COVER SHALL HAVE THE LETTERING "WATER".		6. D.I.P. AND C900 DR18 PVC PIPE SHALL BE PLACED PER MANUFACTURES RECOMMENDATIONS AND EMBEDDED IN SAND ENCASEMENTS MEASURED FROM OUTSIDE SURFACE OF THE PIPE TO THE OUTSIDE OF SAND ENCASEMENT. THE SAND SHALL BE WELL GRADED WITH 3/4" MAX. PARTICLE SIZE AND NOT MORE THAN 10% PASSING THE NO. 200 SIEVE.		7. WATER LINES WITH SLOPES GREATER THAN 15% SHALL HAVE A GASKET SYSTEM WHICH WILL PREVENT JOINT SEPARATION. THE GASKET SHALL BE CAPABLE OF WITHSTANDING MAXIMUM WORKING PRESSURES OF 250PSI. PRODUCT MEETING THESE SPECIFICATIONS IS FIELD LOG GASKET SYSTEM BY GRIFFIN PIPE PRODUCTS CO.		8. ALL BEDDING AND ENCASEMENTS SHALL BE COMPACTED WITH CARE TO ACHIEVE PROPER COMPACTION WITHOUT DAMAGING THE PIPE, FITTINGS, OR APPURTENANCES.		9. ALL MAIN LINES AND APPROPRIATE APPURTENANCES SHALL BE FLUSHED AND DISINFECTED IN ACCORDANCE WITH AWWA C651 AND THE REQUIREMENTS OF THE APPROPRIATE HEALTH DEPARTMENT.		10. THE CONTRACTOR WILL COORDINATE ALL TESTING AND DISINFECTING WITH THE HEALTH DEPARTMENT. IF PROFESSIONAL ENGINEER CERTIFICATION IS REQUIRED THE CONTRACTOR SHALL NOTIFY THE OWNER'S REPRESENTATIVE AT LEAST TEN DAYS PRIOR TO THE START OF WORK.		11. FAILURE OF ANY TESTING SHALL REQUIRE THE CONTRACTOR TO REPAIR OR REPLACE THE FAILED SECTION AT NO ADDITIONAL EXPENSE TO THE CONTRACT.		STORMWATER SYSTEM		1. THE STORMWATER SYSTEM SHALL BE SUPPLIED AND PLACED IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REQUIREMENTS. THE LOCAL STORMWATER AUTHORITY FOR THIS PROJECT IS THE TOWN OF VESTAL.		2. STREET DESIGN INCLUDES MANY VARIABLES SUCH AS PIPE ROUGHNESS COEFFICIENT THAT CAN EFFECT THE ACTUAL FINAL RUN-OFF. IF NO ALTERNATIVE MATERIALS ARE LISTED ON THE UTILITY DRAWINGS NO SUBSTITUTIONS MAY BE MADE BY THE CONTRACTOR UNLESS FIRST REVIEWED AND ACCEPTED BY THE ENGINEER.		3. ALL STORM MATERIAL SIZES, TYPES AND SPECIFICS ARE LISTED ON THE DRAWINGS. IF THE PLANS DO NOT LIST ALL INFORMATION OR ARE UNCLEAR USE THE FOLLOWING.		4. CORRUGATED POLYETHYLENE PIPE (HDPE) SHALL BE IN ACCORDANCE WITH AASHTO M252 AND M294 AND ASTM F405 & F687 WITH A MANNNING FRICTION NUMBER (N) OF 0.01 OR LESS. UNLESS SOILS ARE SAND OR SAND AND GRAVEL WITH NOT MORE THAN 15% PASSING THE 200 SIEVE AND 100% PASSING THE 2 INCH SIEVE THE PIPE WILL BE ENCASED IN TYPE 1 GRANULAR FILL FROM 6 INCHES BELOW TO 12 INCHES ABOVE THE OUTSIDE OF PIPE. INSTALL IN ACCORDANCE WITH ASTM F449 AND THE MANUFACTURES RECOMMENDATIONS. TYPE 1 FILL GRADATION REQUIREMENTS ARE:		5. CONCRETE PIPE SHALL BE REINFORCED. PIPE 18" IN DIAMETER OR LESS SHALL BE OF THE BELL AND SPIGOT TYPE. PIPE OVER 18" IN DIAMETER SHALL BE OF THE TONGUE AND GROOVE TYPE (SLIP JOINT). NO PIPE SHALL BE LESS THAN 15" IN DIAMETER.		