BID DOCUMENTS

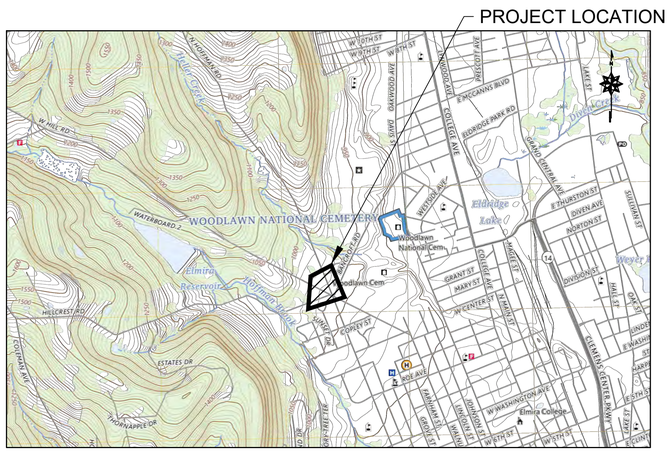
FOR

EWB POTABLE WATER PRESSURE BOOSTING PUMP STATION

ELMIRA WATER BOARD

CITY OF ELMIRA

CHEMUNG COUNTY, NEW YORK



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HUNT NO. 3405-001

JANUARY 28, 2026

ENGINEERS STATEMENT

I, TIMOTHY K. STEED, P.E. DO HEREBY CERTIFY TO THE BEST OF MY KNOWLEDGE, INFORMATION, AND BELIEF THAT THE INFORMATION CONTAINED IN THE ACCOMPANYING PLANS, SPECIFICATIONS, AND REPORTS THAT HAVE BEEN PREPARED IN ACCORDANCE WITH THE ACCEPTED ENGINEERING PRACTICES, AND IS TRUE AND CORRECT.

TIMOTHY K.STEED, P.E.
PRINCIPAL

HUNT ENGINEERS | ARCHITECTS | SURVEYORS
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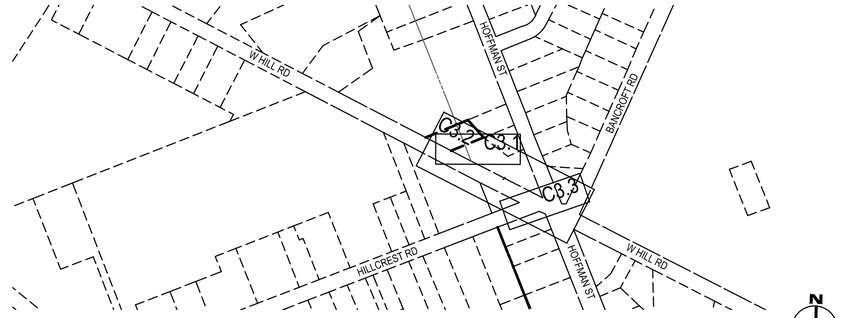
NY CERTIFICATE NO. 0018220 PA CERTIFICATE NO. TSC2203131464-1

GENERAL NOTES

1. IN AREAS WHERE THE CONTRACTOR IS EXCAVATING NEAR ANY UTILITY POLES AND TRAFFIC SIGNAL POLES, THE CONTRACTOR SHALL BRACE AND/OR HOLD THE POLE IN PLACE UNTIL EXCAVATED AREA IS BACKFILLED AND COMPACTED. THIS WORK IS TO BE PERFORMED AS APPROVED BY THE APPROPRIATE UTILITY COMPANY.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING AND MAINTAINING APPROPRIATE EROSION CONTROL MEASURES TO PREVENT SEDIMENT FROM MIGRATING OFF SITE, TO STORM SEWERS OR ADJACENT ROADWAYS. REFER TO EROSION AND SEDIMENTATION CONTROL PLANS AND DETAILS FOR ALL REQUIREMENTS.
3. THE CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL AND DISPOSAL OF ANY MATERIAL GENERATED DURING DEMOLITION OR CONSTRUCTION. CITY OF ELMIRA RESERVES, IF SO DESIRED, THE SALVAGE RIGHTS TO ALL REMOVED MATERIAL AND EQUIPMENT.
4. ALL UNSUITABLE MATERIAL ENCOUNTERED DURING EXCAVATION SHALL BE REMOVED TO A DEPTH AND EXTENT ESTABLISHED BY THE RESIDENT ENGINEER. BACKFILL FOR THE EXCAVATION SHALL BE WITH APPROPRIATE MATERIALS AND COMPACTION MEASURES.
5. ALL DISTURBED LAWN AREAS SHALL BE RESTORED TO EQUAL OR BETTER THAN EXISTING CONDITION.
6. AFTER COMPLETION OF UTILITY WORK THE CONTRACTOR'S SURVEYOR SHALL CHECK ALL HORIZONTAL AND VERTICAL CONTROL POINTS PRIOR TO CONSTRUCTION ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
7. THE CONTRACTOR SHALL KEEP THEIR OPERATIONS WITHIN THE DESIGNATED EASEMENTS AND/OR R.O.W. LIMITS.
8. CONDITIONS OF CONSTRUCTION ALONG STATE, COUNTY, AND VILLAGE HIGHWAYS SHALL CONFORM TO SPECIFICATIONS LISTED AND PERMITS ISSUED BY THE APPROPRIATE AGENCIES. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS INCLUDING A BUILDING PERMIT AND HIGHWAY WORK PERMIT FROM THE CITY OF ELMIRA AND A HIGHWAY WORK PERMIT FROM CHEMUNG COUNTY.
9. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS NOT TO DISTURB AND/OR DAMAGE PROPERTY CORNERS (IRON PINS, HUBS, ETC.) ANY DISTURBED OR DAMAGED PROPERTY CORNERS SHALL BE REPLACED BY THE CONTRACTOR'S LICENSED LAND SURVEYOR AT THE CONTRACTOR'S EXPENSE.
10. ALL EXISTING UNDERGROUND UTILITIES SUCH AS ELECTRICAL, GAS MAINS, AND TELEPHONE LINES SHALL BE STAKED OUT BY THE RESPECTIVE UTILITY COMPANY PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL NOTIFY ALL NECESSARY UTILITY COMPANIES FOR STAKEOUT. EXISTING UTILITIES LOCATIONS SHOWN ON THE PLANS SHALL BE CONSIDERED APPROXIMATE AND SHALL BE CONFIRMED BY THE CONTRACTOR. THE CONTRACTOR IS REQUIRED TO CONTACT "DIG SAFELY NEW YORK" 1-800-962-7962 A MINIMUM OF 72 HOURS PRIOR TO COMMENCING WORK.
11. LOCATIONS OF OVERHEAD UTILITY LINES SHOWN ON DRAWING WERE OBTAINED FROM AERIAL SURVEY AND SHOULD BE CONSIDERED APPROXIMATE. ALL STORM CROSSINGS ARE NOT SHOWN ON CONTRACT DRAWINGS.
12. LOCATIONS OF EXISTING STORM SHOWN ON DRAWINGS ARE APPROXIMATE. ALL DAMAGE TO STORM SEWER UTILITIES SHALL BE REPORTED TO THE DESIGN ENGINEER AND ELMIRA WATER BOARD IMMEDIATELY.
13. THE CONTRACTOR SHALL PROTECT EXISTING SEWERS. IF EXISTING SEWERS ARE DAMAGED DURING CONSTRUCTION. THE CONTRACTOR SHALL REPAIR THESE AT NO EXPENSE TO THE OWNER.
14. SAFE AND CONTINUOUS THROUGH TRAFFIC, INGRESS AND EGRESS FOR ADJACENT OWNER DRIVEWAYS, SERVICE ROADS, PUBLIC STREETS, AND SIDEWALKS SHALL BE MAINTAINED THROUGHOUT THE PERIOD OF CONSTRUCTION.
15. THE CONTRACTOR IS RESPONSIBLE FOR THE PROPER DISPOSAL OF ALL REMOVED MATERIALS AND OTHER CONSTRUCTION DEBRIS.
16. MAILBOXES, GUIDERAILS, DRIVEWAY CULVERTS, FENCES, ETC. THAT INTERFERE WITH CONSTRUCTION SHALL BE REMOVED, RESET, AND/OR REPLACED IN-KIND TO THE SATISFACTION OF THE ENGINEER AT NO ADDITIONAL COST TO THE OWNER.
17. THE CONTRACTOR SHALL CONDUCT THEIR ACTIVITIES, IN THE VICINITY OF TREES AND BUSHES, IN STRICT COMPLIANCE WITH THE APPROPRIATE SPECIFICATIONS. ALL COSTS OF CUTTING AND HAULING AWAY TREES THAT ARE PERMITTED TO BE REMOVED; AND ALL COSTS FOR PRESERVING, PROTECTING, TUNNELING UNDER AND/OR TRANSPLANTING TREES THAT HAVE TO STAY SHALL BE AT THE CONTRACTORS EXPENSE. SPECIAL CONSIDERATION MUST BE GIVEN TO THE FACT THAT ENVIRONMENTAL IMPACT IS TO BE KEPT TO A MINIMUM ON THIS PROJECT. ANY TREE REMOVAL SHALL BE LIMITED TO THE DIRECT PATH OF CONSTRUCTION.
18. HIGHWAY DRAINAGE, SIDE STREET DRAINAGE, SWALES, DITCHES, AND OTHER EXISTING DRAINAGE FACILITIES SHALL BE PROTECTED AND MAINTAINED IN ADEQUATE WORKING CONDITION DURING CONSTRUCTION. THE CONTRACTOR SHALL RESTORE ANY OF SUCH FACILITIES THAT ARE DAMAGED DURING CONSTRUCTION TO THE SATISFACTION OF THE AUTHORITY HAVING JURISDICTION AND THE ENGINEER AT NO ADDITIONAL COST TO THE OWNER.
19. ALL EXCAVATIONS AND OTHER CONSTRUCTION ACTIVITIES SHALL PROVIDE PROTECTION TO THE WORK FORCE AS PER THE CURRENT O.S.H.A. REQUIREMENTS, AS WELL AS ANY STATE AGENCY REQUIREMENTS.
20. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PREPARING AND SUBMITTING ALTERNATES TO THE DESIGNED MAINTENANCE AND PROTECTION OF TRAFFIC PLAN AT LEAST 2 WEEKS PRIOR TO PRE-CONSTRUCTION MEETING. MPT MUST BE ACCEPTABLE TO THE CITY OF ELMIRA AND APPROVED BY NYSDOT. MPT PLAN SHALL BE IN ACCORDANCE WITH THE NYSDOT. MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. (MUTCD)
21. LOCATION OF PROPOSED WATERLINE, THE DISTANCE BETWEEN FACILITIES AND APPURTENANCES SHOWN ON DRAWINGS ARE APPROXIMATE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION DURING THE CONSTRUCTION STAKEOUT. LOCATION OF PIPE, VALVES, HYDRANTS, FITTINGS, AND SERVICES SHALL BE CONFIRMED WITH THE DESIGN ENGINEER AND NYSDOT RESIDENT ENGINEER.
22. ALL AREAS DISTURBED DURING CONSTRUCTION NOT PROPOSED FOR OTHER SURFACE TREATMENTS SHALL BE FURNISHED WITH A MINIMUM OF 4" TOPSOIL AND SEEDED, FERTILIZED, AND MULCHED. THESE REPAIRS SHALL BE TO THE SATISFACTION OF THE OWNER & THE ENGINEER AT NO ADDITIONAL COST.
23. ALL THICKNESS SHOWN ON THE PLANS, DETAILS, AND SPECIFIED IN THE SPECIFICATIONS ARE COMPACTED THICKNESS. ALL PAVED AREAS, ROAD SHOULDERS, DRIVES, ETC., WHERE VEHICLES CAN LEGALLY ACCESS OR PARK WILL REQUIRE COMPACTION TO 95% MAXIMUM DENSITY AS DIRECTED BY THE RESIDENT ENGINEER.
24. THE CONTRACTOR SHALL NOTE THAT THIS PROJECT USES THE ENGLISH SYSTEM FOR MEASUREMENT, BUT MAY REFERENCE THE NYSDOT METRIC SPECIFICATIONS IN ADDITION TO ENGLISH SPECIFICATIONS. ALL WORK SHALL BE DONE ACCORDING TO THE REFERENCED SPECIFICATIONS. HOWEVER MEASUREMENT FOR PAYMENT SHALL USE THE ENGLISH SYSTEM.
25. THE CONTRACTOR IS RESPONSIBLE FOR EXPOSING ALL EXISTING BURIED UTILITIES IN THE GENERAL PATH OF CONSTRUCTION. POTENTIAL CONFLICTS BETWEEN EXISTING UTILITIES AND THE PROPOSED UTILITIES SHALL BE IDENTIFIED AND REPORTED TO THE ENGINEER.
26. THE TAX MAP LINES SHOWN ON THESE DRAWINGS ARE ONLY INTENDED FOR SCHEMATIC PURPOSES, THEY ARE IN NO WAY TO BE USED FOR CONSTRUCTION PURPOSES.
27. ALL SIGNS TO BE RELOCATED/ REINSTALLED USING NEW SIGN POSTS ACCORDING TO THE MOST CORRECT NYSDOT STANDARD SHEETS 645-01 TO 645-03. ANGLE IRON SHALL NOT BE UTILIZED.
28. ALL ASPHALT PAVEMENT SHALL BE SAW CUT PRIOR TO EXCAVATION IN A NEAT AND WORKMANLIKE MANNER.
29. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING 24 HOUR NOTICE TO PROPERTY OWNER BEFORE DISTURBING PROPERTY OWNER'S DRIVEWAY.
30. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING EMERGENCY SERVICES AND PUBLIC TRANSPORTATION (INCLUDING, BUT NOT LIMITED TO THE FIRE DEPARTMENT, AMBULANCE, POLICE, STATE TROOPERS, AND LOCAL AREA SCHOOL DISTRICT BUS GARAGE) ON A WEEKLY BASIS FOR WORK TO BE PERFORMED THE FOLLOWING WEEK. ANY CHANGES TO THAT SCHEDULE SHALL ALSO BE REPORTED AS THEY OCCUR.
31. IF ROCK IS ENCOUNTERED DURING TRENCH EXCAVATION AND SURFACE AREAS OUTSIDE OF THE TRENCH WALLS ARE DAMAGED, THE ELMIRA WATER BOARD AND NYSDOT MUST BE NOTIFIED OF SAID AREA(S) BEFORE BACKFILLING OF TRENCH.

GENERAL WATER DISTRIBUTION NOTES

1. THE MINIMUM VERTICAL SEPARATION DISTANCE BETWEEN WATER AND SEWER UTILITIES SHALL BE 18", MEASURED FROM OUTSIDE WALL TO OUTSIDE WALL OF THE MAINS AT THE POINT OF CROSSING. THE MINIMUM HORIZONTAL SEPARATION DISTANCE BETWEEN PARALLEL WATER AND SEWER UTILITIES SHALL BE 10 FEET, MEASURED FROM OUTSIDE WALL TO OUTSIDE WALL OF UTILITIES. WHERE THESE SEPARATION DISTANCES CANNOT BE ACHIEVED, AND IS LESS THAN 5 FEET, THE PIPES MAY BE CENTERED WITH RESPECT TO ADJACENT SEWER STRUCTURES AND THE JOINTS ENCASED IN CONCRETE OR FLOWABLE FILL. WHERE AT LEAST 5 FEET OF SEPARATION DISTANCE CANNOT BE OBTAINED, THE WATERMAIN SHALL BE ENCASED WITH FLOWABLE FILL. FLY ASH SHALL NOT BE USED.
2. PREFERENCE SHALL BE GIVEN TO INSTALLATION OF WATERMAIN ABOVE SANITARY/STORM SEWERS WHEN POSSIBLE. FLOWABLE FILL AND CONCRETE USED TO FULLY ENCASE WATERMAIN, WHERE SEPARATION IS LESS THAN 5 FEET, SHALL CONFORM TO NYSDOT SPECIFICATION 204 FOR FLOWABLE FILL AND NYSDOT SPECIFICATION 501 FOR GENERAL CONCRETE. FLY ASH SHALL NOT BE USED.
3. WHEN INSTALLING WATERMAIN, THE CONTRACTOR SHALL AVOID CREATING VERTICAL CRESTS WHERE POCKETS OF AIR COULD ACCUMULATE.
4. A CONTINUOUS UPWARD GRADE FOR THE WATERMAIN SHOULD BE PROVIDED TO A POINT OF AIR RELEASE (SUCH AS HYDRANTS, TANK, SERVICE, OR AN AIR RELEASE VALVE).
5. FITTINGS SHALL CONFORM IN ALL RESPECTS TO AWWA C-110 OR TO COMPACT FITTINGS AWWA C-153. ALL SHALL BE FURNISHED WITH CEMENT MORTAR LINING IN CONFORMANCE WITH AWWA C-104. PIPES SHALL HAVE GASKETED JOINTS AND FIELD LOK GASKETS CONFORMING TO AWWA C-111.
6. DISINFECTION, FLUSHING, AND SAMPLING REQUIREMENTS FOR THE NEWLY INSTALLED WATERMAINS SHALL BE CONSISTENT WITH AWWA STANDARD C651 (LATEST REVISION), SECTION 5.2 CONTINUOUS FEED METHOD, DISINFECTING WATERMAINS.
7. AFTER FINAL FLUSHING AND BEFORE THE NEW WATERMAIN IS IN OPERATION, TWO CONSECUTIVE SAMPLES TAKEN 24 HOURS APART, SHALL BE COLLECTED FROM THE NEW WATERMAIN. AT LEAST ONE SET OF SAMPLES SHALL BE COLLECTED FROM EVERY 1200 LINEAR FEET OF WATERMAIN, PLUS ONE SET FROM THE END OF LINES AND EACH BRANCH.
8. HYDRANTS SHALL CONFORM TO AWWA C-502.
9. VALVES SHALL CONFORM TO AWWA C-509.
10. ALL NEW WATERMAINS SHALL BE INSTALLED, PRESSURE TESTED AND LEAKAGE TESTED IN ACCORDANCE WITH THE RECOMMENDED STANDARDS FOR WATER WORKS (LATEST REVISION) AND THE LATEST REVISION OF AWWA STANDARDS.
11. THE FOLLOWING ARE THE MINIMUM RECOMMENDED SEPARATION DISTANCES BETWEEN GAS LINES AND WATER/SEWER LINES, OTHER MORE STRINGENT SEPARATION DISTANCES MAY APPLY. HORIZONTAL - 10 FEET, VERTICAL - 18 INCHES. AT NO INSTANCE SHALL HORIZONTAL SEPARATION DISTANCES BE LESS THAN 2 FEET.
12. APPROPRIATE MEASURES SHALL BE TAKEN TO PREVENT DIRT, DEBRIS, AND GROUNDWATER FROM CONTAMINATING THE WATERMAIN. THE GROUNDWATER LEVEL SHALL NEVER BE ALLOWED TO RISE TO A LEVEL MORE THAN 12" BELOW THE PIPE INVERT. WHENEVER AN OPEN PIPE IS LEFT UNATTENDED, IT SHALL BE CLOSED IN A WATERTIGHT MANNER.
13. WHEN INSTALLING HYDRANTS AND GROUND WATER IS ENCOUNTERED WITHIN 7 FEET OF FINISHED GRADE THE HYDRANT DRAIN OR WEEP HOLES MUST BE TAPPED AND MECHANICALLY PLUGGED. HYDRANTS WITH PLUGGED WEEP HOLES SHALL BE TAGGED TO INDICATE THAT THE BARRELS NEED TO BE PUMPED DRY AFTER EACH USE.
14. THIS PROJECT CAN NOT BE PLACED INTO SERVICE UNTIL APPROVAL IS ISSUED BY THE CHEMUNG COUNTY DEPARTMENT OF HEALTH.
15. ADDITIONAL DEPTH OF EXCAVATION FOR INSTALLATION OF PROPOSED WATERMAIN WILL BE REQUIRED AT EXISTING STORM SEWER CULVERT AND STREAM CROSSINGS. CONTRACTOR SHALL MAINTAIN A MINIMUM VERTICAL SEPARATION OF 18" BETWEEN PROPOSED WATERMAIN AND EXISTING CULVERTS. WHERE AT LEAST 5 FEET OF SEPARATION DISTANCE CANNOT BE OBTAINED, THE WATERMAIN SHALL BE ENCASED WITH FLOWABLE FILL. FLY ASH SHALL NOT BE USED.
16. WATERMAINS SHALL BE INSTALLED WITH A MINIMUM DEPTH OF COVER OF 5 FEET.
17. ALL FITTINGS SHALL BE RESTRAINED WITH WEDGE ANCHOR RETAINER GLAND. ALL PUSH-ON JOINTS SHALL BE REINFORCED WITH A THRUST RESTRAINT GRIP RING GASKET WITHIN 20 FEET OF ALL ELBOWS OR A BALL JOINT RESTRAINT FOR DIP OR PVC RESPECTIVELY. THRUST BLOCK SHALL ALSO BE INSTALLED WHEN CONNECTING TO EXISTING WATER SYSTEM.
18. DUCTILE IRON SPOOL PIECE BETWEEN VALVE AND M/J CAP AT ALL DEAD ENDS SHALL BE BETWEEN 18" AND 36" IN LENGTH UNLESS A BLOW-OFF HYDRANT IS INSTALLED.
19. WHEN MAIN LINE VALVES AND HYDRANTS ARE SHOWN IN CLOSE PROXIMITY, THE VALVE MUST BE WITHIN 5' OF THE HYDRANT TEE.
20. CONTRACTOR TO PROVIDE 72 HOURS NOTICE TO IMPACTED WATER CUSTOMERS, CURRENTLY BEING SERVED BY THE OWEGO ELECTRIC, GAS & WATER, PRIOR TO INTERRUPTION OF THEIR WATER SERVICE. CONTRACTOR SHALL COORDINATE WITH THE TOWN BEFORE PROVIDING 72 HOUR NOTICE.
21. ALL GATE VALVES LOCATED ON WATERMAIN TO BE ABANDONED SHALL BE CLOSED AND BOXES SHALL BE REMOVED. ALL HYDRANTS CURRENTLY LOCATED OFF OF WATERMAIN TO BE ABANDONED SHALL BE REMOVED AND WATERMAIN SHALL BE CAPPED AS REQUIRED PRIOR TO BACKFILL.
22. WHERE NEW WATERMAIN IS BEING INSTALLED TO REPLACE ADJACENT EXISTING WATERMAIN, THE PROPOSED WATERMAIN IS TO BE INSTALLED BELOW THE ELEVATION OF THE EXISTING WATERMAIN TO MINIMIZE EXISTING WATER SERVICE INTERRUPTION.
23. A WATERMAIN INSTALLED IN AGGRESSIVE SOIL SHALL BE LINED WITH POLY WRAP AS DETERMINED BY THE OWNERS REPRESENTATIVE IN THE FIELD. IF THE CONTRACTOR IDENTIFIES UNNATURAL OR KNOWN AGGRESSIVE SOILS, THEY SHALL NOTIFY THE OWNER OR THEIR REPRESENTATIVE.