6. END SECTIONS SHALL BE THE SAME MATERIAL AS THE PRECEDING PIPE WITH APPROPRIATE COLLAR.		7. MANHOLES (MH) AND CATCH BASINS (CB) SHALL BE PROVIDED PER ASTM C478 WITH STEEL CORE POLYETHYLENE STEPS. SIZE TO BE A MINIMUM OF 2 FOOT GREATER THAN THE LARGEST DIAMETER PIPE ENTERING OR EXITING. INCREASE SIZE IF IN THE SAME HORIZONTAL PLANE THERE IS TWO SUPPORTING AREAS BETWEEN PIPES THAT IS LESS THAN 8 INCHES OR THE CIRCUMFERENCE IS SUPPORTED BY LESS THAN 1/2 OF THE DIAMETER OF THE MH OR CB. INVERTS SHALL BE SMOOTH CAST IN PLACE CONCRETE UNLESS SUMPS ARE INDICATED ON THE DETAILS. UNLESS OTHERWISE INDICATED FILTER FABRIC SHALL BE PROVIDED OVER THE PRECAST STONE SHALL BE PROVIDED AT THE CROWN OF PIPES AND AT SUBGRADE ELEVATION. GASKETS BETWEEN RISERS SHALL BE RUBBER PER ASTM C443.		8. DROP INLETS SHALL BE PRECAST REINFORCED CONCRETE UNIT WITH INTEGRAL PRECAST BASE.		9. FRAMES AND GRATES AND COVERS SHALL BE GRAY IRON MATERIAL, MEETING ASTM A48-83 CLASS 30B WITH A TENSILE STRENGTH OF 30,000PSI. CASTINGS TO BE FULLY COATED.		10. CLEANOUTS SHALL BE MADE OF THE SAME PIPE MATERIAL AS THE CARRIER PIPE. A CAST IRON FRAME AND COVER SHALL BE PROVIDED FOR ACCESS AT GRADE AND DESIGNED FOR H-20 LOADING. THE CLEANOUT SHALL BE ENCASED IN SAND OF THE SAME TYPE AS THE PIPE BEDDING FOR THE FULL DEPTH OF THE CLEANOUT		11. PERFORATED STORM PIPE SHALL BE POLYETHYLENE PIPE WITH ALL THE REQUIREMENTS LISTED ABOVE EXCEPT THAT IT IS NOT REQUIRED TO BE SMOOTH-LINED, OR PERFORATED STORM PIPE MAY BE POLYVINYL CHLORIDE (PVC) MEETING THE REQUIREMENTS LISTED ABOVE BOTH PERFORATED THE ENTIRE LENGTH OF THE PIPE SECTION. THE PIPE SHALL BE ENCASED IN A MIX OF 1 INCH AND 2 INCH STONE AND WRAPPED IN FILTER FABRIC. IN CLEAN GRAVELS THE FILTER FABRIC SHOULD BE REMOVED UNDER THE PIPE.		12. DRY WELLS SHALL MEET THE SAME REQUIREMENTS AS THOSE LISTED FOR MANHOLES WITH THE ADDITION OF OPENINGS OF APPROXIMATELY 15% OF THE RINGS INTERIOR SURFACE. THE OPENINGS SHALL BE 1 X 3 INCH SLOTS OR 1.75 INCH DIAMETER ON THE INSIDE SURFACE. DRY WELLS SHALL BE BACKFILLED WITH A MINIMUM OF 2 FEET OF CLEAN COMPACTED NYSDOT #2 CRUSHED STONE.		13. TRENCH DRAINS UNLESS OTHERWISE NOTED SHALL BE 4 INCH PERFORATED CORRUGATED POLYETHYLENE PIPE ENCASED IN CLEAN STONE SIZED BETWEEN 2 INCH AND 1/4 INCH AND THEN WRAPPED IN FILTER FABRIC. OUTSIDE DIMENSIONS OF THE TRENCH DRAIN WILL BE NOT LESS THAN 1 FOOT.		14. RIP RAP SHALL BE PLACED AT THE END OF ALL OUTFALL STRUCTURES. THE RIP RAP UNLESS OTHERWISE NOTED SHALL BE A CLEAN DURABLE STONE WITH AVERAGE WEIGHTS OF 100 POUNDS. THE RIP RAP SHALL BE PLACED ON 1 FOOT OF GRAVEL SUBBASE OR STABILIZING FABRIC.		