1 MAP KEY
SCALE: N.T.S.

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NY CERTIFICATE NO. 0018220 PA CERTIFICATE NO. TSC220313464-1

GENERAL NOTES

EWB POTABLE WATER PRESSURE BOOSTING PUMP STATION

ELMIRA WATER BOARD

ELMIRA, NY 14901

C0.1

PROJECT NO: 3405-001

PROTECT EXISTING TREE

REMOVE TREES IN ENTIRETY

PROTECT EXISTING TREE IF POSSIBLE

REMOVE AND REPLACE SIGN

PROTECT EXISTING TREE

HOFFMAN STREET

WEST HILL ROAD

HILLCREST ROAD

RANCROFT ROAD

EDGE OF PAVE

DITCH

ASPHALT PARKING

GRAVEL DRIVE

ASPHALT DRIVE

CONC. WALK

CENTERLINE

STONE SIGN

CLEAN OUT

POSSIBLE GAS LINE

1220 HOFFMAN RD N
TAX PARCEL: 88.05-1-2
NF
BRUSH DANIELL A

1230 HOFFMAN RD N
TAX PARCEL: 88.05-1-4.2
NF
ELMIRA WATER BOARD

1270 HOFFMAN RD N
TAX PARCEL: 88.08-1-20.2
NF
ELMIRA WATER BOARD

1207 HOFFMAN RD N
TAX PARCEL: 88.05-1-3
NF
RAWLINGZ CHARLES

1251 HOFFMAN RD N
TAX PARCEL: 88.05-1-8
NF
GILMAN ROBERT A

140 RANCROFT RD
TAX PARCEL: 88.05-1-7
NF
MILLER SHERRYLYN M

88 WEST HILL ST
TAX PARCEL: 88.05-1-6
NF
MANON WILLIAM & JESSICA

1241 HOFFMAN RD
TAX PARCEL: 88.05-1-4.1
NF
BRYANT CAROL A

WEST HILL RD
TAX PARCEL: 88.08-1-20.1
NF
BRYANT CAROL A

10 - 12 HILLCREST RD
TAX PARCEL: 88.08-1-19.2
NF
IMN DEVELOPMENT

TAX PARCEL: 88.05-1-5
NF
IMN DEVELOPMENT

1175 HOFFMAN ST
TAX PARCEL: 88.05-3-1
NF
SGA WEST HILL LLC

1185 HOFFMAN ST
TAX PARCEL: 88.08-3-2
NF
HAMILTON WILLIAM C & HAMILTON MARY L

F WOOD FENCE

CITY OF ELMIRA
TOWN OF ELMIRA

1 EXISTING CONDITIONS/DEMOLITION PLAN
SCALE: 1" = 20'

SCALE IN FEET
0 10 20 40 60
SCALE: 1" = 20'

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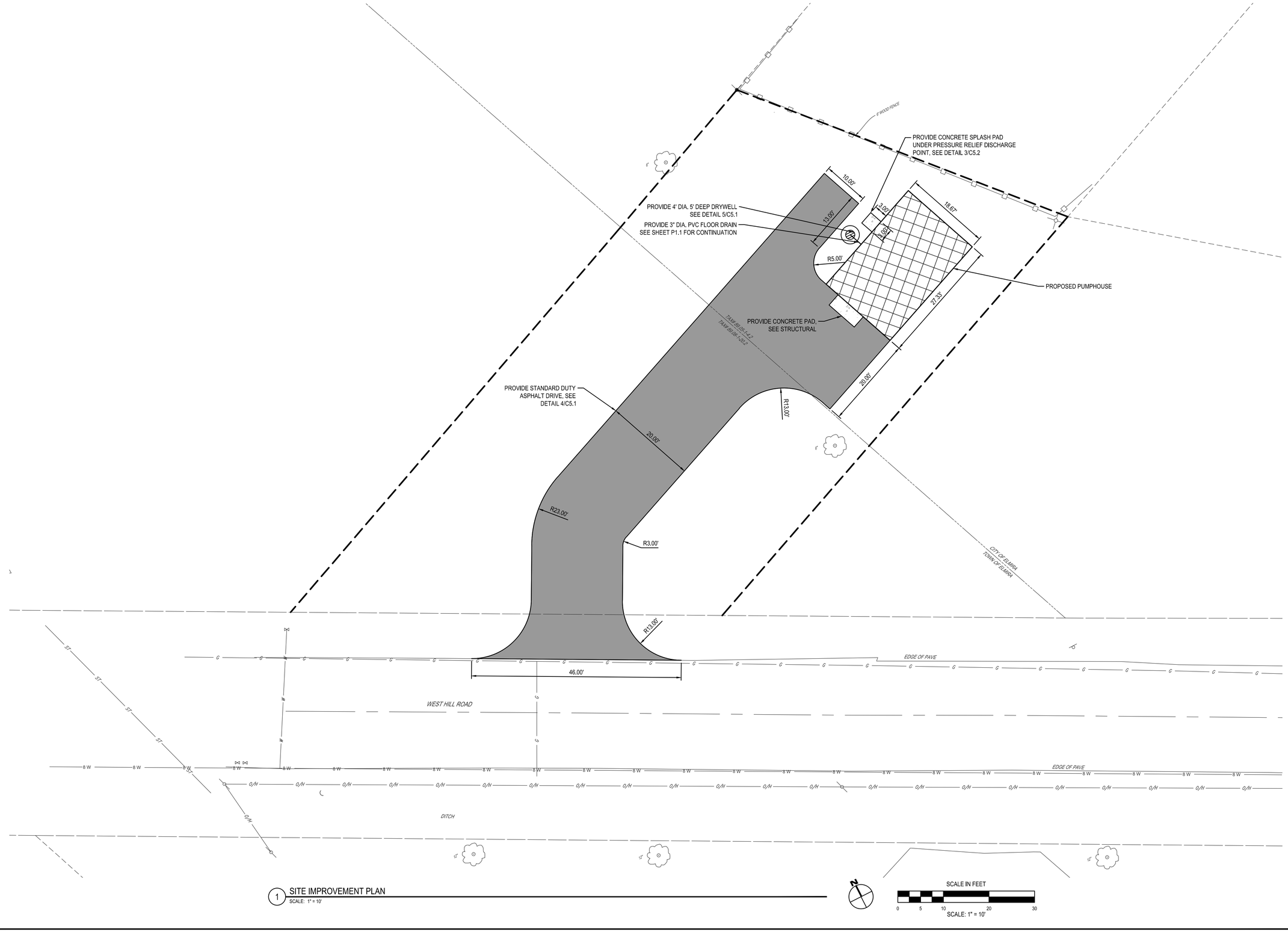
EXISTING CONDITIONS DEMOLITION PLAN

EWB POTABLE WATER PRESSURE BOOSTING PUMP STATION
ELMIRA WATER BOARD
ELMIRA, NY 14901

C1.1

PROJECT NO: 3405-001



1 SITE IMPROVEMENT PLAN
SCALE: 1" = 10'

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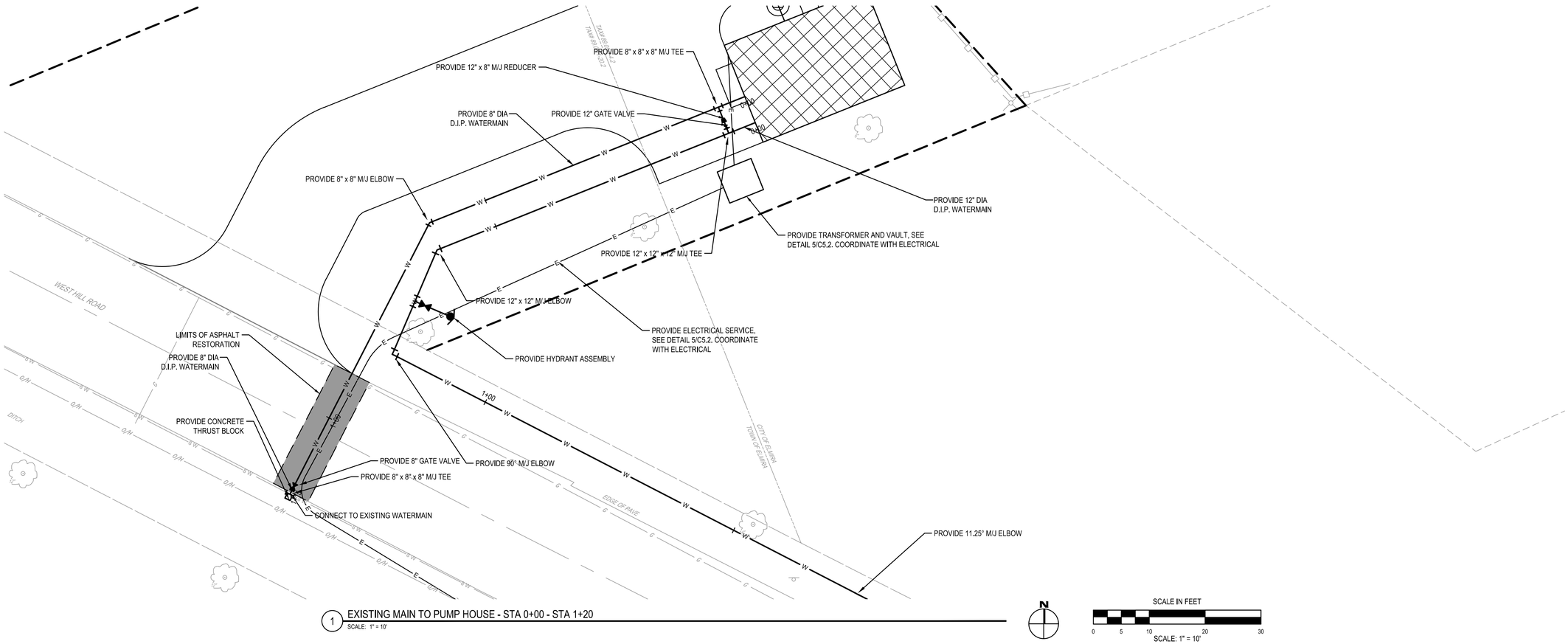
SITE IMPROVEMENT PLAN

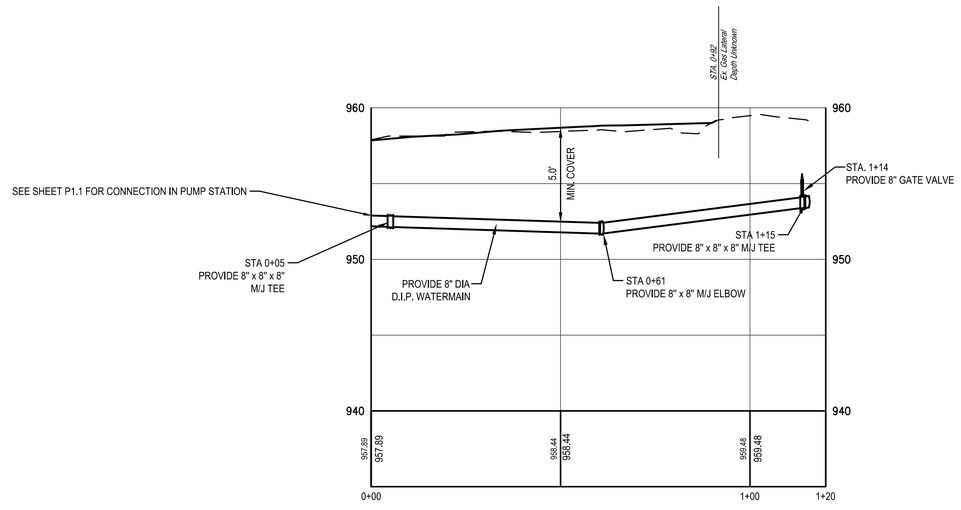
EWB POTABLE WATER PRESSURE BOOSTING PUMP STATION
ELMIRA WATER BOARD
ELMIRA, NY 14901

C2.1

PROJECT NO: 3405-001



1 EXISTING MAIN TO PUMP HOUSE - STA 0+00 - STA 1+20
SCALE: 1" = 10'



2 PUMP HOUSE TO INTERSECTION PROFILE - STA 0+00 - STA 4+40
SCALE: H: 1"=20' V: 1"=5'

NOTE:
ALL EXTERNAL VALVES AND HYDRANTS SHALL OPEN RIGHT. ALL EXTERNAL PIPING SHALL BE CL 52 DUCTILE IRON PIPING.

#	DATE:	DESCRIPTION OF REVISION:

"IT IS A VIOLATION OF THE LAW FOR ANY PERSON TO MAKE UNAUTHORIZED ALTERATIONS OR ADDITIONS TO PLANS BEARING A LICENSED ENGINEER'S, ARCHITECT'S OR SURVEYOR'S SEAL."

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SITE UTILITY PLAN

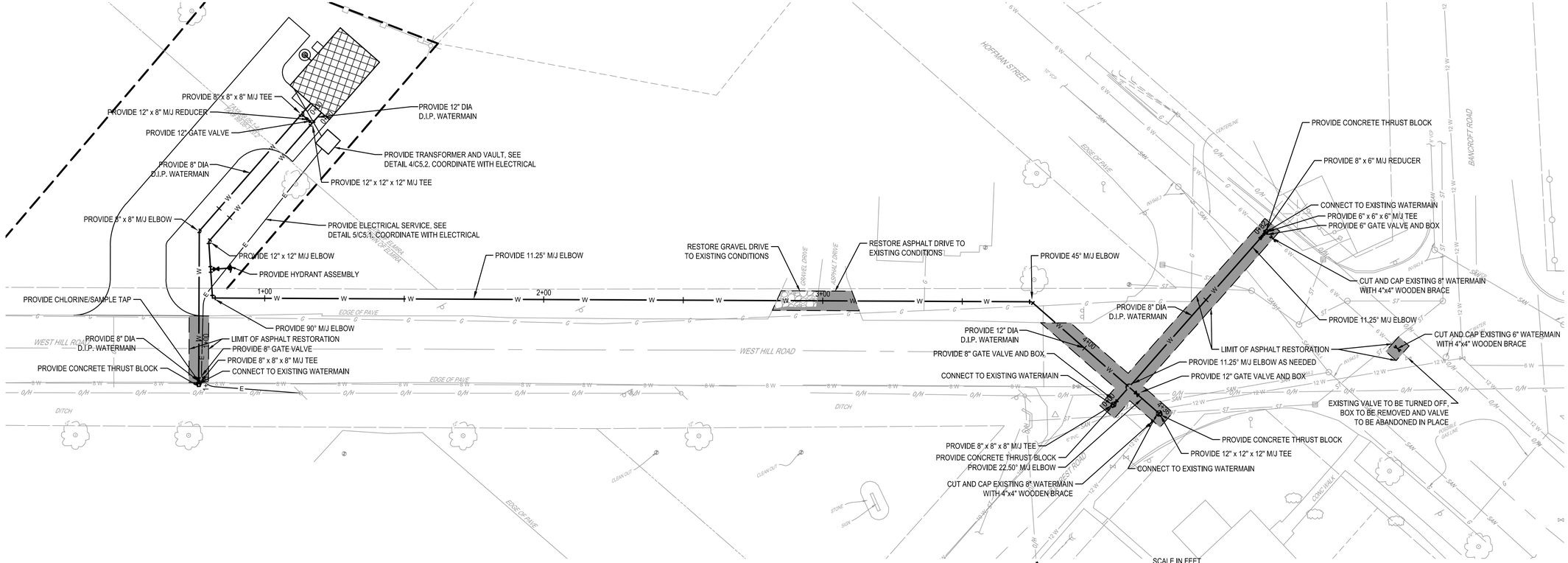
EWB POTABLE WATER PRESSURE BOOSTING PUMP STATION

ELMIRA WATER BOARD

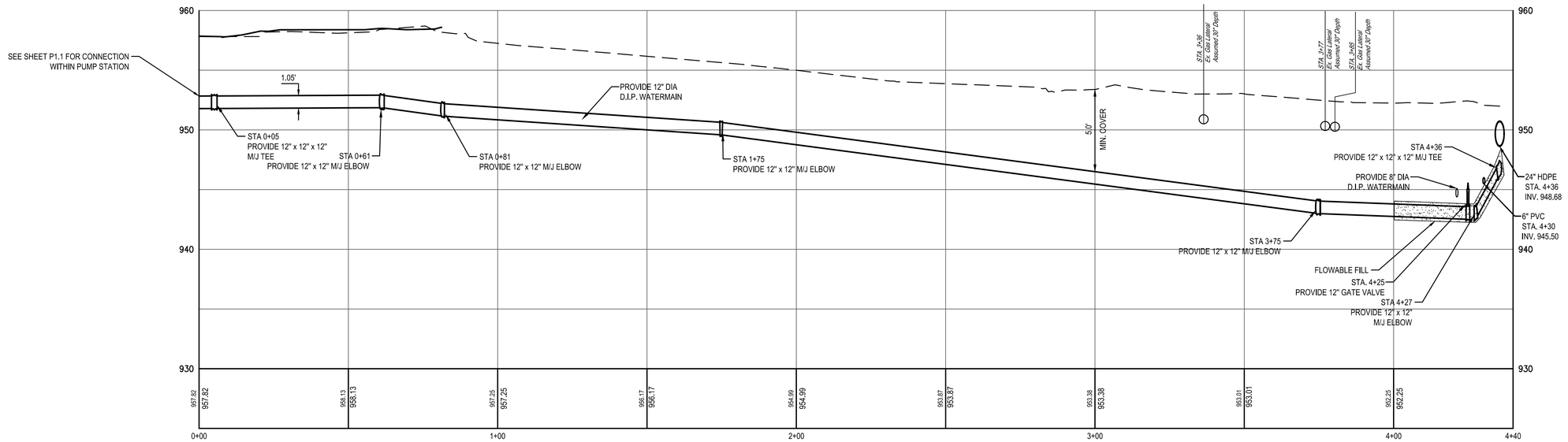
ELMIRA, NY 14901

C3.1

PROJECT NO: 3405-001



1 PUMP HOUSE TO INTERSECTION PLAN - STA 0+00 - STA 4+40
SCALE: 1" = 10'



2 PUMP HOUSE TO INTERSECTION PROFILE - STA 0+00 - STA 4+40
SCALE: H: 1"=20' V: 1"=5'

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#	DATE:	DESCRIPTION OF REVISION:

"IT IS A VIOLATION OF THE LAW FOR ANY PERSON TO MAKE UNAUTHORIZED ALTERATIONS OR ADDITIONS TO PLANS BEARING A LICENSED ENGINEERS, ARCHITECTS OR SURVEYOR'S SEAL."