15. ALL JOINTS BETWEEN PIPES AND PRECAST STRUCTURES SHALL BE MORTARED TIGHT.		16. ALL PIPE SHALL BE PLACED IN ACCORDANCE WITH THE MANUFACTURES RECOMMENDATION AND TO THE LINES AND GRADES SHOWN ON THE DRAWINGS. CARE SHALL BE GIVEN DURING BACKFILL OPERATIONS NOT TO MOVE OR DAMAGE PIPE OR APPURTENANCES WHILE ACHIEVING THE APPROPRIATE COMPACTION REQUIREMENTS.		17. ALL SYSTEMS SHALL BE VISUALLY INSPECTED FOR ALIGNMENT AND WORKMANSHIP. ALL DEBRIS, DIRT OR OTHER FOREIGN OBJECTS SHALL BE REMOVED AND THE SYSTEM FLUSHED CLEAN.		18. ANY PIPES FOUND WITH DIAMETER DEFLECTIONS GREATER THAN 5% OF THE SPECIFIED PIPE DIAMETER SHALL BE REPAIRED OR REPLACED. IF DEFLECTIONS OR PERCENTALS GREATER THAN 5% OF THE DIAMETER OF THE PIPE WILL BE CORRECTED OR REPLACED.		19. ANY CLEANING, REPAIRS OR REPLACEMENT REQUIRED DUE TO FAILURE OF TESTING OR POOR WORKMANSHIP SHALL BE DONE BY THE CONTRACTOR AT NO ADDITIONAL EXPENSE TO THE CONTRACT.		SANITARY SEWER SYSTEMS		1. THE SANITARY SEWER SYSTEM SHALL BE SUPPLIED AND PLACED IN ACCORDANCE WITH ALL LOCAL, STATE AND FEDERAL REQUIREMENTS. THE LOCAL SANITARY SEWER AUTHORITY FOR THIS PROJECT IS THE TOWN OF VESTAL.		2. ALL SANITARY SEWER MATERIAL SIZES, TYPES AND SPECIFICS ARE LISTED ON THE DRAWINGS. IF THE PLANS DO NOT LIST ALL INFORMATION OR ARE UNCLEAR USE THE FOLLOWING.		3. UNLESS OTHERWISE NOTED SANITARY PIPE AND FITTINGS SHALL BE POLYVINYL CHLORIDE (PVC) PER ASTM D3034, SDR 35, WITH GASKETS PER ASTM D3212, ELASTOMERIC SEAL. THE PIPE SHALL BE BED 6 INCHES BELOW AND 12 INCHES ABOVE WITH 1/2" - 3/4" CRUSHED STONE, CRUSHED GRAVEL, OR PEA GRAVEL.		4. CLEANOUTS SHALL BE MADE OF THE SAME PIPE MATERIAL AS THE CARRIER PIPE. A CAST IRON FRAME AND COVER SHALL BE PROVIDED FOR ACCESS AT GRADE AND DESIGNED FOR H-20 LOADING. THE CLEANOUT SHALL BE ENCASED IN SAND OF THE SAME TYPE AS THE PIPE BEDDING FOR THE FULL DEPTH OF THE CLEANOUT. CLEANOUTS SHOULD BE NO MORE THAN 90 FEET APART ON LATERALS.		5. ALL PIPE SHALL BE PLACED IN ACCORDANCE WITH THE MANUFACTURES RECOMMENDATION AND TO THE LINES AND GRADES SHOWN ON THE DRAWINGS. CARE SHALL BE GIVEN DURING BACKFILL OPERATIONS NOT TO MOVE OR DAMAGE PIPE OR APPURTENANCES WHILE ACHIEVING THE APPROPRIATE COMPACTION REQUIREMENTS.		6. ALL SYSTEMS SHALL BE VISUALLY INSPECTED FOR ALIGNMENT AND WORKMANSHIP. ALL DEBRIS, DIRT OR OTHER FOREIGN OBJECTS SHALL BE REMOVED AND THE SYSTEM FLUSHED CLEAN.		