HUNT ENGINEERS | ARCHITECTS | SURVEYORS
HORSEHEADS, NY 607 - 358 - 1000 ROCHESTER, NY 585 - 327 - 7950
TOWANDA, PA 570 - 265 - 4868 BINGHAMTON, NY 607 - 798 - 8081
ALBANY, NY 607 - 798 - 8081 WWW.HUNT-EAS.COM
NY CERTIFICATE NO. 0018220 PA CERTIFICATE NO. TSC220313464-1

SITE UTILITY PLAN

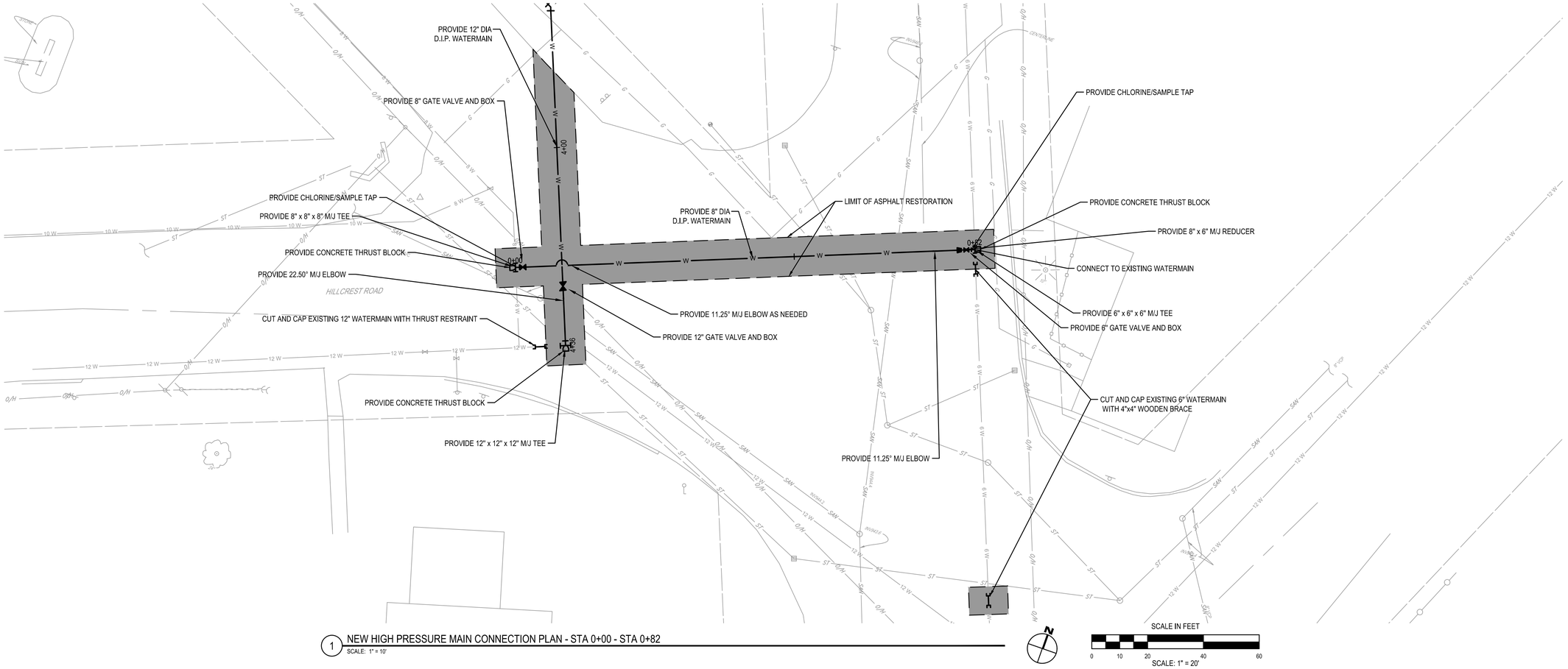
EWB POTABLE WATER PRESSURE BOOSTING PUMP STATION

ELMIRA WATER BOARD

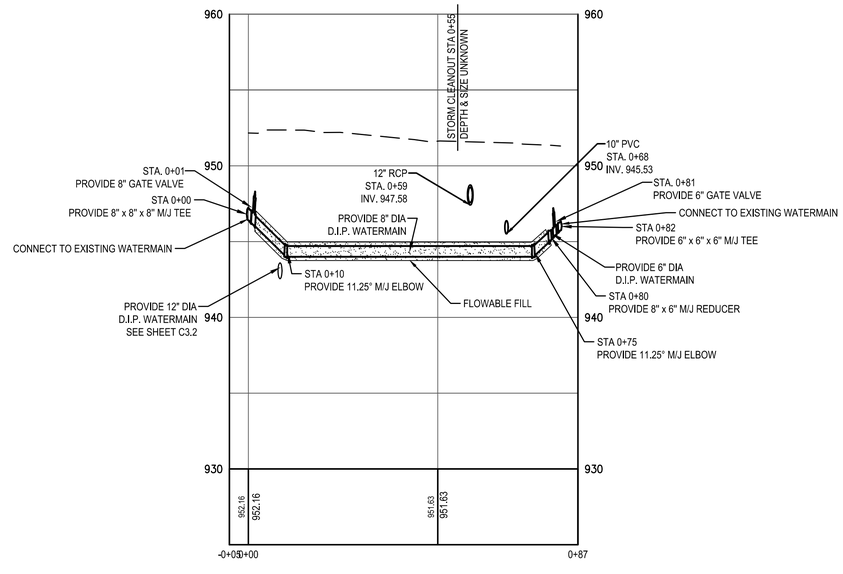
ELMIRA, NY 14901

C3.2

PROJECT NO: 3405-001



1 NEW HIGH PRESSURE MAIN CONNECTION PLAN - STA 0+00 - STA 0+82
SCALE: 1" = 10'



2 HIGH PRESSURE MAIN CONNECTION PROFILE - STA 0+00 - STA 0+82
SCALE: H: 1"=20' V: 1"=5'

NOTE:
ALL EXTERNAL VALVES AND HYDRANTS SHALL OPEN RIGHT. ALL EXTERNAL PIPING SHALL BE CL 52 DUCTILE IRON PIPING.

DRAWN BY:	ZBS
CHECKED BY:	TKS
DATE:	1/28/26
PHASE:	BID

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SITE UTILITY PLAN

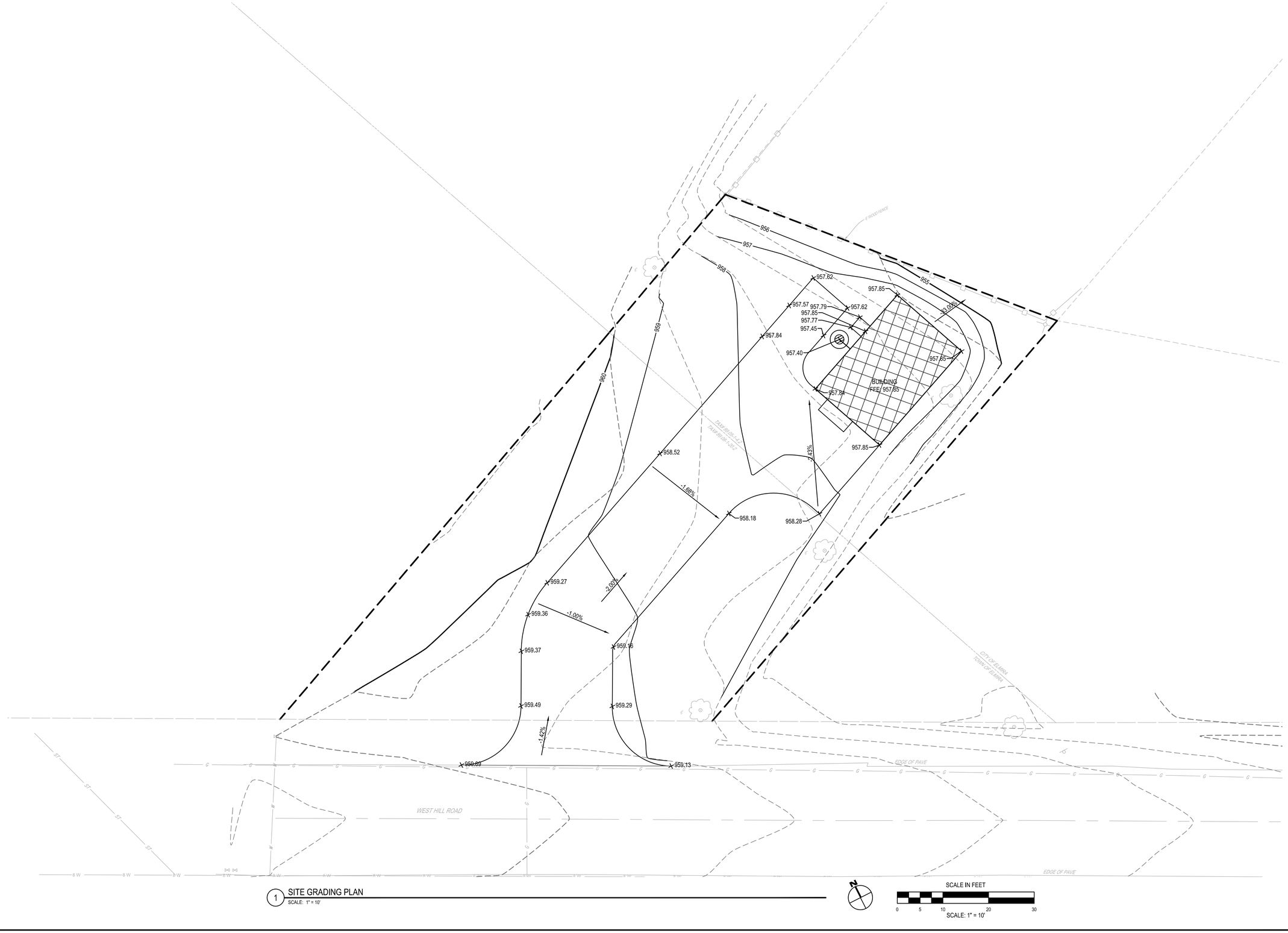
EWB POTABLE WATER PRESSURE BOOSTING PUMP STATION

ELMIRA WATER BOARD

ELMIRA, NY 14901

C3.3

PROJECT NO: 3405-001



1 SITE GRADING PLAN
SCALE: 1" = 10'

N

SCALE IN FEET
0 5 10 20 30
SCALE: 1" = 10'

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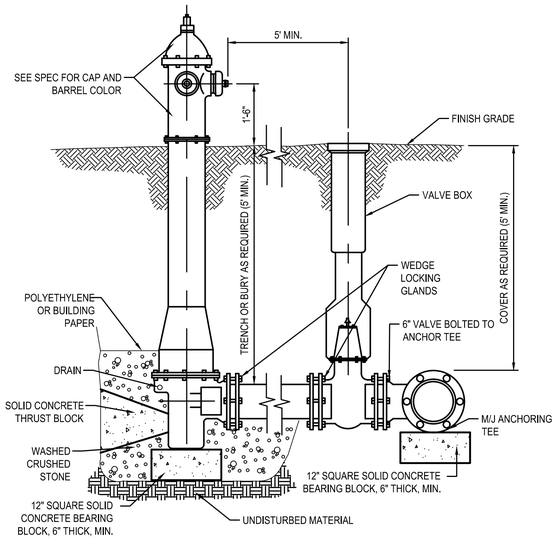
SITE GRADING PLAN

EWB POTABLE WATER PRESSURE BOOSTING PUMP STATION
ELMIRA WATER BOARD
ELMIRA, NY 14901

C4.1

PROJECT NO: 3405-001

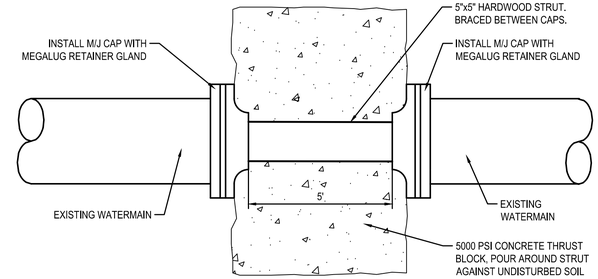


NOTES:

1. WHEN INSTALLING HYDRANTS AND GROUND WATER IS ENCOUNTERED WITHIN 7 FEET OF FINISHED GRADE THE HYDRANT DRAIN OR WEEP HOLES MUST BE TAPPED AND PLUGGED.
2. HYDRANTS SHALL NOT BE LOCATED WITHIN 10 FEET OF SANITARY SEWERS, STORM DRAINS, AND STORMWATER INLETS.
3. IF GROUND WATER IS ENCOUNTERED WITHIN 7 FEET OF FINISHED GRADE THE HYDRANT DRAIN OR WEEP HOLES MUST BE TAPPED AND MECHANICALLY PLUGGED. HYDRANTS WITH PLUGGED WEEP HOLES SHALL BE TAGGED TO INDICATE THAT THE BARRELS NEED TO BE PUMPED DRY AFTER EACH USE.

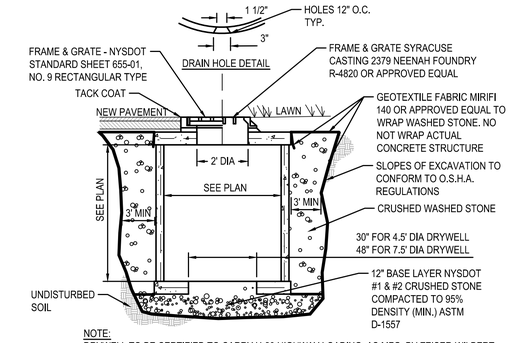
6 HYDRANT UNIT DETAIL

SCALE: N.T.S.



7 TYPICAL DISCONNECT DETAIL

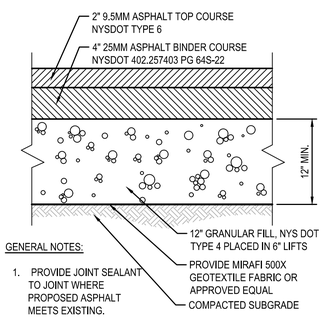
SCALE: N.T.S.



NOTE:
DRYWELL TO BE CERTIFIED TO CARRY H-20 HIGHWAY LOADING, AS MFG. BY ZEISER-WILBERT VAULT, INC. OR APPROVED EQUAL WHEN IN PAVED AREAS.

5 DRYWELL DETAIL

SCALE: N.T.S.

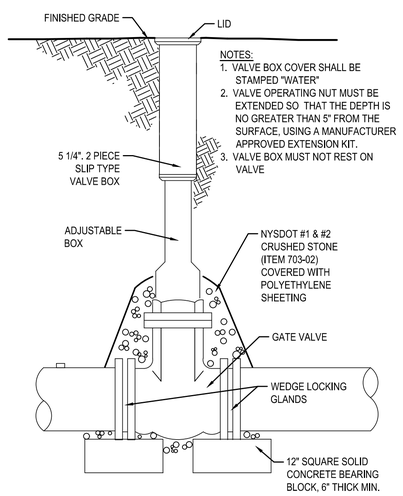


GENERAL NOTES:

1. PROVIDE JOINT SEALANT TO JOINT WHERE PROPOSED ASPHALT MEETS EXISTING.

4 STANDARD DUTY ASPHALT PAVEMENT

SCALE: N.T.S.

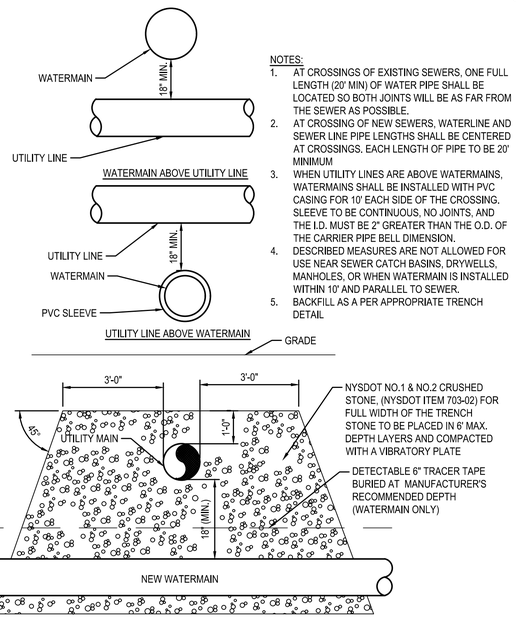


NOTES:

1. VALVE BOX COVER SHALL BE STAMPED "WATER"
2. VALVE OPERATING NUT MUST BE EXTENDED SO THAT THE DEPTH IS NO GREATER THAN 5" FROM THE SURFACE, USING A MANUFACTURER APPROVED EXTENSION KIT.
3. VALVE BOX MUST NOT REST ON VALVE

3 GATE VALVE DETAIL

SCALE: N.T.S.

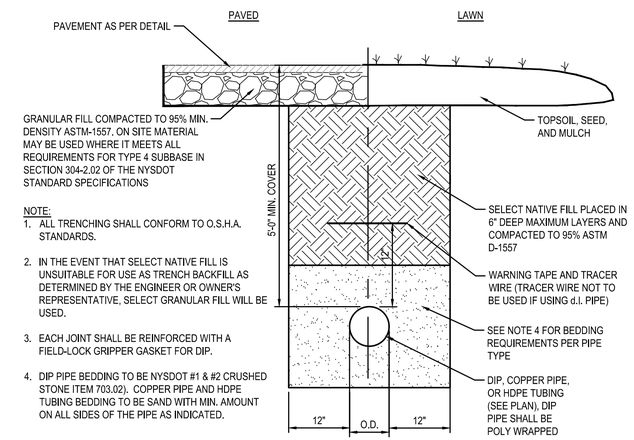


NOTES:

1. AT CROSSINGS OF EXISTING SEWERS, ONE FULL LENGTH (20' MIN) OF WATER PIPE SHALL BE LOCATED SO BOTH JOINTS WILL BE AS FAR FROM THE SEWER AS POSSIBLE.
2. AT CROSSING OF NEW SEWERS, WATERLINE AND SEWER LINE PIPE LENGTHS SHALL BE CENTERED AT CROSSINGS. EACH LENGTH OF PIPE TO BE 20' MINIMUM
3. WHEN UTILITY LINES ARE ABOVE WATERMAINS, WATERMAINS SHALL BE INSTALLED WITH PVC CASING FOR 10' EACH SIDE OF THE CROSSING. SLEEVE TO BE CONTINUOUS, NO JOINTS, AND THE I.D. MUST BE 2" GREATER THAN THE O.D. OF THE CARRIER PIPE BELL DIMENSION.
4. DESCRIBED MEASURES ARE NOT ALLOWED FOR USE NEAR SEWER CATCH BASINS, DRYWELLS, MANHOLES, OR WHEN WATERMAIN IS INSTALLED WITHIN 10' AND PARALLEL TO SEWER.
5. BACKFILL AS A PER APPROPRIATE TRENCH DETAIL

2 UTILITY CROSSING DETAIL

SCALE: N.T.S.



NOTE:

1. ALL TRENCHING SHALL CONFORM TO O.S.H.A. STANDARDS.
2. IN THE EVENT THAT SELECT NATIVE FILL IS UNSUITABLE FOR USE AS TRENCH BACKFILL AS DETERMINED BY THE ENGINEER OR OWNER'S REPRESENTATIVE, SELECT GRANULAR FILL WILL BE USED.
3. EACH JOINT SHALL BE REINFORCED WITH A FIELD-LOCK GRIPPER GASKET FOR DIP.
4. DIP PIPE BEDDING TO BE NYSDOT #1 & #2 CRUSHED STONE ITEM 703.02). COPPER PIPE AND HDPE TUBING BEDDING TO BE SAND WITH MIN. AMOUNT ON ALL SIDES OF THE PIPE AS INDICATED.

1 WATERMAIN TRENCH SECTION

SCALE: N.T.S.

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SITE DETAILS

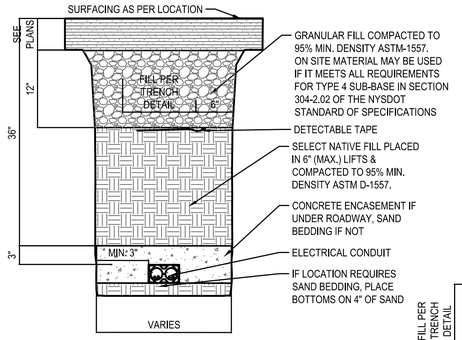
EWB POTABLE WATER PRESSURE BOOSTING PUMP STATION

ELMIRA WATER BOARD

ELMIRA, NY 14901

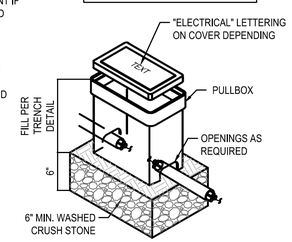
C5.1

PROJECT NO: 3405-001

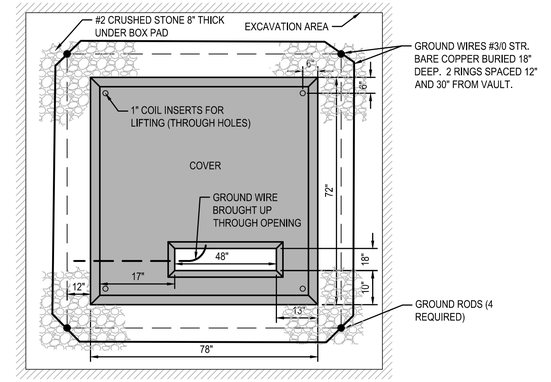


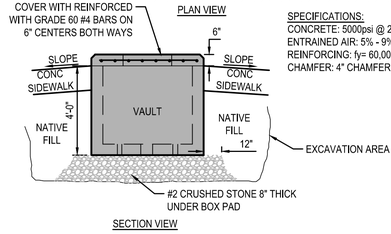
NOTES:
1. ALL TRENCHING SHALL CONFORM TO O.S.H.A. STANDARDS.
2. ALL DEVICES PER SPECIFICATIONS

NOTES:
QUANTITIES SHOWN FOR REFERENCE ONLY. REFER TO PLANS AND SPECIFICATIONS FOR DETAILS.



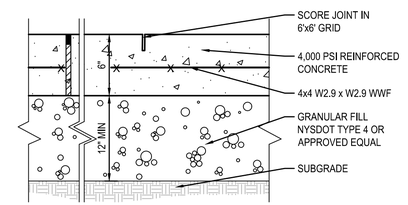
5 TYPICAL ELECTRICAL TRENCH DETAIL
SCALE: N.T.S.



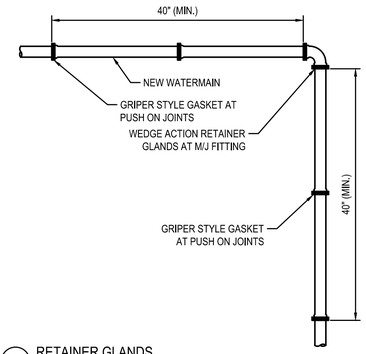


SPECIFICATIONS:
CONCRETE: 5000psi @ 28 DAYS
ENTRAINED AIR: 5% - 9%
REINFORCING: fy= 60,000psi ASTM A615
CHAMFER: 4" CHAMFER - ALL TOP EDGES SLAB ONLY.

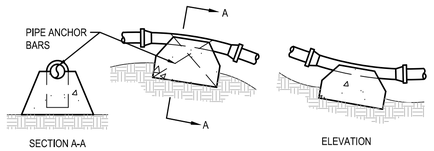
4 6'x6.5' (78"x72") TRANSFORMER PAD DETAIL
SCALE: N.T.S.



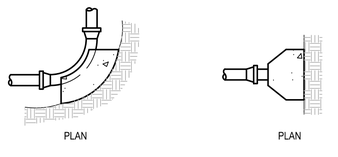
3 CONCRETE PAD DETAIL
SCALE: N.T.S.



2 RETAINER GLANDS
SCALE: N.T.S.



VERTICAL BENDS



PIPE DIA. (INCHES)	VERTICAL THRUST BLOCK VOLUME 100 P.S.I.G. INTERNAL PRESSURE				
	90° BEND	60° BEND	45° BEND	22 1/2° BEND	4° PIPE DEFLECTION TO 11 1/4° BEND
6	1.5 C.Y.	1.2 C.Y.	.8 C.Y.	.4 C.Y.	.2 C.Y.
8	2.6 C.Y.	2.0 C.Y.	1.4 C.Y.	.7 C.Y.	.4 C.Y
10 & 12	6.0 C.Y.	4.2 C.Y.	3.2 C.Y.	1.6 C.Y.	.8 C.Y.
14 & 16	11.2 C.Y.	7.9 C.Y.	6.1 C.Y.	3.1 C.Y.	1.6 C.Y

SAFE BEARING LOADS OF SOILS AND FACTORS FOR MODIFICATION OF THRUST BLOCK AREAS

SOIL	SAFE BEARING LOAD P.S.F.	FACTOR
MUCK PEAT	0	-
SOFT CLAY	300	4.00
SAND	1000	2.00
SAND & GRAVEL	1500	1.33
SAND & GRAVEL CEMENTED W/CLAY	2000	1.00
SHALE	5000	0.40

MINIMUM THRUST BLOCK AREAS REQUIRED AT PIPE BENDS AND PLUGS UNDER VARIOUS INTERNAL PRESSURE IN GRANULAR SOIL WITH A BEARING LOAD OF 2000 P.S.F.