7. ALL TAPS TO MAIN LINES SHALL BE MADE WITH SADDLES WHEN THE TAP IS 1/2 THE DIAMETER OR LESS OF THE EXISTING PIPE BUT MADE WITH A SLEEVE WHEN THE TAP IS GREATER THAN 1/2 THE DIAMETER OR EQUAL TO THE EXISTING PIPE. IF CONNECTIONS ARE REQUIRED TO EQUAL SIZE PIPES OF 8 INCHES OR GREATER A MANHOLE SHOULD BE INSTALLED OVER THE CONNECTION JOINT. MANHOLES SHALL BE CONSTRUCTED WITH A MINIMUM OF 4 INCHES ABOVE THE EXISTING PIPE. THE PIPE HOLE SHALL BE CORED AND A PRESS WEDGE INSTALLED. THE CONNECTION SHALL BE MORTARED UP WITH WATERPROOF/PLUG MORTAR. INSIDE THE EXISTING MANHOLE THE EXISTING INVERT SHALL BE BROKE OUT IN A MANNER THAT PROTECTS FROM DEBRIS ENTERING THE LIVE SYSTEM, WHILE A NEW INVERT IS FORMED.		8. THE CONTRACTOR SHALL PROVIDE ANY TESTING REQUIRED BY THE AUTHORITY HAVING JURISDICTION INCLUDING INSPECTION.		9. THE WORK WITHIN THE NYSDOT RIGHT OF WAY SHALL BE DONE IN ACCORDANCE WITH THE PERMIT ISSUED BY NYSDOT.		PAVEMENT AND STRUCTURAL SUBBASE		1. THE TYPE OF SUBBASE REQUIRED FOR EACH USE SHALL BE CALLED OUT ON THE DRAWINGS, IF NO REFERENCE IS MADE ON THE DRAWINGS OR DETAILS TO THE TYPE OF SUBBASE REQUIRED THE FOLLOWING SHALL BE USED. THE SOURCE OF THE MATERIAL SHALL BE ONE APPROVED FOR USE BY THE APPLICABLE STATE'S "DEPARTMENT OF TRANSPORTATION". THE MATERIAL SHALL BE A CRUSHED STONE CONFORMING TO AASHTO M147-65 (1980 OR LATEST REVISION), GRADE A. GRAVEL OR OTHER MATERIALS CAN ONLY BE SUBSTITUTED FOR CRUSHED STONE WHEN APPROVED IN WRITINGS BY THE OWNER'S AUTHORIZED ENGINEER. THE SUPPLY OF SUBBASE SHALL HAVE 100% PASSING THE 2 INCH SIEVE, 30% TO 65% PASSING THE 3/8 INCH SIEVE, 25% TO 55% PASSING THE NO. 4 SIEVE, 15% TO 40% PASSING THE NO. 40 SIEVE AND 2% TO 10% PASSING THE NO. 200 SIEVE.		2. SUBBASE SHALL BE PLACED IN LIFTS NOT TO EXCEED 12 INCHES AND COMPACTED TO THE REQUIREMENTS STATED IN THE SOILS REPORT. IF NOT STATED THE COMPACTION REQUIREMENT SHALL BE 95% OF MAXIMUM DRY DENSITY PER ASTM D1557 (MODIFIED PROCTOR).		3. FINAL GRADING OF SUBBASE SHALL BE TO ±1 INCH OF THAT DESIGNATED ON THE DRAWINGS AND ±1 INCH OF THE REQUIRED THICKNESS OR THICKNESS OF 8 INCHES OR GREATER AND ± 1/2 INCH FOR THICKNESS LESS THAN 8 INCHES.		4. THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL COSTS IN PREPARING THE SUBGRADE TO RECEIVE SUBBASE. THIS SHALL INCLUDE FINE GRADING AND COMPACTING AS NECESSARY TO MEET THE REQUIREMENTS STATED HERE AND UNDER EARTHWORK.		5. THE AMOUNT OF TESTING REQUIRED TO VERIFY THE COMPACTION SHALL BE THE SAME AS STATED UNDER EARTHWORK.		CONCRETE CURB, SIDEWALKS AND GUTTERS		1. THE DIMENSIONS SHALL BE THOSE SHOWN ON THE DRAWINGS. THE CONCRETE MIX SHALL BE 4500 PSI AT 28 DAYS MADE WITH TYPE 1 OR TYPE II CEMENT PER ASTM C150 AND AGGREGATES MEETING STATE DEPARTMENT OF TRANSPORTATION REQUIREMENTS. SLUMP FOR SUP FORMING SHALL BE 1 INCH ± 1/2 INCH AND FOR FORMED CONCRETE THE SLUMP SHALL BE 3 INCH ± 1 INCH. AIR ENTRAINING MIXTURE SHALL MEET THE REQUIREMENTS OF ASTM C260 4% ± 1-1/2% FOR SUP FORM WORK AND 6% ± 1 1/2% FOR FORMED AND PLACED CONCRETE. WATER REDUCING AGENT SHALL CONFORM TO ASTM C 494, TYPE A. CURING COMPOUNDS SHALL CONFORM WITH ASTM C309, TYPE I, CLASS A MOISTURE LOSS OF NOT MORE THAN 0.055 GR/SQ CM WHEN APPLIED AT 200 SQ FT PER GALLON.		2. SIDEWALKS, CURBS, GUTTERS AND CURBS SHALL BE PLACED ON COMPACTED SUBBASE CONSISTENT WITH THE PAVEMENT SUBBASE AS SHOWN ON THE DRAWINGS. WHEN SUBBASE DETAILS ARE MISSING AND NO AGENCY HAS JURISDICTION USE THE FOLLOWING: SIDEWALKS AND GUTTERS SHALL BE PLACED ON A MINIMUM OF 6 INCHES OF COMPACTED SUBBASE AND CURBS SHALL BE PLACED ON A MINIMUM OF 4 INCHES OF COMPACTED SUBBASE.		3. ALL FORMING, PLACEMENT, MATERIALS AND CURING SHALL CONFORM TO THE LATEST ADDITION OF AC 318 "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" AND ALL SIMILAR STATE DEPARTMENT OF TRANSPORTATION REQUIREMENTS.		4. REINFORCING SHALL BE IN ACCORDANCE WITH THAT SPECIFIED ON THE DRAWINGS AND THE CONCRETE REINFORCING STEEL INSTITUTE (CRSI) "MANUAL OF STANDARD PRACTICES". REINFORCING STEEL SHALL BE ASTM A615, GRADE 60, DEFORMED. WELDED WIRE FABRIC SHALL BE ASTM A185, WELDED WIRE STEEL FABRIC.		5. SIDEWALKS, AND GUTTERS SHALL HAVE A BROOM FINISH PERPENDICULAR TO FLOW WITH A PICTURE FRAME EDGE JOINT ALL THE WAY AROUND. CURBS SHALL HAVE A SMOOTH FINISH OR LIGHT RUB FINISH BUT CONSISTENT THROUGH OUT THE PROJECT.		6. EXPANSION JOINTS SHALL BE PLACED EVERY 20 FEET MAXIMUM IN RUNS OF WALKS, 30 FEET MAXIMUM IN CURBS AND WHERE WALKS ABOUT CONCRETE CURBS, STRUCTURES OR OTHER FIXED OBJECTS. EXPANSION JOINT MATERIAL SHALL BE PREMOULDED, 1/2 INCH MATERIAL WITH 23/64 INCH CAP IN ACCORDANCE WITH ASST. D1751. AFTER CONCRETE HAS SET THE CAP SHOULD BE REMOVED AND VOID FILLED WITH WATERPROOF JOINT FILLER. CURB AND GUTTER SHALL BE CUT OR TOOL JOINTED TO 1/3 THE DEPTH EVERY 10 FEET. SIDEWALKS SHOULD HAVE TOOLED OR CUT JOINTS TO 1/3 THE DEPTH IN SQUARES OR AS CLOSE TO SQUARE AS POSSIBLE NOT EXCEEDING 5FTX5FT.		ASPHALT PAVEMENT		1. ASPHALT SHALL BE THE TYPE OR TYPES SPECIFIED ON THE DRAWINGS. IF NO TYPE IS INDICATED THE CONTRACTOR SHALL USE A MIX SPECIFIED BY THE APPROPRIATE STATE DEPARTMENT OF TRANSPORTATION FOR TOP AND BINDER. ALL ASPHALT SHALL BE PRODUCED IN STATE APPROVED PLANTS WITH STATE APPROVED PRODUCTS.		2. ASPHALT WILL ONLY BE PLACED WHEN THE OUTSIDE TEMPERATURE IS 45 DEGREES F AND RISING. ASPHALT WILL NEVER BE PLACED ON FROZEN MATERIAL, DURING MEDIUM OR HEAVY PRECIPITATION, OR WHEN PRECEDING PRECIPITATION HAS SATURATED THE SUBBASE AND/OR SUBGRADE.		