PIPE DIA. (INCHES)	HORIZ. THRUST BLOCK AREA - S.F. 100 P.S.I.G. INTERNAL PRESSURE						
	PLUG OR TEE	90° BEND	60° BEND	45° BEND	30° BEND	22 1/2° BEND	11 1/4° BEND
4	1	1	1	1	-	-	-
6	2	2	2	1	1	-	-
8	3	3	3	2	1	1	-
10	4.5	6	4	3	2.5	2	1
12	6	8	6	4	3	2	1
14 & 16	10	14	10	8	5	4	2

NOTES:
1. NO. 4 REBAR FOR ANCHORS TO CONCRETE SHALL BE USED.
2. ALL THRUST BLOCKS SHALL BE POURED AGAINST UNDISTURBED EARTH. ALL THRUST BLOCKS TO BE FORMED TO AVOID CONCRETE CONTACT WITH BOLT HEADS OR NUTS.
3. CONCRETE MIN. COMPRESSIVE STRENGTH SHALL BE 4000 PSI AT 28 DAYS.
4. THE CONTRACTOR SHOULD ALWAYS CONSIDER TEST PRESSURES WHEN CALCULATING BEARING AREA.
5. THRUST BLOCKS SHALL BE POURED AT ALL BENDS AND TAPPING SLEEVE AND VALVE CONNECTIONS

1 THRUST BLOCK DETAILS
SCALE: N.T.S.

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SITE DETAILS

EWB POTABLE WATER PRESSURE BOOSTING PUMP STATION
ELMIRA WATER BOARD
ELMIRA, NY 14901

C5.2

PROJECT NO: 3405-001

GENERAL NOTES

1. THE TYPICAL DETAILS DEPICTED ON THE STANDARD SHEETS AND IN THE MUTCD, REFLECT THE MINIMUM REQUIREMENTS.

2. PROPOSED REVISIONS TO THE TRAFFIC CONTROL PLAN SHALL BE PROVIDED, IN WRITING, TO THE DOT ENGINEER FOR REVIEW AND APPROVAL BY THE REGIONAL DIRECTOR OR HIS/HER DESIGNEE FIVE (5) WORK DAYS PRIOR TO THE PLANNED IMPLEMENTATION OF SUCH PROPOSED REVISIONS, EXCEPT FOR CHANGES THAT ALTER THE SCOPE OF THE TRAFFIC CONTROL PLAN. SUCH CHANGES IN SCOPE MUST BE SUBMITTED TO THE ENGINEER FOR APPROVAL BY THE REGIONAL DIRECTOR OR HIS/HER DESIGNEE THIRTY (30) WORK DAYS PRIOR TO IMPLEMENTATION OF SUCH REVISIONS.

3. THE NAMES, ADDRESSES, AND TELEPHONE NUMBERS OF STAFF WHO ARE AUTHORIZED TO SECURE LABOR, MATERIALS, AND EQUIPMENT FOR EMERGENCY REPAIRS OUTSIDE NORMAL WORKING HOURS SHALL BE PROVIDED, IN WRITING, TO THE NYSDOT ENGINEER. THE ENGINEER WILL PROVIDE THE SUBMITTED INFORMATION TO REGIONAL MANAGEMENT, THE NEW YORK STATE POLICE, THE RESIDENT ENGINEER, AND THE LOCAL POLICE.

4. STANDARD SHEET 619-503 MAY BE USED FOR AN OFFSITE DETOUR SETUP FOR BOTH LONG TERM AND SHORT TERM WORK DURATIONS.

5. REGIONAL HIGH-VOLUME RESTRICTIONS SHALL BE FOLLOWED. CONSULT WITH DOT ENGINEER IF EXCEPTION NEEDED.

6. PLAN AHEAD TO AVOID CONFLICTING WORK ZONES. CHECK FOR CONSTRUCTION PROJECTS, CLOSURES, & RESTRICTIONS AT WWW.511NY.ORG, WWW.DOT.NY.GOV/PROJECTS, AND WITH NYSDOT ENGINEER.

7. WORK ZONE INCIDENTS SHALL BE DOCUMENTED AND REPORTED USING EITHER THE DEPARTMENT'S WORK ZONE INCIDENT FORM, OR THE CONSTRUCTION INCIDENT REPORTING SYSTEM, AS APPROPRIATE.

8. CONSIDER CLOSURE WIDTH AND THE ABILITY TO ACCOMMODATE WIDE LOAD VEHICLES BEFORE ESTABLISHING WORK ZONES.

9. IF THE WORK ZONE AFFECTS AN EXISTING ACCESSIBLE AND DETECTABLE PEDESTRIAN FACILITY, ACCESSIBILITY AND DETECTABILITY SHALL BE PROVIDED ALONG THE ALTERNATE ROUTE.

ACTIVITY AREA

1. A 500' MINIMUM LONGITUDINAL DISTANCE SHALL BE MAINTAINED BETWEEN CONSTRUCTION OPERATIONS ON ALTERNATE SIDES OF THE ROADWAY, UNLESS OTHERWISE APPROVED BY THE ENGINEER.

2. WHEN TWO OR MORE AREAS ARE ADJACENT, OVERLAP, OR ARE IN CLOSE PROXIMITY, THE CONTRACTOR SHALL ENSURE THERE ARE NO CONFLICTING SIGNS AND THAT LANE CONTINUITY IS MAINTAINED THROUGHOUT ALL WORK AREAS.

SIGNS

1. THE LOCATIONS OF THE SIGNS SHOWN ON THE WORK ZONE TRAFFIC CONTROL PLANS AND DETAILS MAY BE ADJUSTED BASED ON SIGHT DISTANCE AND OTHER CONSIDERATIONS. THE FINAL LOCATIONS OF SIGNS ARE SUBJECT TO APPROVAL OF THE ENGINEER.

2. FOR LONG TERM WORK DURATIONS, ANY EXISTING SIGNS, INCLUDING OVERHEAD SIGNS, WHICH CONFLICT WITH THE TEMPORARY TRAFFIC CONTROL SIGN LAYOUT SHALL BE COVERED, REMOVED, STORED OR RESET, AS APPROVED BY THE ENGINEER. ALL APPROPRIATE EXISTING SIGNS SHALL BE RESTORED TO THEIR ORIGINAL CONDITION AND/OR LOCATION UNLESS OTHERWISE REPLACED IN THIS CONTRACT.

3. SIGNS AT OR NEAR INTERSECTIONS SHALL BE PLACED SO THAT THEY DO NOT OBSTRUCT A MOTORIST'S LINE OF SIGHT.

4. SIGNS MOUNTED ON THE MEDIAN OF DIVIDED HIGHWAYS WHERE MEDIAN BARRIER IS IN PLACE MAY BE MOUNTED ON THE BARRIER WITH A SADDLE TYPE BRACKET OR OMITTED WITH THE APPROVAL OF THE DOT ENGINEER. LAYING THE SIGN DOWN IN A HORIZONTAL POSITION IS NOT PERMITTED.

5. THE DIMENSIONS OF WORK ZONE TRAFFIC CONTROL SIGNS ARE DESCRIBED IN THE MUTCD. ANY CHANGES TO THE DIMENSIONS SHALL BE APPROVED BY THE REGIONAL DIRECTOR OR BY HIS/HER DESIGNEE.

6. NYR9-12 SHALL BE USED IN PLACE OF NYR9-11 WHEN A REDUCED REGULATORY SPEED LIMIT SIGN IS AUTHORIZED.

7. RIGID AND FLEXIBLE "ROLL-UP" SIGNS MAY BE USED FOR MOBILE, SHORT DURATION AND SHORT-TERM STATIONARY WORK. RIGID SIGNS MUST BE MOUNTED AT LEAST 5 FEET ABOVE GRADE (7 FEET WHERE THERE ARE PEDESTRIANS OR PARKED CARS). FLEXIBLE SIGNS SHALL BE MOUNTED AT LEAST ONE FOOT ABOVE GRADE. MESH SIGNS SHALL NOT BE USED. USE RETRO REFLECTORIZED RIGID SIGNS FOR NIGHTTIME WORK.

LANE WIDTHS

1. UNLESS AUTHORIZED BY THE ENGINEER, THE MINIMUM LANE WIDTHS FOR WORK ZONE TRAVEL LANES SHALL BE AS FOLLOWS: FREEWAYS AND/OR EXPRESSWAYS IS 11'. THE MINIMUM LANE WIDTH FOR ALL OTHER TYPES OF ROADWAYS IS 10'.

2. A WRITTEN NOTE SHALL BE PROVIDED TO THE ENGINEER, A MINIMUM OF 21 CALENDAR DAYS IN ADVANCE OF PERFORMING ANY WORK THAT RESULTS IN THE REDUCED WIDTH OF AN EXISTING ROADWAY, SO THAT THE ENGINEER MAY NOTIFY THE REGIONAL PERMIT ENGINEER IN A TIMELY MANNER.

3. IF THE WORK ZONE AFFECTS PEDESTRIANS, A MINIMUM PEDESTRIAN PATHWAY WIDTH OF 5 FEET SHALL BE MAINTAINED UNLESS OTHERWISE AUTHORIZED BY THE ENGINEER.

4. TEMPORARY BICYCLE ACCOMMODATIONS SHALL NOT BE LESS THAN WHAT CURRENTLY EXISTS UNLESS AUTHORIZED BY THE ENGINEER.

PROTECTIVE VEHICLES

1. PROTECTIVE VEHICLES ARE DIVIDED INTO 2 CATEGORIES BASED ON THE GROSS VEHICLE WEIGHT (GVW):

   - PROTECTIVE VEHICLE LIGHT (PVL) SHALL HAVE A MINIMUM GVW OF 9,500 LBS. OR GREATER.

   - PROTECTIVE VEHICLE HEAVY (PVH) SHALL HAVE A MINIMUM GVW OF 22,000 LBS. OR GREATER.

2. IF THE PROTECTIVE VEHICLE ENCROACHES INTO THE TRAVEL LANE, OR IF IT REMAINS ENTIRELY ON THE SHOULDER OF ANY HIGH SPEED ROAD (45 MPH), IT SHALL BE EQUIPPED WITH A DEPLOYED TRUCK/TRAILER MOUNTED IMPACT ATTENUATOR (TMIA, SEE TABLE 011-01 ON SHEET 619-011). BALLAST MAY BE USED TO BRING A LIGHTER VEHICLE UP TO THE INDICATED WEIGHT PROVIDED THE BALLAST IS SECURELY CONTAINED WITHIN AN ENCLOSED BODY OR OTHERWISE SECURELY FASTENED TO THE VEHICLE PURSUANT TO FEDERAL MOTOR CARRIER SAFETY ADMINISTRATION (FMCSA) CARGO SECUREMENT RULES, SUCH THAT:

   - THE BALLAST WILL NOT SEPARATE FROM THE VEHICLE UPON IMPACT AND

   - THE BALLAST WEIGHT WILL NOT EXCEED THE MANUFACTURER'S GROSS VEHICLE WEIGHT RATING (GVWR).

   - TRUCK/TRAILER MOUNTED IMPACT ATTENUATORS SHALL NOT BE MOUNTED/INSTALLED ON VEHICLES WITH A GROSS WEIGHT (GVW) LESS THAN WHAT IS MINIMALLY REQUIRED BY THE MANUFACTURER OF THE TMIA.

3. WHEN A PROTECTIVE VEHICLE(S) IS USED BETWEEN THE WORK VEHICLE (CREW) OR HAZARD AND THE TRAFFIC IN A MOVING OPERATION IT IS REFERRED TO AS A SHADOW VEHICLE(S).

4. WHEN A PROTECTIVE VEHICLE(S) IS USED BETWEEN THE WORK VEHICLE (CREW) OR HAZARD AND THE TRAFFIC IN A STATIONARY OPERATION IT IS REFERRED TO AS A BARRIER VEHICLE(S).

5. WHEN A PROTECTIVE VEHICLE IS USED IN ADVANCE OF EITHER MOVING OR STATIONARY OPERATIONS TO DISPLAY SIGN MESSAGES IT IS REFERRED TO AS AN ADVANCE WARNING VEHICLE. WHEN SIGNS ARE MOUNTED ON AN ADVANCED WARNING VEHICLE, THEY SHALL NOT OBSTRUCT VISIBILITY OF ANY LIGHTS (TAILLIGHTS OR WARNING LIGHTS), OR SIDE-VIEW MIRRORS ON THE VEHICLE, OR TRUCK MOUNTED ARROW BOARDS.

6. IN A MOVING OPERATION OR A STATIONARY OPERATION THAT OCCUPIES A LOCATION FOR UP TO 1 HOUR, THE OPERATOR SHALL REMAIN IN THE PROTECTIVE VEHICLE WITH THE SAFETY BELT AND HEADREST PROPERLY ADJUSTED, MAINTAIN VEHICLE SPACING, AND KEEP THE WHEELS ALIGNED WITH THE LANE STRIPING AND LANE TO MAINTAIN LANE DISCIPLINE AND TO STAY IN LANE IF STRUCK. THE PARKING BRAKE SHALL BE SET WHENEVER POSSIBLE. TWO-WAY RADIOS SHOULD BE USED TO COMMUNICATE BETWEEN THE OPERATOR AND THE WORK CREW.

7. IN A STATIONARY OPERATION THAT OCCUPIES A LOCATION FOR MORE THAN 1 HOUR, ONCE THE PROTECTIVE VEHICLE HAS BEEN APPROPRIATELY PLACED, IT SHOULD BE UNOCCUPIED. UNOCCUPIED VEHICLE SHALL BE POSITIONED PARALLEL TO TRAFFIC, PARKING BRAKE SET, PLACED IN 2ND GEAR (MANUAL TRANSMISSIONS /ENGINE OFF) OR PARK / NEUTRAL (AUTOMATIC TRANSMISSIONS). THE FRONT WHEELS SHALL BE ALIGNED WITH THE LANE STRIPING AND LANE TO MAINTAIN LANE DISCIPLINE AND TO STAY IN LANE IF STRUCK.

8. NO WORK ACTIVITY, EQUIPMENT, VEHICLES AND/OR MATERIALS SHALL BE LOCATED BETWEEN THE PROTECTIVE VEHICLE AND THE ACTIVE WORK AREA (ROLL AHEAD DISTANCE).

9. DIRECT VERBAL COMMUNICATION BETWEEN THE PROTECTIVE VEHICLES AND THE WORK VEHICLE(S) / EQUIPMENT SHALL BE UTILIZED WHERE AVAILABLE.

CHANNELIZING DEVICES

1. WHERE POSSIBLE ALL CHANNELIZING AND GUIDING DEVICES ARE TO BE PLACED SO AS TO PROVIDE A MINIMUM 2' LATERAL CLEARANCE TO THE TRAVELED WAY.

2. A DROP-OFF OF GREATER THAN 24 INCHES WITHIN 10 FEET FROM THE EDGE OF THE TRAVELED WAY TO REMAIN AT THE END OF THE WORK SHIFT SHALL BE SEPARATED FROM TRAFFIC WITH POSITIVE BARRIER. FOR POSTED SPEED LIMIT OF 45 MPH AND LESS, A DROP-OFF OF GREATER THAN 24 INCHES WITHIN 10 FEET FROM THE EDGE OF THE TRAVELED WAY THAT IS 100 FEET OR LESS IN LENGTH WILL BE ALLOWED WITH CHANNELIZING DEVICES CONSISTING OF DRUMS, EXTRA TALL CONES, OR OVERSIZED VERTICAL PANELS ONLY AT A MAXIMUM SPACING OF 20 FEET FOR SHORT DURATIONS NOR TO EXCEED ONE WORK SHIFT.

3. TEMPORARY POSITIVE BARRIER MAY BE SUBSTITUTED WITH DRUM CHANNELIZING DEVICES, IN SOME CIRCUMSTANCES, WITH APPROVAL OF THE REGIONAL TRAFFIC ENGINEER BASED ON GUIDANCE FOUND IN THE HIGHWAY DESIGN MANUAL AND ENGINEERING JUDGEMENT.

PUBLIC ACCESS

1. PROPERTY OWNERS WHOSE DRIVEWAYS WILL BE MADE INACCESSIBLE SHALL BE NOTIFIED AT LEAST 24 HOURS PRIOR TO RESTRICTING USE OF THE DRIVEWAY. FOR MULTIPLE ACCESS PROPERTIES, AT LEAST ONE DRIVEWAY SHALL BE OPEN AT ALL TIMES. ACCESS SHALL BE RESTORED TO ALL DRIVEWAYS AS SOON AS POSSIBLE.

2. SUITABLE RAMPS SHALL BE INSTALLED TO MAINTAIN SMOOTH TRANSITIONS FROM RESIDENTIAL AND COMMERCIAL DRIVEWAYS TO AND FROM THE WORK AREA.

LANE CLOSURES

1. LANE CLOSURES SHALL BE LOCATED TO PROVIDE OPTIMUM VISIBILITY, I.E. BEFORE CURVES AND CRESTS, TO THE EXTENT CONDITIONS PERMIT.

2. THE ENGINEER MAY REQUIRE THAT ALL LANES BE RE-OPENED AT ANY TIME IF THE ROUTE IS NEEDED FOR EMERGENCY PURPOSES. THIS COULD INCLUDE INCIDENTS AT LOCATIONS OUTSIDE THE CONTRACT LIMITS.

3. EACH ARROW PANEL SHALL BE VISIBLE 1500 FEET IN ADVANCE FROM ANY POINT WITHIN THE ROADWAY.

TOLERANCE NOTE

1. ALL DIMENSIONS ON ANY 619 STANDARD SHEET ARE NOMINAL.

   - WHEN A DECIMAL POINT WITH SIGNIFICANT DIGIT(S) TO THE RIGHT OF IT IS/ARE PRESENT-TOLERANCE FOR EACH DIMENSION IS ONE HALF OF THE LAST SIGNIFICANT DIGIT IN THE UNITS SHOWN. (e.g. 1.0' IS 0.05' & 1.00" IS 0.005").

   - OTHERWISE, TOLERANCE FOR EACH DIMENSION IS THE LESSER OF 10% OF THE NOMINAL DIMENSION SHOWN OR 6" (e.g. TOLERANCE FOR 3' IS 3.6" & TOLERANCE FOR 10' IS 6").

2. TOLERANCE ARE NOT CUMULATIVE. ABOVE DOES NOT APPLY WHEN ANY RANGE, MAXIMUM OR MINIMUM DIMENSION OR A CONTEXT SPECIFIC TOLERANCE IS SPECIFIED.

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NYSDOT M&PT DETAILS

EWB POTABLE WATER PRESSURE BOOSTING PUMP STATION

ELMIRA WATER BOARD

ELMIRA, NY 14901

NEW YORK STATE OF OPPORTUNITY. Department of Transportation

U.S. CUSTOMARY STANDARD SHEET

WORK ZONE TRAFFIC CONTROL
GENERAL NOTES
(SHEET 1 OF 2)

ERRATA 3 EFF. 05/01/24 ISSUED WITH EB 24-007		
ERRATA 2 EFF. 09/01/23 ISSUED WITH EB 23-016		
ERRATA 1 EFF. 05/01/23 ISSUED WITH EB 22-033	APPROVED DECEMBER 21, 2022	ISSUED UNDER EI 22-033
	ROBERT LIMOGES, P.E. DIRECTOR, OTSM	619-010

C5.3

PROJECT NO: 3405-001

WORK DURATION DEFINITIONS

1. THERE ARE MAINLY FIVE WORK DURATIONS:

   A. LONG-TERM IS STATIONARY WORK THAT OCCUPIES A LOCATION MORE THAN 3 CONSECUTIVE DAYS.

   B. INTERMEDIATE-TERM IS STATIONARY WORK THAT OCCUPIES A LOCATION MORE THAN ONE DAYLIGHT PERIOD UP TO 3 CONSECUTIVE DAYS, OR NIGHTTIME WORK LASTING MORE THAN 1 HOUR.

   C. SHORT-TERM IS STATIONARY DAYTIME WORK THAT OCCUPIES A LOCATION FOR MORE THAN 1 HOUR WITHIN A SINGLE DAYLIGHT PERIOD.

   D. SHORT DURATION IS WORK THAT OCCUPIES A LOCATION UP TO 1 HOUR. IT CAN BE PERFORMED DURING THE DAYTIME OR AT NIGHT IN ACCORDANCE WITH NOTES N1 TO N11 NOTES ON NIGHTTIME WORK.

   E. MOBILE IS WORK THAT MOVES INTERMITTENTLY OR CONTINUOUSLY WHERE THE WORK AT ANY SPECIFIC LOCATION COMPLETES WITHIN 15 MINUTES. IT IS USED FOR VEHICLE BASED OPERATIONS AND DOES NOT INVOLVE WORKERS ON FOOT. IT CAN BE PERFORMED DURING THE DAYTIME OR AT NIGHT IN ACCORDANCE WITH NOTES N1 TO N10 NOTES ON NIGHTTIME WORK.

2. SPECIAL OPERATIONS ARE WORK OPERATIONS THAT DO NOT FIT INTO ONE OF THE ABOVE FIVE CATEGORIES. SPECIAL OPERATIONS INCLUDE:

   A. STOP AND GO OPERATIONS - WORK THAT COMPLETES WITHIN 5 MINUTES AND ALLOWS WORKERS ON FOOT.

   B. OTHER OPERATIONS INCLUDING MOWING, MULCHING/HERBICIDE OPERATIONS, TEMPORARY ROAD/INTERSECTION CLOSURES, ETC.

ROADWAY TYPE DEFINITIONS

1. FREEWAY:

   A. INTERSTATE: INTERREGIONAL HIGH-SPEED, HIGH-VOLUME, DIVIDED FACILITIES WITH COMPLETE CONTROL OF ACCESS.

   B. PARKWAY: DIVIDED HIGHWAYS FOR NON-COMMERCIAL TRAFFIC WITH FULL CONTROL OF ACCESS, GRADE PARKWAY SEPARATIONS, INTERCHANGES, AND OCCASIONAL AT-GRADE INTERSECTIONS. PARKWAYS ARE DESIGNATED BY LAW.