3. SURFACES THAT WILL ABOUT THE NEW ASPHALT SHALL BE TACK COATED PRIOR PLACEMENT OF ASPHALT INCLUDING CURBS, GUTTERS, EXISTING ASPHALT AND STRUCTURES. TACK COAT SHALL BE APPLIED NEATLY TO MATCH THE LINES AND GRADES OF THE PROPOSED ABUTTING ASPHALT AT A RATE OF .05 TO .15 GALLONS PER SQUARE YARD.		4. ASPHALT SHALL BE PLACED IN LAYERS EQUAL TO THOSE SPECIFIED ON THE PLANS. THICKNESS OF EACH LAYER OR THE THICKNESS OF ALL LAYERS COMBINED SHALL NOT VARY MORE THAN 1/4 INCH FOR THICKNESS OF 0 TO 4 INCHES AND 1/2 INCH FOR THICKNESS OF 4 INCHES OR GREATER. FROM THOSE SPECIFIED ON THE DRAWINGS, IF MORE THAN 60% OF TEST CORES SAMPLED FAIL TO EQUAL OR EXCEED THE REQUIRED DEPTH THE PAVEMENT SHALL BE CONSIDERED FAILED AND BE SUBJECT TO REPAIRS, REPLACEMENT OR REASONABLE COMPENSATION OF WHICH THE CONTRACTOR WILL BEAR ALL COSTS. THE ASPHALT SHALL ALSO BE TESTED FOR SMOOTHNESS BY LAYING A 16 FOOT STRAIGHT EDGE ON THE PAVEMENT AND VERIFYING THAT THERE ARE NO GAPS GREATER THAN 1/4 INCH IN ANY DIRECTION.		5. PLACEMENT AND COMPACTION REQUIREMENTS SHALL BE THE SAME AS THOSE SPECIFIED BY THE STATE DEPARTMENT OF TRANSPORTATION OF WHICH THE PROJECT IS LOCATED IN. THE ROLLING SHALL BE DONE IN TWO DIRECTIONS. MATCH JOINTS AND LEAVE A SMOOTH, UNIFORM SURFACE WHILE PROVIDING THE PROPER COMPACTION WHICH WILL BE 95% OF LABORATORY DENSITY.		6. WHEN MATCHING INTO EXISTING PAVEMENT ALL MATCH JOINTS SHALL BE SAW CUT TO PROVIDE A STRAIGHT SMOOTH JOINT. THE ASPHALT DEPTH AT THE MATCH POINT SHALL BE EQUAL TO THAT OF THE PROPOSED OR EXISTING WHICH EVER IS GREATER.		7. PAVING EQUIPMENT AND QUALITY, ASPHALT SHALL BE PLACED BY MECHANICAL EQUIPMENT EXCEPT IN SMALL AREAS THAT ARE INACCESSIBLE TO A PAVER. ASPHALT SHALL BE TRANSPORTED IN COVERED TRUCKS AND SCHEDULED IN SUCH A MANNER THAT WILL MAINTAIN ASPHALT TEMPERATURE. ASPHALT SHALL BE REJECTED WHEN TEMPERATURES FALL BELOW 250 DEGREES F OR THE MINIMUM TEMPERATURES SPECIFIED BY THE STATE DEPARTMENT OF TRANSPORTATION.		SEEDING AND LANDSCAPING		1. ALL DISTURBED AREAS SHALL BE FINE GRADED REMOVING ALL ROOTS, STICKS, STONES AND DEBRIS GREATER THAN 2 INCHES IN ANY DIMENSION.		2. SEED, MULCH AND FERTILIZE AS NECESSARY TO RESTORE ALL DISTURBED AREAS TO ORIGINAL CONDITION OR BETTER.		3. LAWN FERTILIZER SHALL BE 55% NITROGEN, 10% PHOSPHORUS AND 10% POTASH WHERE 50% OF THE NITROGEN IS DERIVED FROM UREAFORM SOURCE.		4. LAWN SEED WHEN NOT GIVEN ON THE PLANS SHALL BE 50% BY WEIGHT, 85% PURITY, 85% GERMINATION OF PENNLAWN PERENNIAL, 30% BY WEIGHT, 87% PURITY, 85% GERMINATION OF PENNLAWN RED FESCUE, 20% BY WEIGHT, 85% PURITY, 80% GERMINATION OF COMMON KENTUCKY BLUEGRASS.		5. WHEN PLACING BY HYDROSEEDING APPLICATION SEED SHALL BE PLACED AT 80 POUNDS PER ACRE, HYDROMULCH AT 1,200 POUNDS PER ACRE, WATER AT 500 GALLONS PER ACRE AND FERTILIZER AT A MINIMUM OF 200 POUNDS PER ACRE.		6. IF PLACING BY ME
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GENERAL NOTES