2. EXPRESSWAY: DIVIDED HIGHWAYS FOR THROUGH TRAFFIC WITH FULL OR PARTIAL CONTROL OF ACCESS AND GENERALLY WITH GRADE SEPARATIONS AT MAJOR CROSSROADS. ALL FREEWAY STANDARD SHEETS ARE APPLICABLE TO EXPRESSWAY.

3. NON-FREEWAY:

   A. MULTILANE DIVIDED HIGHWAY

   B. MULTILANE UNDIVIDED HIGHWAY

   C. TWO-LANE TWO-WAY ROADWAY

ALL NON-FREEWAYS CAN BE EITHER URBAN OR RURAL:

URBAN: (MEETS MORE THAN 1 OF THE FOLLOWING CRITERIA)
- •HIGH DENSITY DEVELOPMENT
- •ON-STREET PARKING
- •VARIED BUILDING SETBACKS
- •MULTI-STORY AND LOW-TO MEDIUM-RISE STRUCTURES FOR RESIDENTIAL
- •COMMERCIAL, AND EDUCATIONAL USES, STRUCTURES THAT ACCOMMODATE MIXED USES: COMMERCIAL, RESIDENTIAL, AND PARKING
- •LIGHT INDUSTRIAL, AND SOMETIMES HEAVY INDUSTRIAL, LAND USE
- •PROMINENT DESTINATIONS WITH SPECIALIZED STRUCTURES, E.G., LARGE THEATERS, SPORTS FACILITIES OR CONFERENCE CENTERS
- •HIGH LEVELS OF PEDESTRIAN AND BICYCLIST ACTIVITY, WITH NEARLY CONTINUOUS SIDEWALKS AND MARKED CROSSWALKS
- •HIGHER DENSITY OF TRANSIT STOPS AND ROUTES
- •DRIVEWAY DENSITIES GREATER THAN 25 DRIVEWAYS/MILE ON EACH SIDE OF THE ROAD
- •MINOR COMMERCIAL DRIVEWAY DENSITIES OF 10 DRIVEWAYS/MILE OR GREATER
- •MAJOR COMMERCIAL DRIVEWAYS
- •HIGH DENSITY OF CROSS STREETS

RURAL: DOES NOT MEET MORE THAN ONE OF THE ABOVE CRITERIA.

NOTES FOR NIGHTTIME OPERATIONS:

N1. WORK OCCURRING AFTER SUNSET AND BEFORE SUNRISE WILL BE CONSIDERED NIGHTTIME OPERATIONS.

N2. ALL SIGNS, STOP/SLOW PADDLES AND RED FLAGS USED TO WARN/ALERT/CONTROL TRAFFIC SHALL BE RETROREFLECTIVE.

N3. ALL WORKERS INVOLVED SHALL WEAR PROTECTIVE HELMETS AND NIGHTTIME APPAREL IN ACCORDANCE WITH §107-05A. HIGH VISIBILITY APPAREL AT ALL TIMES.

N4. VEHICLES OPERATING ON THE PAVEMENT OF A CLOSED ROADWAY OR TRAVEL LANE SHALL DISPLAY ROTATING AMBER BEACONS OR FLASHING LED BEACONS AT ALL TIMES.

N5. LEVEL I ILLUMINATION SHALL BE PROVIDED NEAR THE BEGINNING OF LANE CLOSURE TAPERS AND AT ROAD CLOSURES, INCLUDING THE SETUP AND REMOVAL OF THE CLOSURE TAPERS.

N6. LEVEL II ILLUMINATION SHALL BE PROVIDED FOR FLAGGING STATIONS, ASPHALT PAVING, MILLING, AND CONCRETE PLACEMENT AND/OR REMOVAL OPERATIONS, INCLUDING BRIDGE DECKS, 50 FEET AHEAD OF AND 100 FEET BEHIND A PAVING OR MILLING MACHINE.

N7. LEVEL III ILLUMINATION SHALL BE PROVIDED FOR PAVEMENT OR STRUCTURAL CRACK FILLING, JOINT REPAIR, PAVEMENT PATCHING AND REPAIRS, INSTALLATION OF SIGNAL EQUIPMENT OR OTHER ELECTRICAL/MECHANICAL EQUIPMENT, AND OTHER TASKS INVOLVING FINE DETAILS OR INTRICATE PARTS AND EQUIPMENT.

N8. ALL LIGHTING SHALL BE DESIGNED, INSTALLED, AND OPERATED TO AVOID GLARE THAT AFFECTS TRAFFIC ON THE ROADWAY OR THAT CAUSES ANNOYANCE OR DISCOMFORT FOR RESIDENCES ADJOINING THE ROADWAY.

N9. PRIOR TO THE START OF NIGHTTIME OPERATIONS, A WRITTEN NIGHTTIME OPERATIONS AND LIGHTING PLAN IS REQUIRED FOR APPROVAL FROM THE DOT ENGINEER.

N10. SEE STANDARD SPECIFICATIONS §619 FOR ADDITIONAL REQUIREMENTS AND CONSIDERATIONS. REFER TO SECTION 619-3.19B FOR BALLOON LIGHTING REQUIREMENTS.

N11. FLAGGERS SHALL USE A FLASHLIGHT WITH RED GLOW CONE/RED LED BATON FOR FLAGGING IN NON-ILLUMINATED FLAGGER STATIONS DURING NIGHTTIME OPERATIONS.

ERRATA 1 eff. 09/01/23
ISSUED WITH EB 23-016

NEW YORK STATE OF OPPORTUNITY. Department of Transportation

U.S. CUSTOMARY STANDARD SHEET

WORK ZONE TRAFFIC CONTROL
GENERAL NOTES
(SHEET 2 OF 2)

APPROVED DECEMBER 21, 2022

ROBERT LIMOGES, P.E.
DIRECTOR, OTSM

ISSUED UNDER EI 22-033

619-010

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NYSDOT M&PT DETAILS

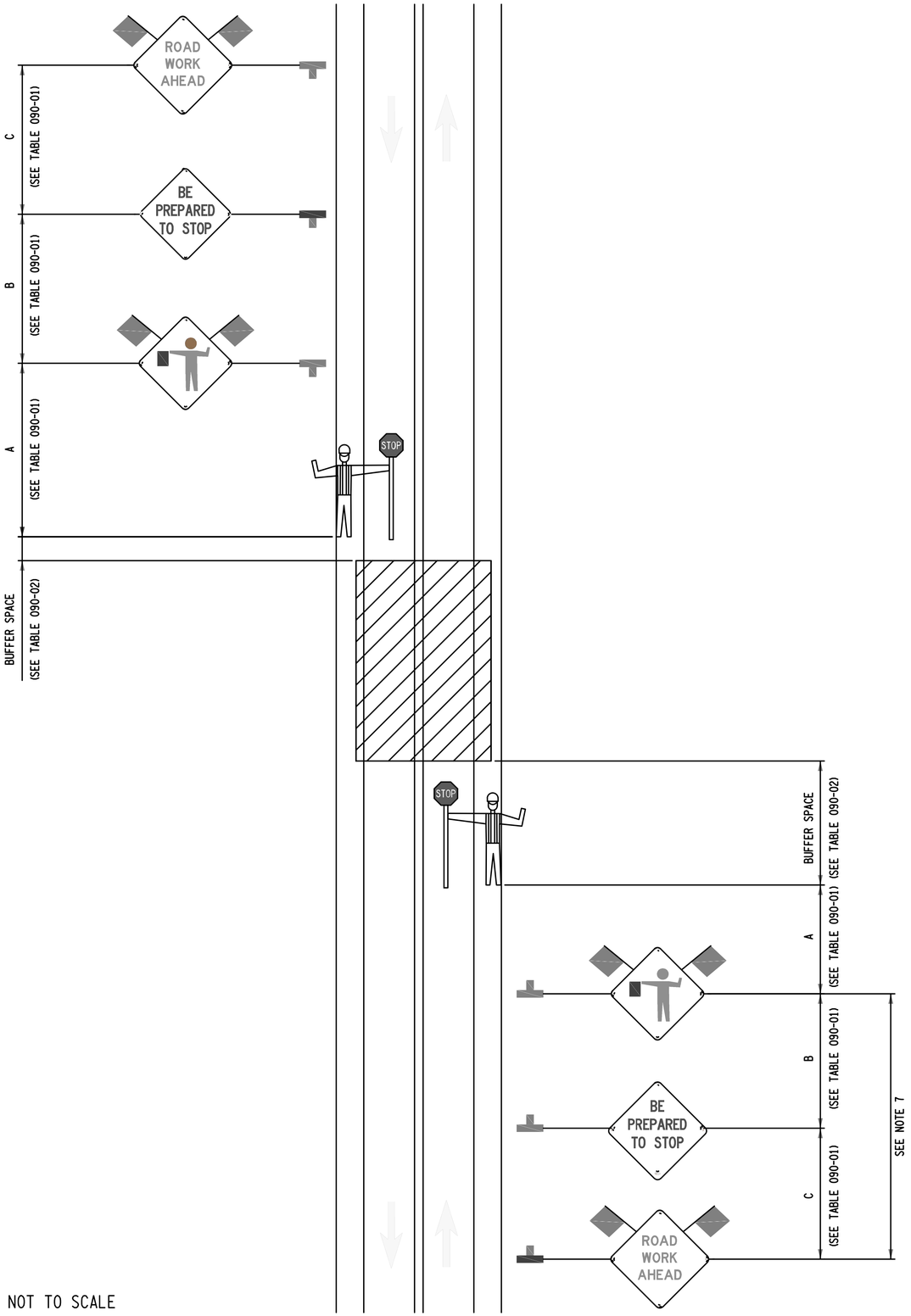
EWB POTABLE WATER PRESSURE BOOSTING PUMP STATION

ELMIRA WATER BOARD

ELMIRA, NY 14901

C5.4

PROJECT NO: 3405-001



NOT TO SCALE

NOTES:

1. DURATION OF THE CLOSURE SHALL NOT EXCEED 5 MINUTES.
2. IN URBAN CONDITIONS, ADVANCE WARNING SIGN SPACINGS MAY BE ADJUSTED IN ORDER TO ACCOMMODATE SIDE STREETS AND DRIVEWAYS. IF THERE IS A CONFLICT, MOVE THE SIGN UPSTREAM.
3. FLAGGER SYMBOL SIGN (W20-7) AND "BE PREPARED TO STOP" (W3-4) SHALL BE REMOVED, COVERED OR TURNED AWAY FROM ROAD USERS WHEN FLAGGING OPERATIONS ARE NOT OCCURING.
4. FOR MULTI LANE ROADWAYS, A SITE SPECIFIC PLAN IS REQUIRED ILLUSTRATING PROPOSED STRATEGIES / SIGNAGE TO REDUCE THE ROAD TO A SINGLE LANE ON EACH APPROACH TO THE WORK AREA.
5. TRAFFIC IN BOTH DIRECTIONS WILL BE STOPPED FOR THE ENTIRE DURATION OF THE WORK. THE WORK SHALL BE SUSPENDED DURING PERIODS OF POOR VISIBILITY AND DURING PEAK HOURS.
6. WORK SHOULD BE SCHEDULED DURING NON-PEAK HOURS.
7. PRIOR TO PLACING THE ADVANCE WARNING SIGNS, CONSIDERATION NEEDS TO BE GIVEN TO THE EXPECTED VOLUME OF TRAFFIC THAT NEEDS TO BE HELD AND DISTANCES B AND C INCREASED IF NEEDED.

W3-4

W20-7

WORK AREA

W20-1

FLAGGER

TABLE 090-01: ADVANCE WARNING SIGN SPACING

ROAD TYPE	DISTANCE BETWEEN SIGNS			SIGN LEGEND	
	A (FT.)	B (FT.)	C (FT.)	XX	YY
URBAN (≤ 30 MPH•)	100	100	100	AHEAD	AHEAD
URBAN (35-40 MPH•)	200	200	200	AHEAD	AHEAD
URBAN (≥ 45 MPH•)	350	350	350	1000 FT.	AHEAD
RURAL	500	500	500	1500 FT.	1000 FT.

• PRECONSTRUCTION POSTED SPEED LIMIT

TABLE 090-02: LONGITUDINAL BUFFER SPACE

PRECONSTRUCTION POSTED SPEED LIMIT (MPH)	DISTANCE (FT.)/ # OF SKIP LINES
25	155/4
30	200/5
35	250/6
40	305/8
45	360/9
50	425/11
55	495/13

TABLE 090-03: REQUIRED SIGN SIZE•

SIGN	NON-FREEWAY	FREEWAY
W3-4	36x36	48x48
W20-1	36x36	48x48
W20-7	36x36	48x48
WARNING FLAG	18x18	18x18

•FREEWAY SIZES MAY BE USED ON NON-FREEWAY, IF SPACE CONSTRAINTS DO NOT EXIST.

NEW YORK STATE OF OPPORTUNITY. Department of Transportation

U.S. CUSTOMARY STANDARD SHEET

WORK ZONE TRAFFIC CONTROL
TWO-LANE TWO-WAY ROADWAY
TEMPORARY ROAD CLOSURE

APPROVED DECEMBER 2, 2021

ROBERT LIMOGES, P.E.
DIRECTOR, OTSM

ISSUED UNDER EI 21-028

619-090

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NYSDOT M&PT DETAILS

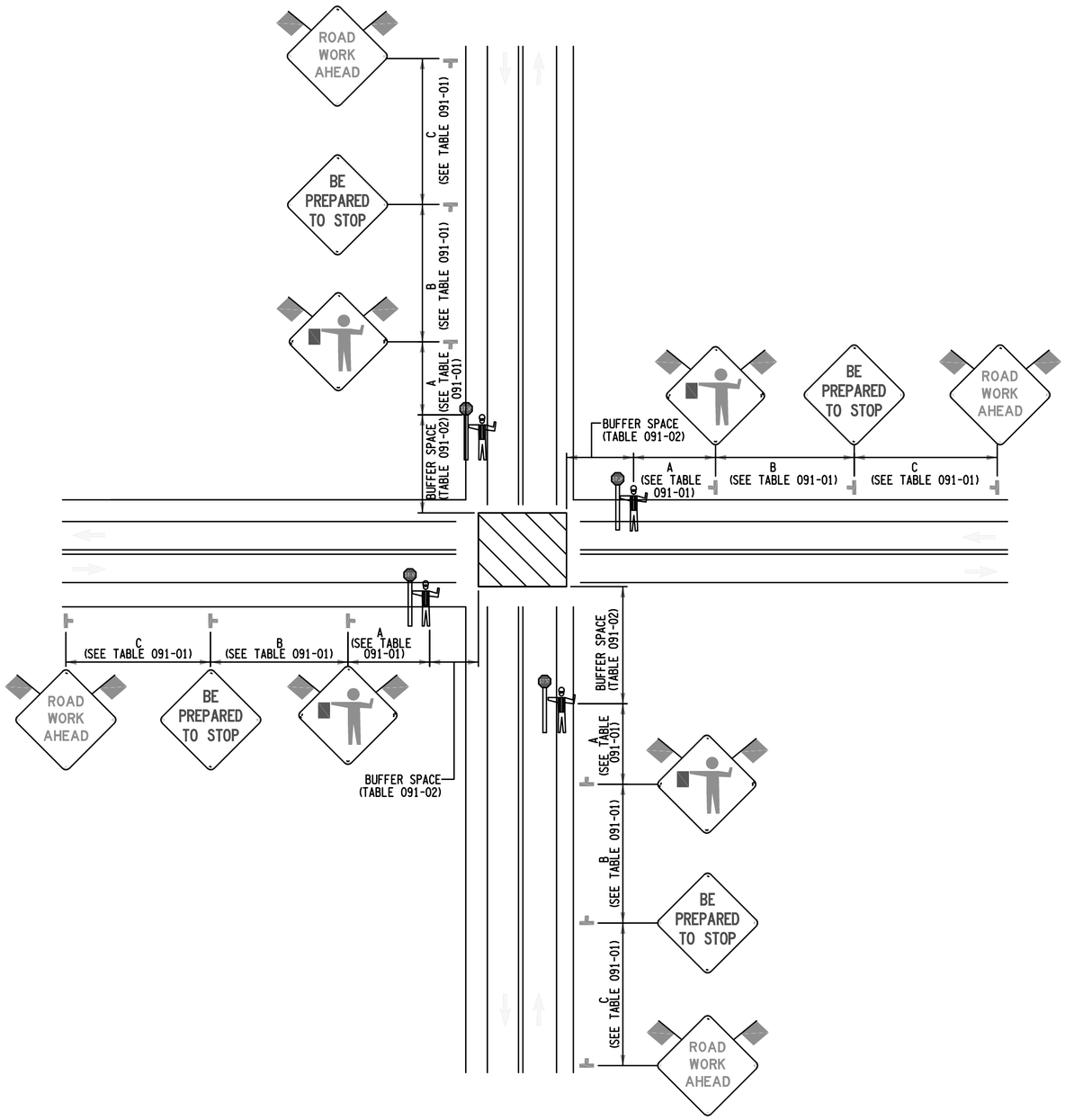
EWB POTABLE WATER PRESSURE BOOSTING PUMP STATION

ELMIRA WATER BOARD

ELMIRA, NY 14901

C5.5

PROJECT NO: 3405-001



NOT TO SCALE

TABLE 091-01: ADVANCE WARNING SIGN SPACING					
ROAD TYPE	DISTANCE BETWEEN SIGNS			SIGN LEGEND	
	A (FT.)	B (FT.)	C (FT.)	XX	YY
URBAN (≤ 30 MPH•)	100	100	100	AHEAD	AHEAD
URBAN (35-40 MPH•)	200	200	200	AHEAD	AHEAD
URBAN (≥ 45 MPH•)	350	350	350	1000 FT.	AHEAD
RURAL	500	500	500	1500 FT.	1000 FT.

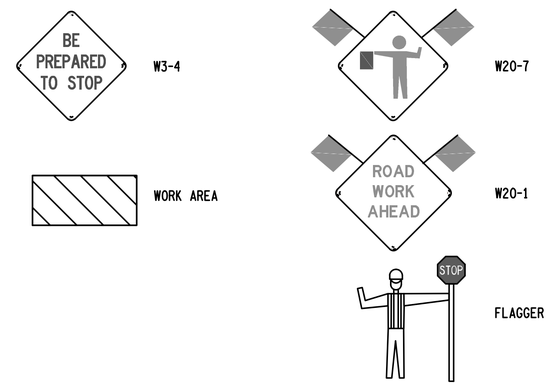
• PRECONSTRUCTION POSTED SPEED LIMIT

TABLE 091-02: LONGITUDINAL BUFFER SPACE	
PRECONSTRUCTION POSTED SPEED LIMIT (MPH)	DISTANCE (FT.)/ * OF SKIP LINES
25	155/4
30	200/5
35	250/6
40	305/8
45	360/9
50	425/11
55	495/13

TABLE 091-03: REQUIRED SIGN SIZES*		
SIGN	NON-FREEWAY	FREEWAY
W3-4	36x36	48x48
W20-1	36x36	48x48
W20-7	36x36	48x48
WARNING FLAG	18x18	18x18
*FREEWAY SIZES MAY BE USED ON NON-FREEWAY, IF SPACE CONSTRAINTS DO NOT EXIST.		

NOTES:

1. DURATION OF THE CLOSURE SHALL NOT EXCEED 5 MINUTES.
2. IN URBAN CONDITIONS, ADVANCE WARNING SIGN SPACINGS MAY BE ADJUSTED IN ORDER TO ACCOMMODATE SIDE STREETS AND DRIVEWAYS. IF THERE IS A CONFLICT, MOVE THE SIGN UPSTREAM.
3. FLAGGER SYMBOL SIGN (W20-7) AND "BE PREPARED TO STOP" (W3-4) SHALL BE REMOVED, COVERED OR TURNED AWAY FROM ROAD USERS WHEN FLAGGING OPERATIONS ARE NOT OCCURRING.
4. FOR INTERSECTIONS WITH MULTIPLE LANE APPROACHES, A SITE SPECIFIC PLAN IS REQUIRED ILLUSTRATING PROPOSED STRATEGIES/ SIGNAGE TO REDUCE ALL APPROACHES TO A SINGLE LANE.
5. TRAFFIC IN BOTH DIRECTIONS WILL BE STOPPED FOR THE ENTIRE DURATION OF THE WORK. THE WORK SHALL BE SUSPENDED DURING PERIODS OF POOR VISIBILITY AND DURING PEAK HOURS.
6. WORK SHOULD BE SCHEDULED DURING NON-PEAK HOURS.
7. PRIOR TO PLACING THE ADVANCE WARNING SIGNS, CONSIDERATION NEEDS TO BE GIVEN TO THE EXPECTED VOLUME OF TRAFFIC THAT NEEDS TO BE HELD AND DISTANCES B AND C INCREASED IF NEEDED.