CONTRACTOR'S NOTE:

SCHEDULE 40 STEEL PIPE

MAIN SUCTION:
10", ANSI STANDARD B16.5, CLASS 150 FLANGE

MAIN DISCHARGE:
10", ANSI STANDARD B16.5, CLASS 150 FLANGE

ALL PIPING AND EQUIPMENT
WILL BE ADEQUATELY
SUPPORTED AND BRACED

PLATE & STRUCTURAL
STEEL: ASTM A-36

STRUCTURAL TUBING: A500, GRADE B

CONTRACTOR'S NOTES

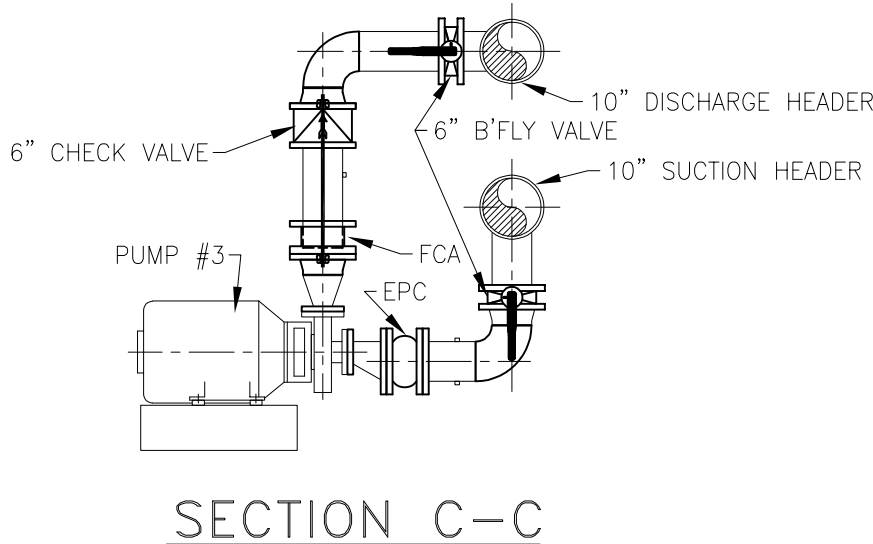
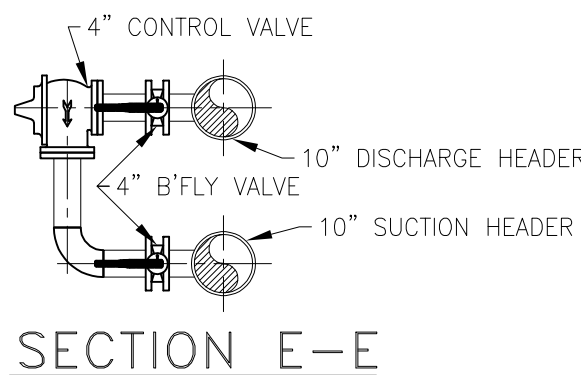
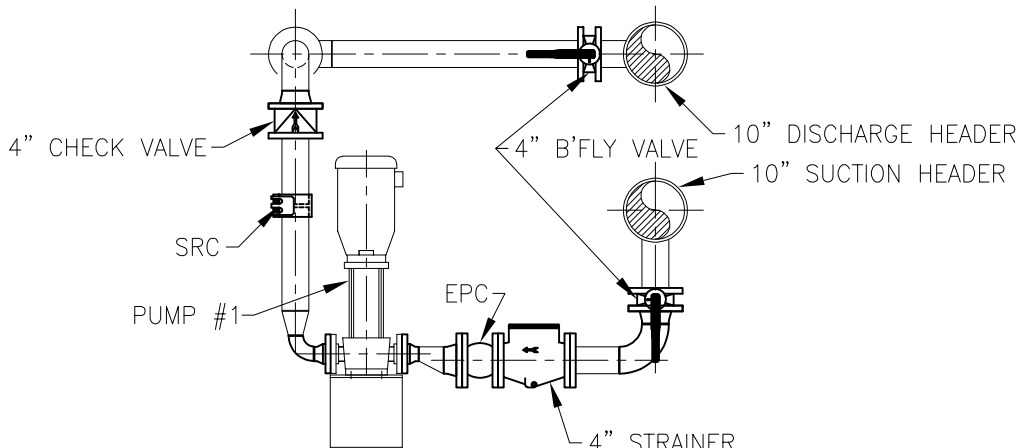
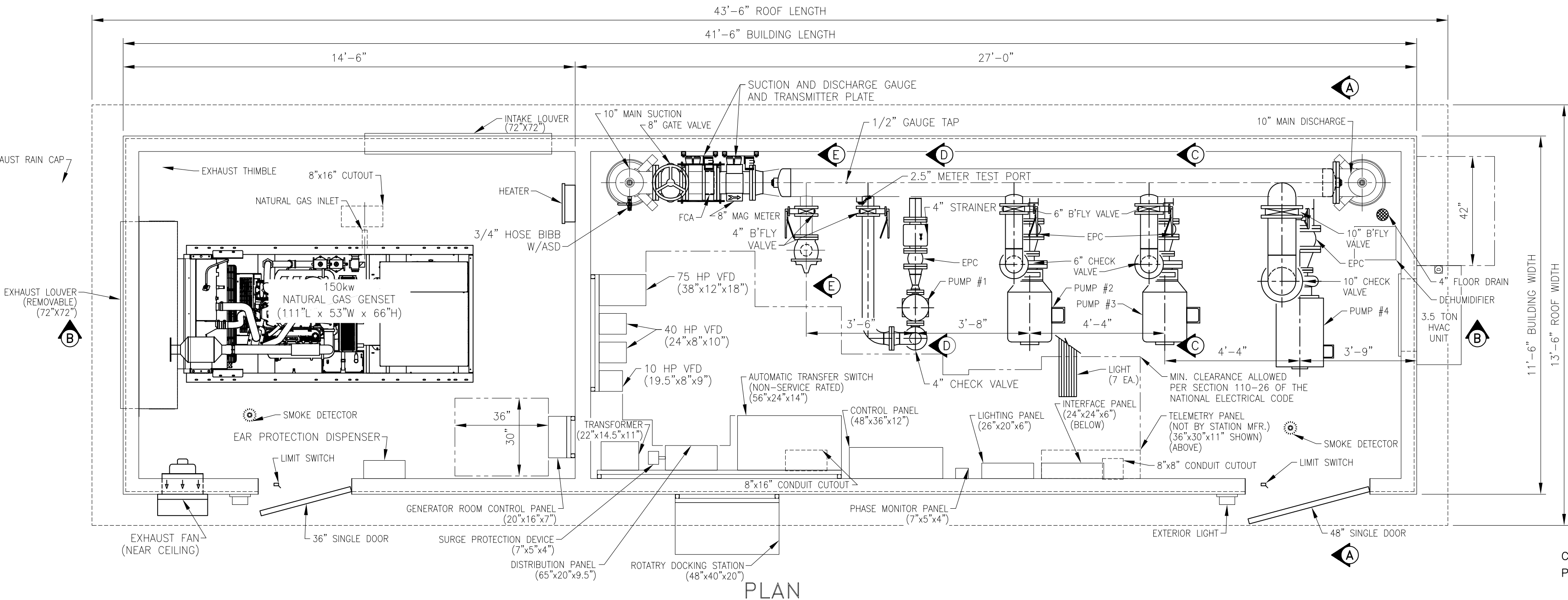
DEHUMIDIFIER MUST
BE POWERED UP AND TURNED ON
IMMEDIATELY AFTER THIS STATION IS
SET IN PLACE.