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NYSDOT M&PT DETAILS

EWB POTABLE WATER PRESSURE BOOSTING PUMP STATION

ELMIRA WATER BOARD

ELMIRA, NY 14901

NEW YORK STATE OF OPPORTUNITY. Department of Transportation

U.S. CUSTOMARY STANDARD SHEET

WORK ZONE TRAFFIC CONTROL TWO-LANE TWO-WAY ROADWAY TEMPORARY INTERSECTION CLOSURE

APPROVED DECEMBER 2, 2021

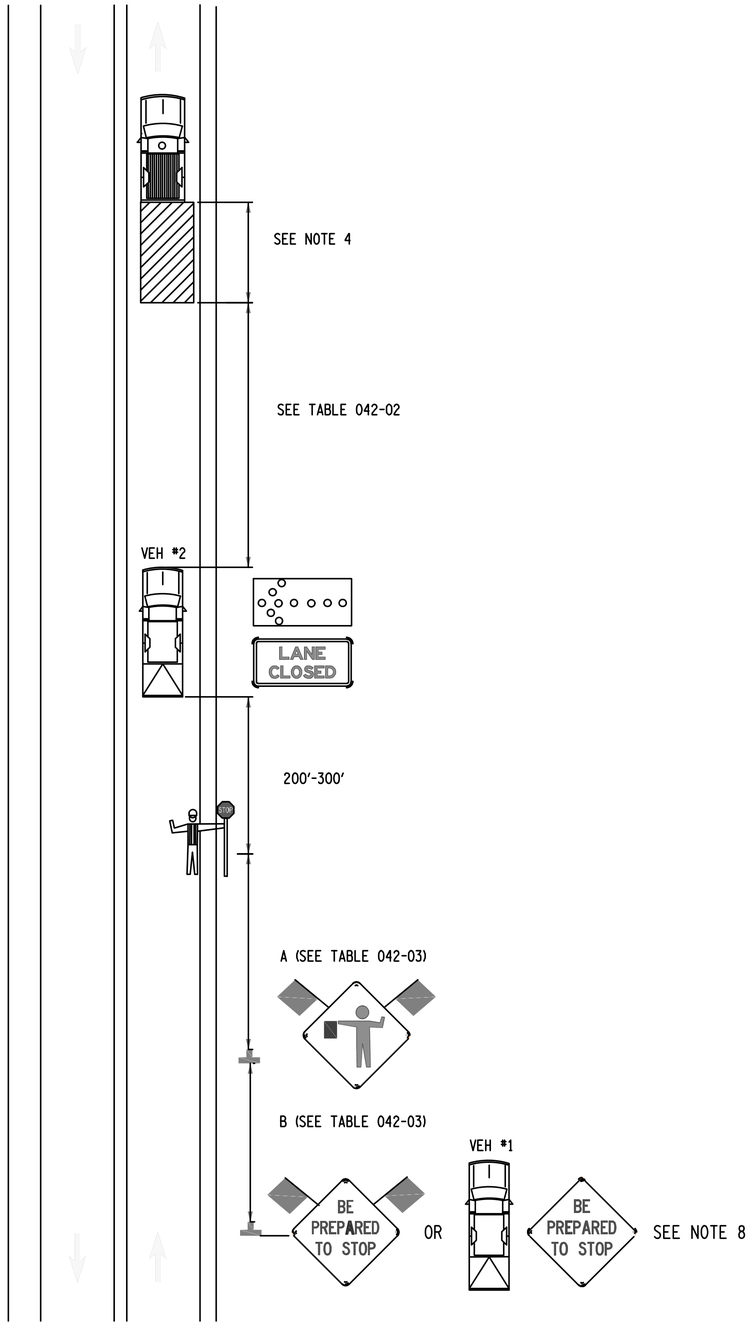
ROBERT LIMOGES, P.E.
DIRECTOR, OTSM

ISSUED UNDER EI 21-028

619-091

C5.6

PROJECT NO: 3405-001



NOT TO SCALE

TABLE 042-01: PROTECTIVE VEHICLE REQUIREMENTS				
CLOSURE TYPE	ROAD TYPE & SPEED	NON-FREEWAY		
		≥ 45 MPH	35 - 40 MPH	≤ 30 MPH
	EXPOSURE CONDITIONS[1]			
LANE CLOSURE OR ENCROACHMENT	WORKERS ON FOOT OR VEHICLE EXPOSED TO TRAFFIC	P, TMIA	P, TMIA	P
	OTHER HAZARDS NO WORKERS EXPOSED	NA	NA	NA
SHOULDER CLOSURE OR ENCROACHMENT	WORKERS ON FOOT OR VEHICLE EXPOSED TO TRAFFIC	P, TMIA	P	P
	OTHER HAZARDS NO WORKERS EXPOSED	NA	NA	NA

LEGEND

P: PROTECTIVE VEHICLE REQUIRED FOR EACH CLOSED LANE & EACH CLOSED PAVED SHOULDER 8' OR WIDER, IF THE WORK SPACE MOVES WITHIN THE STATIONARY CLOSURE, THE PROTECTIVE VEHICLE SHALL BE REPOSITIONED ACCORDINGLY

TMIA: TMIA REQUIRED
NA: NOT APPLICABLE

NOTES:
1. THE EXPOSURE CONDITIONS ASSUMES THERE IS NO POSITIVE PROTECTION PRESENT

TABLE 042-02: ROLL AHEAD DISTANCE				
ROLL AHEAD DISTANCE (FT.)/# OF SKIP LINES FOR VEHICLES				
PRECONSTRUCTION POSTED SPEED LIMIT (MPH)	MOVING OPERATION (BASED ON PROTECTIVE VEHICLE SPEED OF 15 MPH)		STATIONARY OPERATION	
	MIN	MAX	MIN	MAX
≥ 55	200/5	280/7	120/3	200/5
45 - 50	160/4	240/6	80/2	160/4
≤ 40	120/3	200/5	40/1	120/3

NOTES:

1. THIS TYPICAL APPLIES TO CONTINUOUSLY MOVING OR OPERATIONS STOPPING FOR NO MORE THAN 5 MINUTES.
2. SHOULD THE WORK DURATION EXCEED 5 MINUTES, THE WZTC SETUP SHALL BE RECONFIGURED TO MEET THE REQUIREMENTS OF STANDARD SHEET 619-203 SET-UP.
3. THIS STANDARD SHEET MAY BE USED FOR OPERATIONS SUCH AS SETTING UP STATIONARY TRAFFIC CONTROL (E.G., PLACING CONES, DRUMS AND SIGNS) AND DEBRIS REMOVAL.
4. WORK AREA SHALL NOT EXCEED 40 FEET IN LENGTH.
5. VEH #2 SHALL BE PLACED TO OPTIMIZE AND ENHANCE VISIBILITY FROM THE REAR OF THE OPERATION. AND SHALL NOT EXCEED THE APPROPRIATE ROLL AHEAD DISTANCE VALUES.
6. THE FLAGGER SHALL HOLD TRAFFIC UNTIL THE OPERATION IS COMPLETED, AND WORK VEHICLE CLEARS THE LANE. THE TRAFFIC SHALL NOT BE DIRECTED INTO OPPOSING LANE.
7. THE SAME PROTECTIVE VEHICLE WITH TMIA CAN BE USED FOR SETTING UP THE ADVANCE WARNING SIGNAGE. AFTER THE ADVANCE WARNING SIGNS HAVE BEEN SETUP, THE SAME PROTECTIVE VEHICLE SHALL BE USED TO SHADOW THE WORK VEHICLE FOR THE DURATION OF THE OPERATION.
8. TO ENSURE VISIBILITY OF THE FLAGGER SIGN W20-7, STATIC W3-4 SIGN SHALL BE USED FOR SPEED LIMITS OF 40 MPH OR LOWER. VEH #1 CAN ONLY BE USED FOR SPEED LIMITS OF 45 MPH OR GREATER WHEN USED, THIS VEHICLE SHALL STAY AS FAR RIGHT AS POSSIBLE AND SHALL ADJUST ITS SPACING TO ACCOMMODATE CHANGING SIGHT DISTANCE AND OTHER FIELD CONDITIONS.
9. UNLESS THIS SETUP IS BEING USED FOR AN EMERGENCY SITUATION, WORK SHOULD BE SCHEDULED DURING NON-PEAK HOURS.

TABLE 042-03: ADVANCE PLACEMENT SIGN DISTANCE		
ROAD TYPE	DISTANCE BETWEEN SIGNS	
	A (FT.)	B (FT.)
URBAN (≤ 30 MPH•)	100	100
URBAN (35-40 MPH•)	200	200
URBAN (≥ 45 MPH•)	350	350
RURAL	500	500

• PRECONSTRUCTION POSTED SPEED LIMIT

TABLE 042-04: REQUIRED SIGN SIZES•		
SIGN	NON-FREEWAY	FREEWAY
NYW8-33	48x24	48x24
W3-4	36x36	48x48
W20-7	36x36	48x48
WARNING FLAG	18x18	18x18
•FREEWAY SIZES MAY BE USED ON NON-FREEWAY, IF SPACE CONSTRAINTS DO NOT EXIST.		

WORK AREA
24000 LB PROTECTIVE VEHICLE WITH TMIA SEE TABLE 042-01
WORK VEHICLE
24000 LB PROTECTIVE VEHICLE WITHOUT TMIA (SEE TABLE 042-01)
W20-7
W3-4
NYW8-33
ARROW PANEL
FLAGGER

NEW YORK STATE OF OPPORTUNITY. Department of Transportation

U.S. CUSTOMARY STANDARD SHEET

WORK ZONE TRAFFIC CONTROL
NON-FREEWAY
LANE CLOSURE
STOP AND GO OPERATION

APPROVED DECEMBER 2, 2021

ROBERT LIMOGES, P.E.
DIRECTOR, OTSM

ISSUED UNDER EI 21-028

619-042

DRAWN BY:
CHECKED BY:
DATE: 1/28/26
PHASE: BID

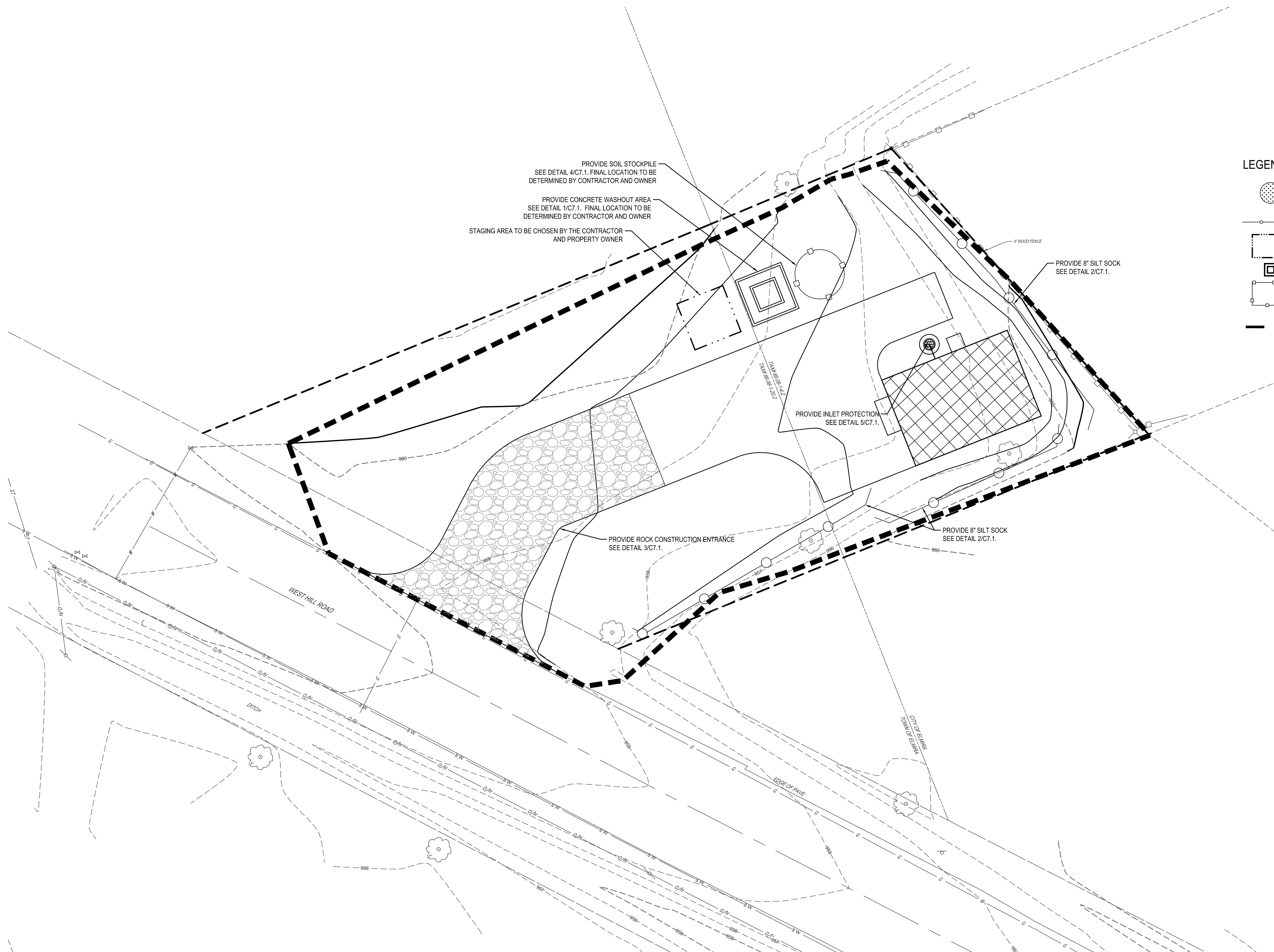
#	DATE:	DESCRIPTION OF REVISION:

HUNT ENGINEERS | ARCHITECTS | SURVEYORS
HORSEHEADS, NY 607 - 358 - 1000 ROCHESTER, NY 585 - 327 - 7950
TOWANDA, PA 570 - 265 - 4868 BINGHAMTON, NY 607 - 798 - 8081
ALBANY, NY 607 - 798 - 8081 WWW.HUNT-EAS.COM
NY CERTIFICATE NO. 0018220 PA CERTIFICATE NO. TSC220313146A-1

NYSDOT M&PT DETAILS
EWB POTABLE WATER PRESSURE BOOSTING PUMP STATION
ELMIRA WATER BOARD
ELMIRA, NY 14901

C5.7

PROJECT NO: 3405-001



LEGEND

- INLET PROTECTION
- SILT SOCK
- STAGING AREA
- CONCRETE WASHOUT
- TOPSOIL STOCKPILE
- LIMIT OF DISTURBANCE

1 EROSION & SEDIMENT CONTROL PLAN
SCALE: 1" = 10'

SCALE IN FEET
0 5 10 20 30
SCALE: 1" = 10'

DRAWN BY:	ZBS
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NY CERTIFICATE NO. 0018220 PA CERTIFICATE NO. TSC2203131464-1

EROSION & SEDIMENT CONTROL PLAN

EWB POTABLE WATER PRESSURE BOOSTING PUMP STATION

ELMIRA WATER BOARD

ELMIRA, NY 14901

C6.1

PROJECT NO: 3405-001

MAINTENANCE & REPAIR OF EROSION & SEDIMENT FACILITIES

1. PROPER MAINTENANCE AND REPAIR OF EROSION AND SEDIMENT CONTROL FACILITIES ARE NECESSARY TO THE EFFECTIVENESS OF THE EROSION AND SEDIMENT POLLUTION CONTROL FACILITIES.
2. DISTURBED GROUND SURFACES SHALL BE SPRINKLED WITH WATER AND/OR CARBON CHLORIDE, AS NEEDED, TO LIMIT THE FORMATION AND MIGRATION OF AIRBORNE DUST.
3. OPERATIONAL MEASURES SHALL BE EMPLOYED DURING CONSTRUCTION TO PREVENT THE SPILLS OF FUELS, LUBRICANTS OR OTHER HAZARDOUS MATERIALS. IF A SPILL OCCURS, IT SHALL BE CONTROLLED IMMEDIATELY TO PREVENT ITS ENTRY INTO OFF-SITE AREAS INCLUDING ADJACENT STORM SEWER.
4. ANY TEMPORARY EROSION CONTROL FACILITY SHALL REMAIN FUNCTIONAL UNTIL VEGETATIVE COVER IS SUFFICIENTLY ESTABLISHED WITHIN THE RESPECTIVE TRIBUTARY DRAINAGE AREA.
5. ANY DEBRIS ACCUMULATED IN EROSION AND SEDIMENT CONTROL FACILITIES SHALL BE REMOVED AND PROPERLY DISPOSED OF. THESE FACILITIES SHALL BE CHECKED DAILY AND AFTER RAINFALL EVENTS, AND REALIGNED AS NEEDED. SEDIMENT SHALL BE REMOVED WHEN IT REACHES THE FOLLOWING DEPTHS:

   SILT SOCK - 1/2 HEIGHT

   CHECK DAM - 1/2 HEIGHT

   NOTE: DISTURBED AREAS SHALL BE CONSIDERED AS PERMANENTLY STABILIZED WHEN A MINIMUM COVER OF 80% HAS BEEN ESTABLISHED.
6. ANY EROSION AND SEDIMENT CONTROL DEVICES THAT ARE NOTED AS DEFICIENT BY A SWPPP INSPECTOR, DESIGN ENGINEER, OR NYSDEC STAFF SHALL BE REPAIRED OR REPLACED WITHIN 24 HOURS OF RECEIVING NOTICE.

SOIL RESTORATION REQUIREMENTS

1. AERATION AND THE APPLICATION OF 6 INCHES OF TOPSOIL IS REQUIRED IN ANY PROPOSED LAWN AREA WHERE TOPSOIL HAS BEEN DISTURBED.
2. FULL SOIL RESTORATION IS REQUIRED IN HEAVY TRAFFIC AREAS ON SITE, ESPECIALLY BETWEEN 5 AND 25 FEET AROUND THE PROPOSED BUILDING, BUT NOT WITHIN A 5 FOOT PERIMETER AROUND FOUNDATION WALLS. RESTORATION IS ALSO REQUIRED ON REDEVELOPMENT PROJECTS IN AREAS WHERE EXISTING IMPERVIOUS AREA WILL BE CONVERTED TO PERVIOUS AREA.
3. FULL SOIL RESTORATION REQUIREMENTS ARE AS FOLLOWS:
   - SOIL RESTORATION IS TO TAKE PLACE DURING PERIODS OF RELATIVELY LOW TO MODERATE SUBSOIL MOISTURE, FOLLOWING ROUGH GRADING OF THE DISTURBED SUBSOILS
   - APPLY 3 INCHES OF COMPOST OVER SUBSOIL
   - TILL COMPOST INTO SUBSOIL TO A DEPTH OF AT LEAST 12 INCHES USING A CAT-MOUNTED RIPPER, TRACTOR-MOUNTED DISC, OR TILLER, MIXING, AND CIRCULATING AIR AND COMPOST INTO SUBSOILS
   - ROCK-PICK UNTIL UPLIFTED STONE/ROCK MATERIALS OF FOUR INCHES AND LARGER SIZE ARE CLEANED OFF THE SITE
   - APPLY TOPSOIL TO A DEPTH OF 6 INCHES
   - VEGETATE AS SPECIFIED ON PLANS
4. AT THE END OF THE PROJECT AN INSPECTOR SHOULD BE ABLE TO PUSH A 3/8 INCH METAL BAR 12 INCHES INTO THE SOIL JUST WITH BODY WEIGHT.
5. TILLING SHOULD NOT BE PERFORMED WITHIN THE DRIP LINE OF ANY EXISTING TREES OR OVER UTILITY INSTALLATIONS THAT ARE WITHIN 24 INCHES OF THE SURFACE.
6. ADDITIONAL INFORMATION AND GUIDANCE MAY BE FOUND IN "DEEP-RIPPING AND DECOMPACTION" PUBLISHED BY NYSDEC DIVISION OF WATER 2008.

MULCHING AND SEEDING REQUIREMENTS

SEEDBED PREPARATION:

1. APPLY LIMESTONE (EQUIVALENT TO 50 PERCENT (50%) CALCIUM PLUS MAGNESIUM OXIDES) AT A RATE OF 90 POUNDS PER 1,000 SQUARE FEET. APPLY FERTILIZER AT A RATE OF 600 POUNDS PER ACRE OR 14 POUNDS PER 1,000 SQUARE FEET USING 10-20-10 OR EQUIVALENT.
2. WORK LIME AND FERTILIZER INTO SOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES WITH A DISC. SPRINGTOOTH HARROW OR OTHER SUITABLE EQUIPMENT. THE FINAL HARROWING OR DISCING OPERATION SHOULD BE ON THE GENERAL CONTOUR. CONTINUE TILLAGE UNTIL A REASONABLY UNIFORM SEEDBED IS PREPARED.
3. INSPECT SEEDBED JUST BEFORE SEEDING. IF TRAFFIC HAS LEFT THE SOIL COMPACT, THE AREA MUST BE RETILLED AS ABOVE

TEMPORARY REQUIREMENTS

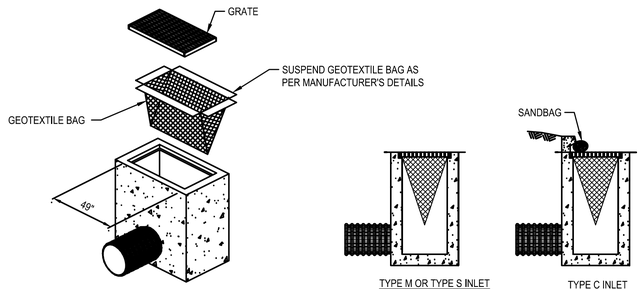
1. SEEDING:
   a. APPLY LAWN MIX AT A RATE (SEE SPECIFICATIONS)
   b. APPLY SEED WITH MECHANICAL SEEDER. OPTIMUM SEEDING DEPTH IS ONE INCH (EXCEPT SANDY SOILS, 2 INCHES).
   c. WHERE FEASIBLE, EXCEPT WHERE EITHER A CULTIPACKER TYPE SEEDER OR HYDROSEEDER IS USED, THE SEEDBED SHALL BE FIRMED FOLLOWING SEEDING OPERATIONS WITH A ROLLER, OR LIGHT DRAG. SEEDING OPERATIONS SHOULD BE ON THE CONTOUR.
2. MULCHING
   a. MULCH MATERIALS SHALL BE SMALL GRAIN STRAW AT A RATE OF 2-1/2 TO 3 TONS PER ACRE, OR 70 TO 90 POUNDS PER 1,000 SQUARE FEET. MULCH SHOULD NOT BE GROUND OR CHOPPED INTO SHORT PIECES.
   b. SPREAD UNIFORMLY BY HAND OR MECHANICALLY SO THAT APPROXIMATELY 75 PERCENT TO 95 PERCENT OF THE SOIL SURFACE WILL BE COVERED.
   c. MULCH ANCHORING SHALL BE ACCOMPLISHED IMMEDIATELY AFTER PLACEMENT TO MINIMIZE LOSS BY WIND OR WATER. 1. MULCHING NETTINGS - STAPLE, JUTE OR COTTON NETTINGS TO THE SOIL SURFACE. USE A DEGRADABLE NETTING IN AREAS TO BE MOWED.

PERMANENT SEEDING

PERMANENT SEEDING TO BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS.

EROSION & SEDIMENT POLLUTION CONTROL GUIDELINES:

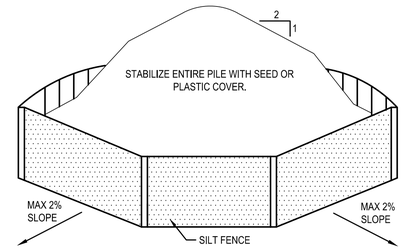
1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING EROSION AND SEDIMENT CONTROL TO PROTECT DOWNSTREAM WATER BODIES.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONSTRUCTION CONTROL AND MAINTENANCE OF SOIL EROSION AND SEDIMENT CONTROL FACILITIES TO ENSURE PROPER FUNCTIONING OF SAID FACILITIES (DURING CONSTRUCTION).
3. AFTER THE PROJECT HAS BEEN COMPLETED, THE CONTRACTOR SHALL HAVE THE RESPONSIBILITY FOR ENSURING THAT ALL TEMPORARY SOIL EROSION AND SEDIMENT CONTROL MEASURES HAVE BEEN REMOVED OR REPLACED BY PERMANENT CONTROLS.
4. ANY DISTURBED AREAS THAT WILL BE LEFT EXPOSED FOR MORE THAN FIVE (5) DAYS, AND NOT SUBJECT TO CONSTRUCTION TRAFFIC, WILL IMMEDIATELY RECEIVE A TEMPORARY SEEDING. IF THE SEASON PREVENTS THE ESTABLISHMENT OF A TEMPORARY COVER, THE DISTURBED AREAS WILL BE MULCHED WITH STRAW OR EQUIVALENT MATERIAL, AT A RATE OF 2.5 - 3.0 TONS PER ACRE, ACCORDING TO STATE STANDARDS.
5. PERMANENT VEGETATION TO BE SEEDED OR SODDED ON ALL EXPOSED AREAS WITHIN FIVE (5) DAYS AFTER FINAL GRADING. MULCH AS NECESSARY FOR SEED PROTECTION AND ESTABLISHMENT. LIME AND FERTILIZE SEED BED PRIOR TO PERMANENT SEEDING.
6. EROSION AND SEDIMENT POLLUTION CONTROL FACILITIES AND PRACTICES, UTILIZED IN THE CONSTRUCTION OF THE PROJECT, SHALL BE CONSISTENT WITH THE LATEST VERSIONS OF THE NEW YORK STATE STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL. NEW YORK STATE STORMWATER MANAGEMENT DESIGN MANUAL AND THE NEW YORK STATE SPDES GENERAL PERMIT FOR STORMWATER DISCHARGES.
7. NATURAL VEGETATION SHALL BE RETAINED, PROTECTED, AND SUPPLEMENTED, AS FEASIBLE PRIOR TO AND DURING CONSTRUCTION.
8. CUT AND FILL SLOPES SHALL BE BROUGHT TO FINAL PROPOSED GRADES AS SOON AS POSSIBLE IN THE CONSTRUCTION SEQUENCES, AND SEEDED AND MULCHED IMMEDIATELY.
9. EROSION AND SEDIMENT POLLUTION CONTROL FACILITIES (SILT SOCK, INLET PROTECTION, STABILIZED CONSTRUCTION ENTRANCES AND ALL OTHER ACCEPTABLE FACILITIES) SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION UNTIL COMPLETE SITE STABILIZATION.
10. HEAVY CONSTRUCTION EQUIPMENT SHALL BE KEPT AS CLOSE TO THE WORK AREA AS PRACTICAL TO MINIMIZE DISTURBANCE OF SOIL ALREADY STABILIZED OR UNDISTURBED. ANY HAZARDOUS MATERIALS THAT LEAK ONTO THE GROUND SHALL BE PROPERLY CLEANED AND DISPOSED PER NYSDEC AND EPA STANDARDS.
11. THE CONTRACTOR IS IN CHARGE OF IMPLEMENTING POLLUTION PREVENTION OF WASTE AND HAZARDOUS MATERIALS. THE CONTRACTOR SHALL HAVE A DESIGNATED REPRESENTATIVE ASSIGNED TO IMPLEMENTING THE SPILL PREVENTION AVOIDANCE AND RESPONSE PLAN. THE CONTRACTOR SHALL MAINTAIN A SPILL PREVENTION CONTROL AND COUNTER MEASURES PROGRAM AND HAVE APPROPRIATE MATERIALS TO CONTROL THE SPILLS ONSITE AT ALL TIMES.
12. TOPSOIL AND OTHER SOIL REMOVED DURING CONSTRUCTION SHALL BE STOCKPILED IN A SUITABLE LOCATION CLEAR FROM ANY STORMWATER DRAINAGE COURSES. STOCKPILES SHALL HAVE EITHER A SILT SOCK OR SILT FENCE AROUND THE PERIMETER AT ALL TIMES. STOCKPILES WHICH ARE INACTIVE FOR MORE THAN 5 DAYS SHALL BE SEEDED.
13. VEGETATIVE STABILIZATION SHALL BE PERIODICALLY INSPECTED FOR SUFFICIENT GROWTH AND PROGRESS. AREAS NOT RESPONDING SHALL BE PROMPTLY RESEEDED AND REMULCHED AS SOON AS POSSIBLE. AREAS SHOWING SIGNS OF EROSION PRIOR TO STABILIZATION SHALL BE GRADED, RESEEDED, AND REMULCHED AS SOON AS POSSIBLE. SOD OR EROSION CONTROL FABRIC SHALL BE UTILIZED WHERE ADEQUATE STABILIZATION IS NOT OCCURRING
14. ALL PERIMETER SOIL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED BEFORE BEGINNING EARTH MOVING ACTIVITIES, OR IN THEIR PROPER SEQUENCE, AND MAINTAINED UNTIL PERMANENT PROTECTION IS ESTABLISHED.
15. A STABILIZED CONSTRUCTION ENTRANCE PAD OF 1.5" TO 2" CLEAN STONE WILL BE PLACED AT ALL CONSTRUCTION DRIVEWAYS BEFORE INITIAL SITE DISTURBANCE. CONSTRUCTION ENTRANCES SHALL BE MAINTAINED AND CLEANED AS NEEDED OR AS SPECIFIED BY THE INSPECTOR.
16. THE APPLICATION OF TOPSOIL, LIMING, FERTILIZING, SEEDING, AND MULCHING FOR DISTURBED AREAS SHALL BE CONSISTENT WITH THE STANDARD GENERAL PRACTICES FOR CONSTRUCTION.
17. IMMEDIATELY FOLLOWING INITIAL DISTURBANCES OF ROUGH GRADING, ALL CRITICAL AREAS SUBJECT TO EROSION (I.E., STEEP SLOPES AND ROADWAY EMBANKMENTS, ETC.) WILL RECEIVE A TEMPORARY SEEDING IN COMBINATION WITH STRAW MULCH OR A SUITABLE EQUIVALENT, AT A RATE OF 2.5 - 3.0 TONS PER ACRE.
18. AT THE TIME WHEN SITE PREPARATION FOR PERMANENT VEGETATIVE STABILIZATION IS TO BE ESTABLISHED, ANY SOIL THAT WILL NOT PROVIDE A SUITABLE ENVIRONMENT TO SUPPORT ADEQUATE VEGETATIVE GROUND COVER SHALL BE REMOVED OR TREATED IN SUCH A WAY THAT WILL PERMANENTLY ADJUST THE SOIL CONDITIONS AND RENDER IT SUITABLE FOR VEGETATIVE GROUND COVER.
19. IF THE REMOVAL OR TREATMENT OF THE SOIL WILL NOT PROVIDE SUITABLE CONDITIONS, NON-VEGETATIVE MEANS OF PERMANENT GROUND STABILIZATION WILL HAVE TO BE EMPLOYED.
20. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN EROSION AND SEDIMENT CONTROL MEASURES UNTIL ALL CONTRIBUTING AREAS HAVE BEEN PERMANENTLY STABILIZED.



NOTES

1. INSPECT INLET FILTER BAG AFTER EACH RUNOFF EVENT. MAINTAIN AS REQUIRED TO ENSURE PROPER FUNCTIONING OF THE BAG.
2. REMOVE ACCUMULATED SEDIMENT/DEBRIS WHEN THE INLET FILTER REACHES ONE-HALF MAXIMUM CAPACITY.
3. REPLACE FILTER BAG IF RIPPED OR TORN.
4. PROVIDE DOWN GRADIENT BERM IF NEEDED. DO NOT USE IN SAG/SUMP CONDITIONS.
5. USE SANDBAGS AT TYPE C INLET CURB OPENINGS TO PREVENT BYPASS FLOW.
6. REMOVE AND PROPERLY DISPOSE OF INLET FILTER BAG WHEN NO LONGER NEEDED.

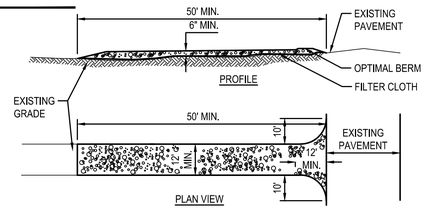
5 INLET FILTER BAG
SCALE: N.T.S.



SOIL STOCKPILING NOTES:

1. AREA CHOSEN FOR STOCKPILING OPERATIONS SHALL BE DRY AND STABLE.
2. MAXIMUM SLOPE OF STOCKPILE SHALL BE 1:2.
3. UPON COMPLETION OF SOIL STOCKPILING, EACH PILE SHALL BE SURROUNDED WITH SILT FENCING AND THEN STABILIZED WITH SEED OR SECURED IMPERVIOUS COVER.
4. SEE SILT FENCE INSTALLATION DETAIL.

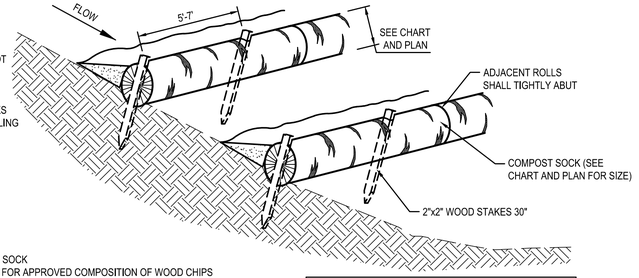
4 SOIL STOCKPILE AREA DETAIL
SCALE: N.T.S.



NOTES:

1. STONE SIZE - USE 3"-4" STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH - AS REQUIRED, BUT NOT LESS THAN 50 FEET.
3. THICKNESS - NOT LESS THAN 6 INCHES.
4. WIDTH - 12 FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT THE POINTS WHERE INGRESS OR EGRESS OCCURS.
5. FILTER CLOTH - WILL BE PLACED OVER ENTIRE AREA PRIOR TO PLACING OF STONE. FILTER CLOTH WILL NOT BE REQUIRED ON A SINGLE RESIDENCE LOT.
6. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIRECTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
7. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANEST OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
8. WASHING - WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

3 ROCK CONSTRUCTION ENTRANCE DETAIL
SCALE: N.T.S.



NOTES:

INSTALLATION:
WHEN INSTALLING RUNNING LENGTHS OF COMPOST SOCKS, BUTT THE SECOND SOCK TIGHTLY AGAINST THE FIRST, DO NOT OVERLAP THE ENDS. STAKE THE SOCKS AT EACH END AND FIVE FOOT ON CENTER.

STAKES SHOULD BE DRIVEN THROUGH THE MIDDLE OF THE SOCK. LEAVING 2 - 3 INCHES OF THE STAKE PROTRUDING ABOVE THE SOCK AND AT LEAST 12" IN THE GROUND. WHEN COMPOST SOCKS ARE USED FOR FLAT GROUND APPLICATIONS, DRIVE THE STAKES STRAIGHT DOWN; WHEN INSTALLING WATTLES ON SLOPES, DRIVE THE STAKES PERPENDICULAR TO THE SLOPE.

DRIVE THE FIRST END STAKE OF THE SECOND SOCK AT AN ANGLE TOWARD THE FIRST SOCK IN ORDER TO HELP ABUT THEM TIGHTLY TOGETHER.

INSTALLATION NOTES:

1. COMPOST SOCKS SHALL BE INSTALLED PRIOR TO ANY LAND-DISTURBING ACTIVITIES.
2. COMPOST SOCKS SHALL BE "SILT SOCK", "FILTEREXX" OR OTHER APPROVED FILTER FABRIC SOCK
3. COMPOST SOCKS SHALL BE FILLED WITH WOOD CHIPS OR COMPOST. SEE SPECIFICATIONS FOR APPROVED COMPOSITION OF WOOD CHIPS OR COMPOST
4. NOT FOR USE IN CONCENTRATED FLOW AREAS.
5. COMPOST SOCKS SHALL BE INSTALLED PER MANUFACTURERS SPECIFICATIONS.
6. ON SLOPES, COMPOST SOCKS SHOULD BE INSTALLED ON CONTOUR WITH A SLIGHT DOWNWARD ANGLE AT THE END OF THE ROW IN ORDER TO PREVENT PONDING AT THE MID SECTION.
7. RUNNING LENGTHS OF SOCKS SHOULD BE ABUTTED FIRMLY TO ENSURE NO LEAKAGE AT THE ABUTMENTS.
8. COMPOST SOCK SHALL BE IN CONSTANT CONTACT WITH THE GROUND SURFACE.
9. WOOD STAKES SHALL BE USED TO SECURE THE WATTLES. 1/2" TO 5/8" REBAR IS ALSO ACCEPTABLE. BE SURE TO USE A STAKE THAT IS LONG ENOUGH TO PROTRUDE SEVERAL INCHES ABOVE THE WATTLE.

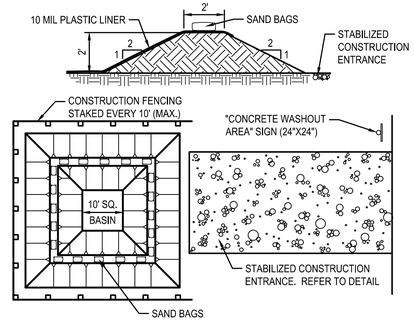
MAINTENANCE:
SEDIMENT ACCUMULATED BEHIND WATTLE SHALL BE REMOVED WHEN SEDIMENT HAS ACCUMULATED TO ONE-HALF THE DIAMETER OF THE WATTLE.

COMPOST SOCK DIAMETER CHART

DIA. (IN)	SLOPE %						
	2	5	10	20	25	33	50
8	225*	200	100	50	20	–	–
12	250	225	125	65	50	40	25
18	275	250	150	70	55	45	30
24	350	275	200	130	100	60	35
32	450	325	275	150	120	75	50

*LENGTH IN FEET

2 COMPOST OR SILT SOCK INSTALLATION DETAIL
SCALE: N.T.S.



NOTES:

1. ALL TOOLS AND EQUIPMENT UTILIZED DURING ANY CONCRETE CONSTRUCTION, INCLUDING HAND TOOLS, WHEELBARROWS, TRUCKS, CHUTES SHALL UTILIZE THE CONCRETE WASHOUT AREA.
2. WASHOUT AREA TO BE MAINTAINED AND CLEANED OUT PERIODICALLY TO PREVENT WASHWATER AND/OR SOLIDS FROM EXITING THE WASHOUT TRAP.

1 CONCRETE WASH OUT DETAIL
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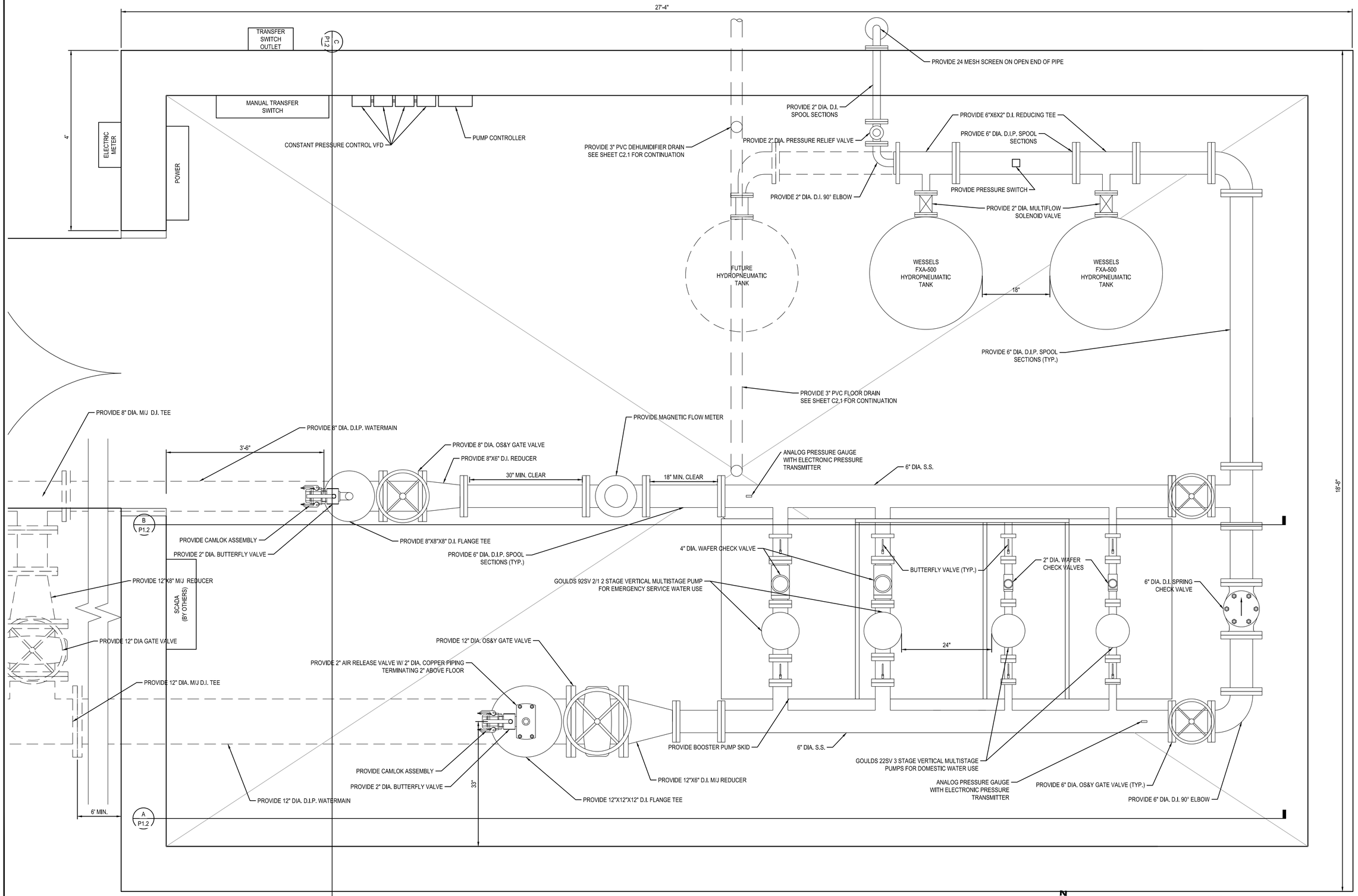

1 WEST HILL ROAD PUMP STATION PLAN
SCALE: 1" = 1'-0"

NOTE:
ALL INTERNAL VALVES SHALL OPEN LEFT.

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W. HILL RD. PUMP STATION PLAN
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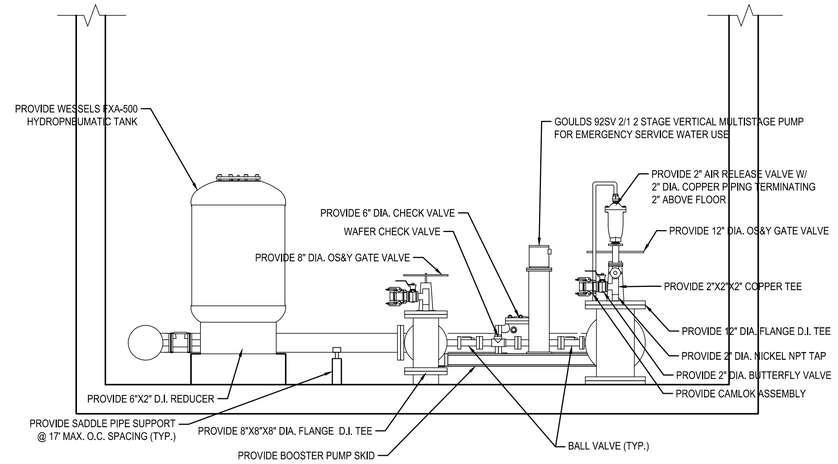
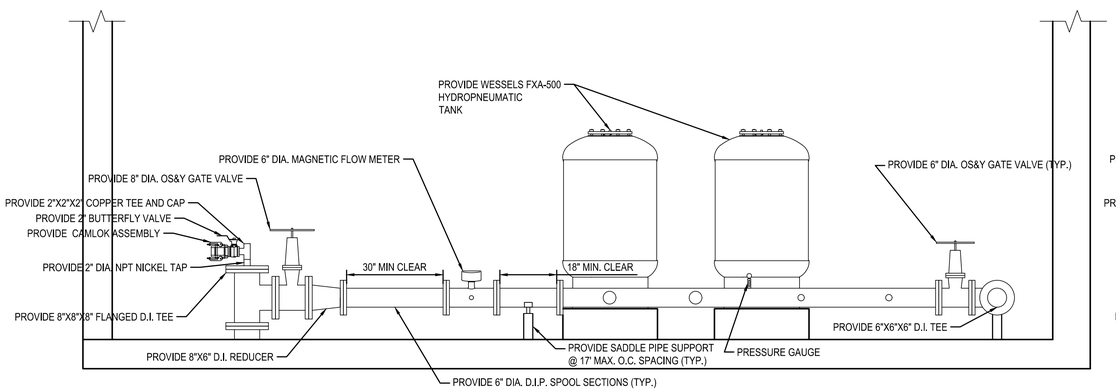


3 SECTION C-C
SCALE: 1/2" = 1'-0"



2 SECTION B-B
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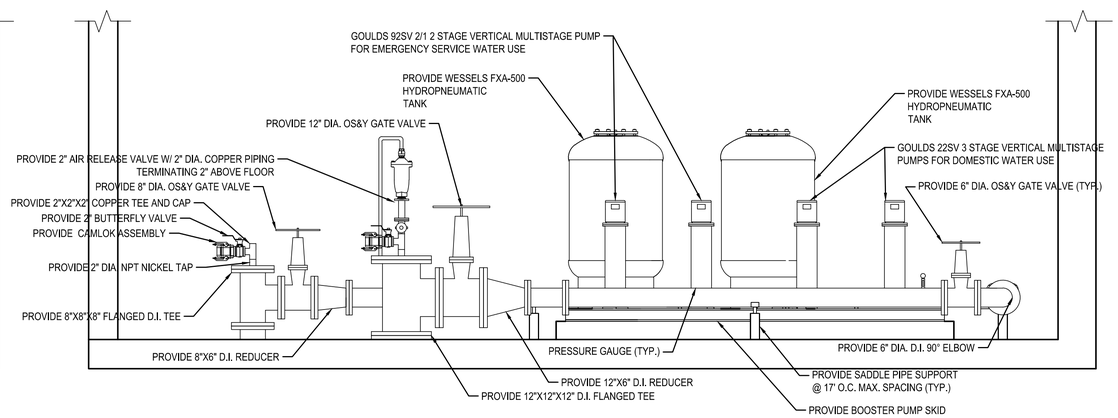

1 SECTION A-A
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W. HILL RD. PUMP STATION PROFILES

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ELMIRA, NY 14901

P1.2

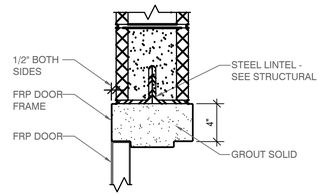
PROJECT NO: 3405-001

DOOR AND FRAME SCHEDULE

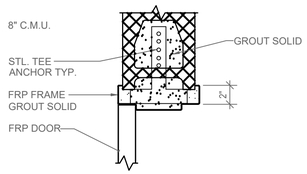
NUMBER	DOOR					GLAZING	RATING	HDWR SET	FRAME			DETAIL			NOTES
	TYPE	SIZE	THK	MATL	FIN				TYPE	MATL	FINISH	HEAD	JAMB	SILL	
100	--	6'-0" x 7'-0"	1-3/4"	FRP	--	-	--	1	--	FRP	BRONZE	5	4	3	

DOOR NOTES:

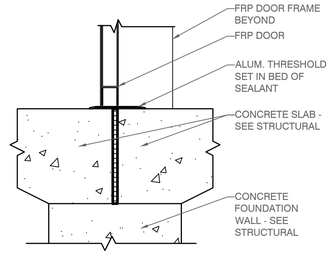
1. SEE ELEVATIONS FOR DOOR & FRAME ELEVATIONS.