SHIMS MAY BE REQUIRED AROUND PERIMETER
OF WATERSHED TO ENSURE PROPER LEVEL.
WITHOUT PROPER LEVEL ENGINEERED FLUID
CANNOT BE RESPONSIBLE FOR PROPER DOOR
OPERATION.

PLEASE NOTE ORIENTATION OF THE INLET
AND OUTLET PIPE AND ELECTRICAL CONDUIT
LOCATIONS IN REFERENCE TO THE JOBSITE LAYOUT.
EFI CANNOT BE HELD RESPONSIBLE, UNLESS
CONFIRMATION OF THESE ORIENTATIONS IS RECEIVED
THROUGH THE APPROVED SUBMITTALS.

THIS STATION IS NOT DESIGNED TO WITHSTAND
PIPELINE THRUST OR EXTERNAL PIPE RESTRAINT
FORCES. THRUST BLOCKING AND PIPE RESTRAINTS
EXTERNAL TO THE STATION SHALL BE DESIGNED
AND INSTALLED BY OTHERS.

ESTIMATED TOTAL STATION WEIGHT: 55,000LBS



DESIGN CRITERIA

Controls LOCAL PRESSURE

Power Service: 480 Volts, 3 Phase, 60 Cycle

PUMP DATA

Type: VERTICAL MULTI-STAGE, CENTRIFUGAL

Pump 1

Capacity: 100 G.P.M. AT 213 FEET T.D.H.

Size: 2" X 2"

Motor: 10 H.P., 3600 R.P.M.

Type: HORIZ. CLOSE CPLG. END SUCTION

Pump 2 & 3

Capacity: 400 G.P.M. AT 213 FEET T.D.H.

Size: 2.5" X 3" X 6"

Motor: 40 H.P., 3600 R.P.M.

Pump 4

Capacity: 1000 G.P.M. AT 213 FEET T.D.H.

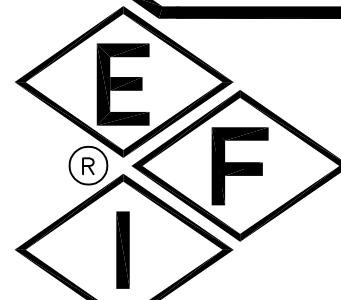
Size: 4" X 5" X 7"

Motor: 75 H.P., 3600 R.P.M.

NOTE: FCA - FLANGED COUPLING ADAPTER
SRC - SELF RESTRAINED COUPLING
EPC - ELASTOMER PIPE CONNECTION

This drawing is conceptual and does not reveal certain details
and manufacturing processes required to successfully build the
equipment. As such, Engineered Fluid, Inc. is not responsible
for injury or damages caused by any unauthorized fabrication
or assembly using all or any part of this drawing.

NOTE: "EXCEPT FOR PIPE END SUPPORTS, WHICH ARE SHOWN, VERTICAL
AND ANGLE PIPE BRACES ARE NOT SHOWN FOR DRAWING CLARITY"



ENGINEERED FLUID, INC.

P.O. DRAWER 723 • CENTRALIA, ILLINOIS 62801 • 618-533-1351

BOOSTER PUMP STATION

THE RETREAT AT BUNN HILL

VESTAL, NY

JOB REF NO. 94783

DRWG. NO. 94783-B-001.1