5 DOOR HEAD DETAIL
1 1/2" = 1'-0"



4 DOOR JAMB DETAIL
1 1/2" = 1'-0"



3 DOOR THRESHOLD DETAIL
1 1/2" = 1'-0"

GENERAL NOTES:

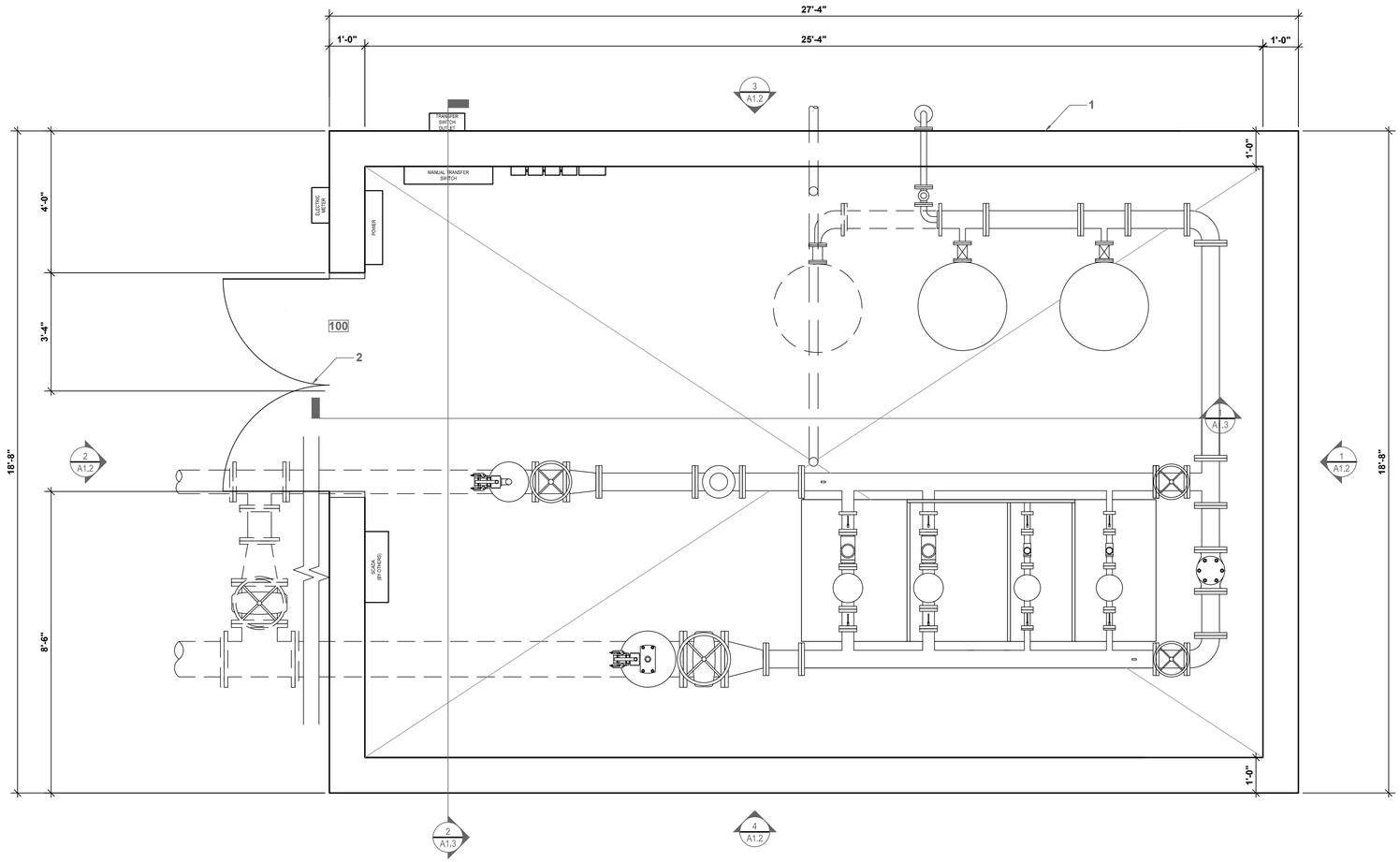
A. ALL INTERIOR PAINTED CEILINGS ARE5/8" THICK SMOOTH FINISH GYPSUM BOARD - PAINTED.

B. ROOF SYSTEM TO CONSIST OF: PLYWOOD ROOF SHEATHING, ICE & WATER SHIELD ON ENTIRE ROOF, ALUMINUM DRIP EDGE, VENTED RIDGE W/ CAP SHINGLES, AND ARCHITECTURAL ASPHALT SHINGLES.

C. ALL EXTERIOR CMU TO BE INSULATED SPLIT FACED 12" CMU BLOCK.

1 PLAN DRAWING NOTES:

1. 12" INSULATED CMU.
2. FRP DOOR AND FRAME - SEE SCHEDULE.



1 FLOOR PLAN
1/2" = 1'-0"

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FLOOR PLAN AND SCHEDULE

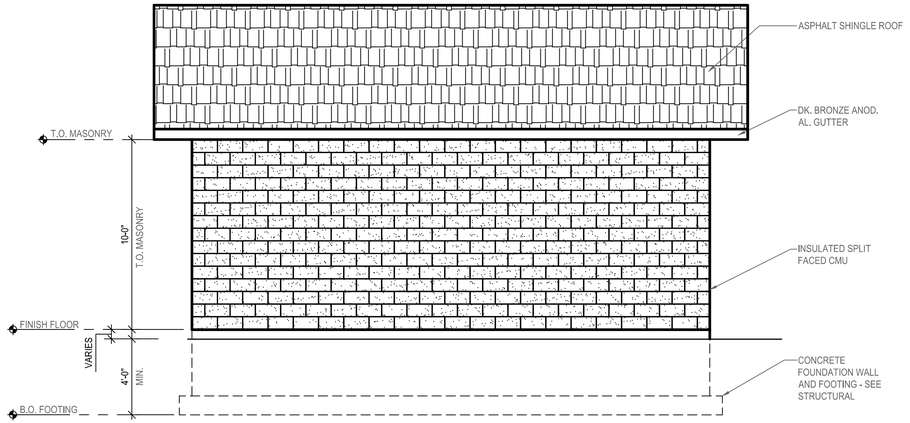
EWB POTABLE WATER PRESSURE BOOSTING PUMP STATION

ELMIRA WATER BOARD

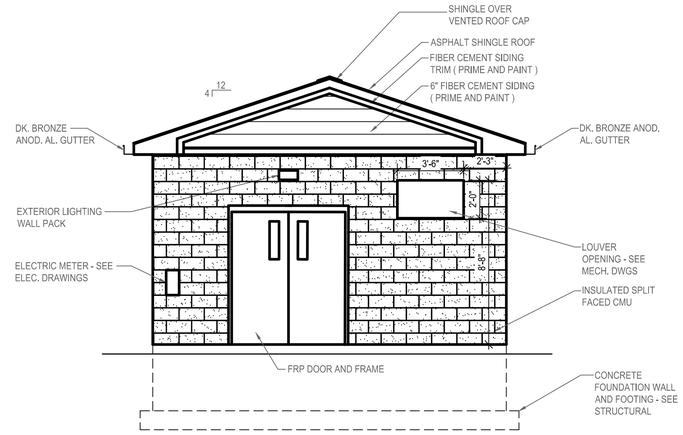
ELMIRA, NY 14901

A1.1

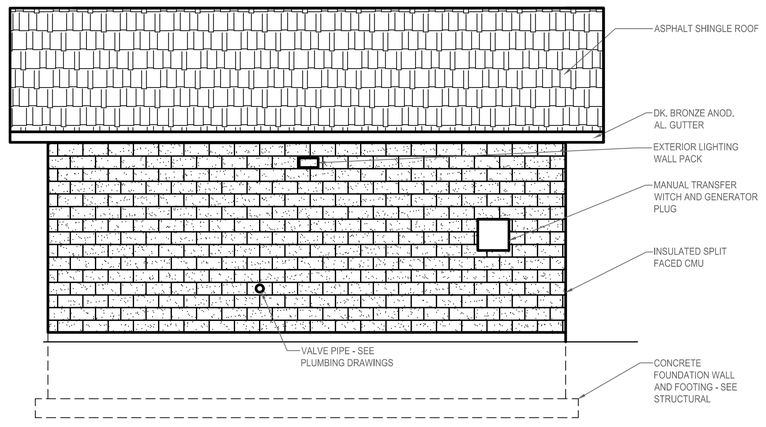
PROJECT NO: 3405-001



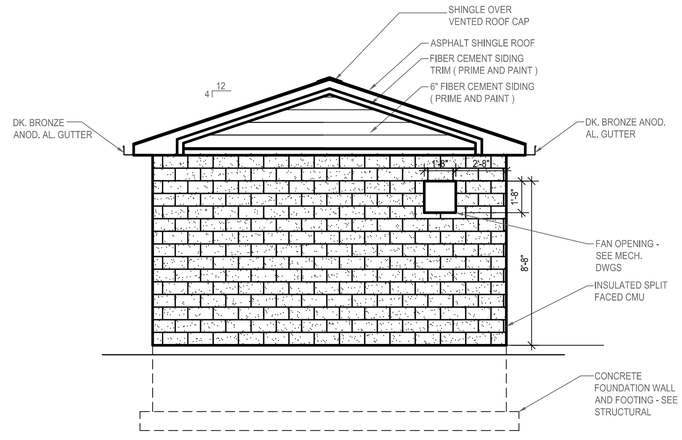
4 SOUTH ELEVATION
1/4" = 1'-0"



2 WEST ELEVATION
1/4" = 1'-0"



3 NORTH ELEVATION
1/4" = 1'-0"



1 EAST ELEVATION
1/4" = 1'-0"

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EXTERIOR ELEVATIONS

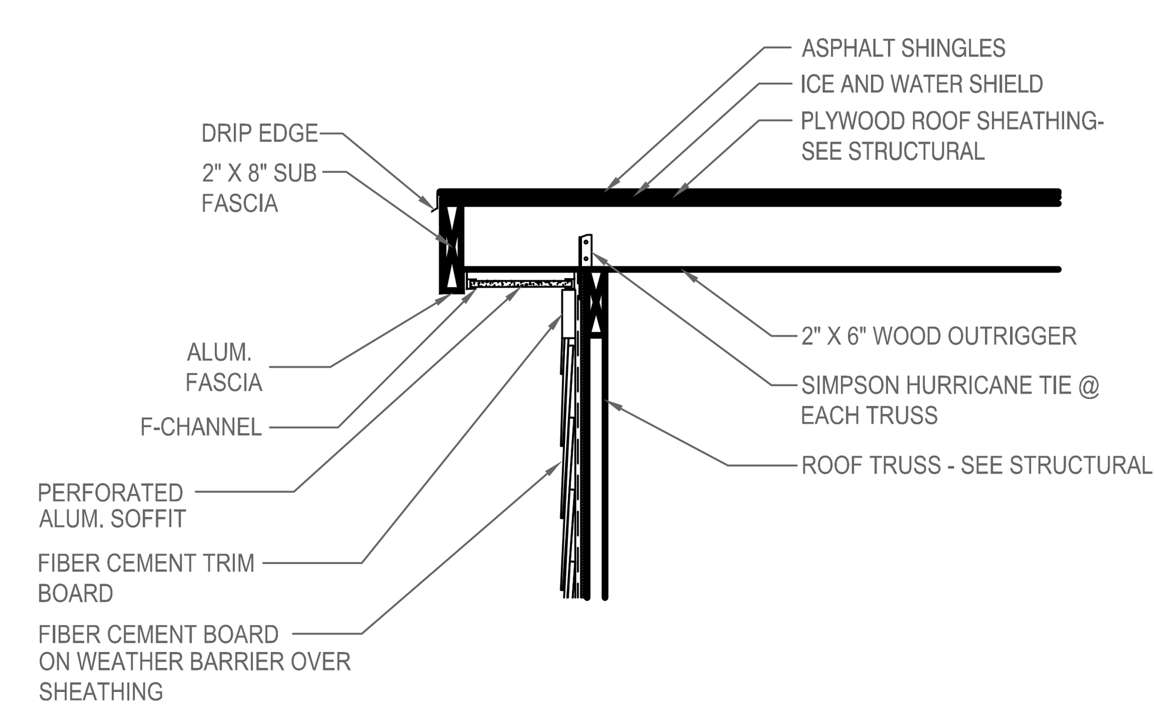
EWB POTABLE WATER PRESSURE BOOSTING PUMP STATION

ELMIRA WATER BOARD

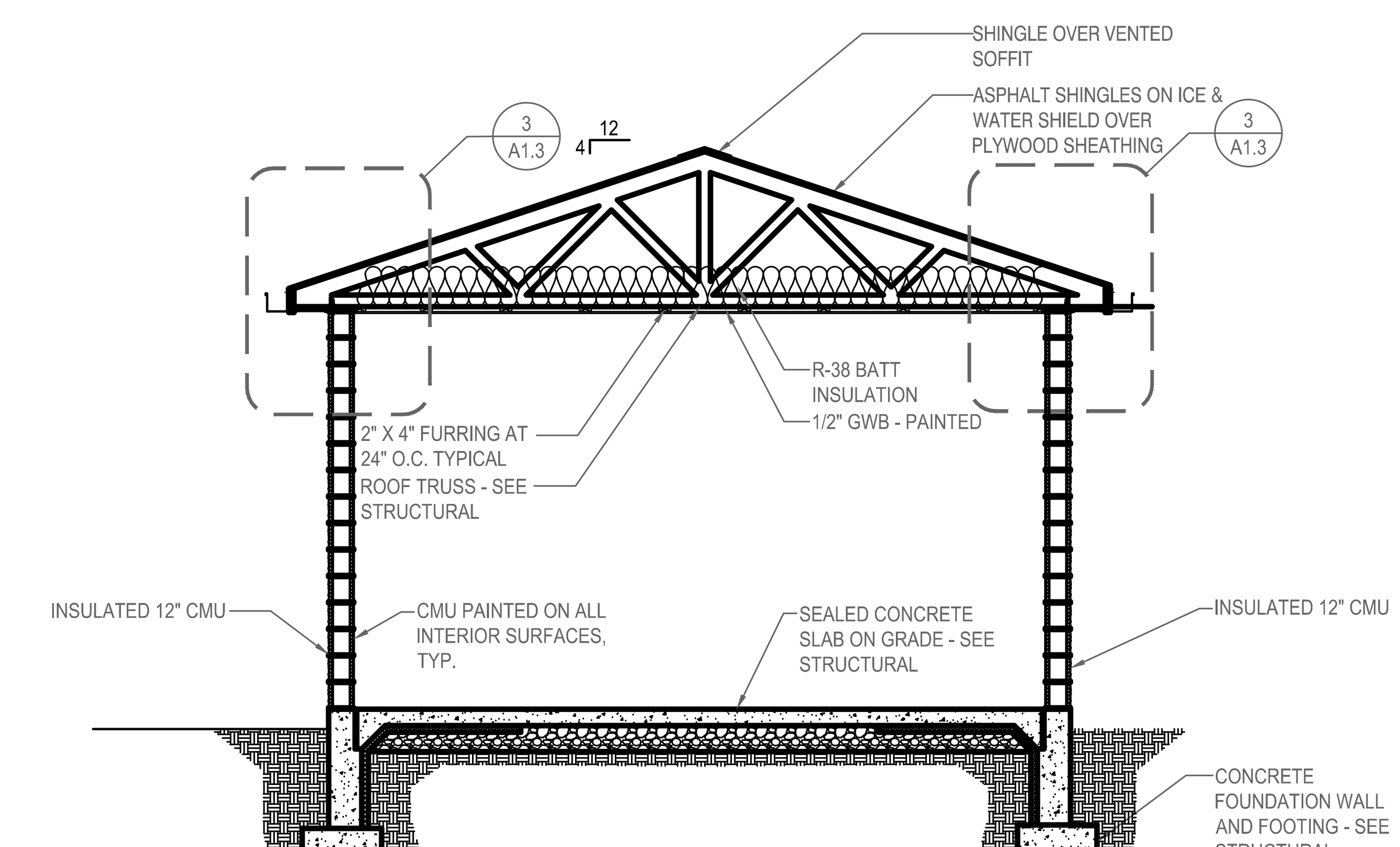
ELMIRA, NY 14901

A1.2

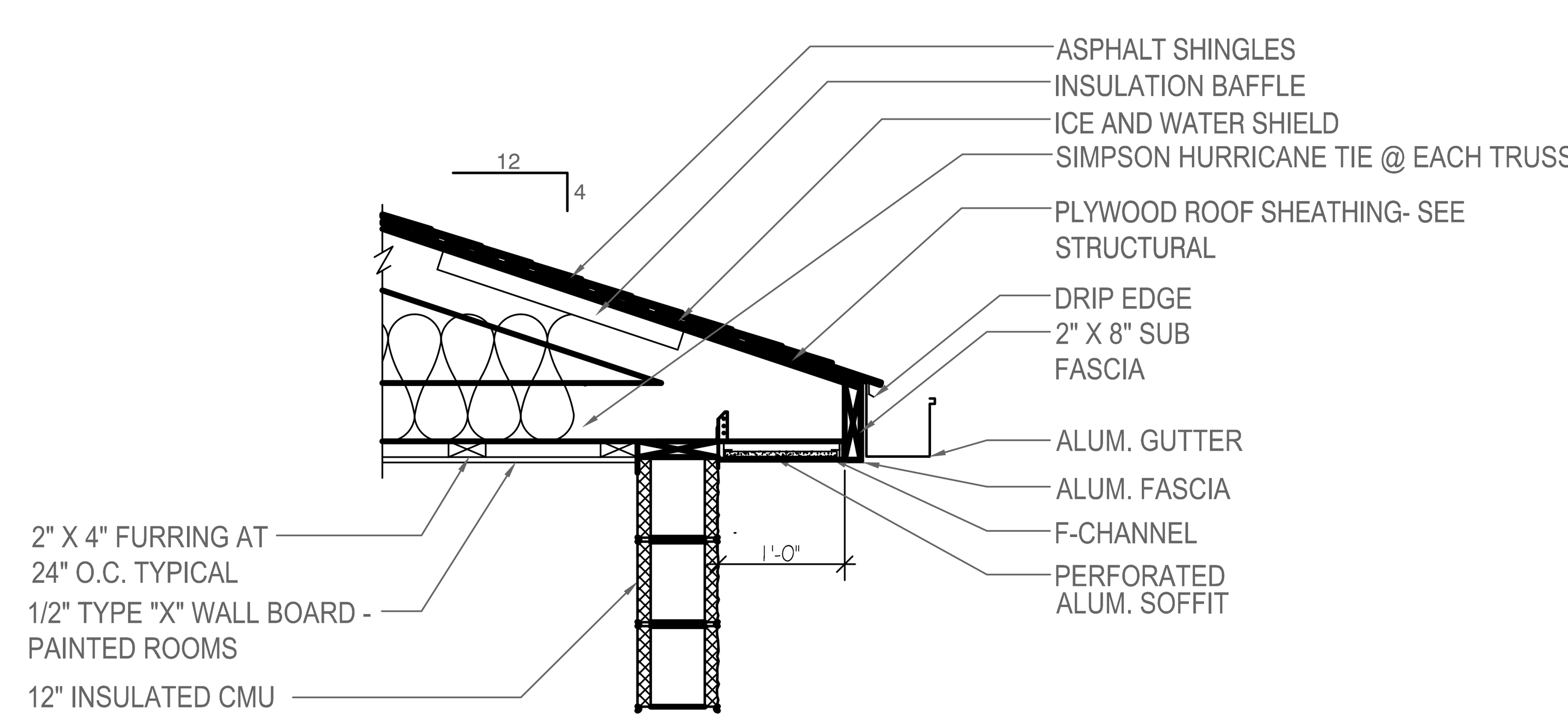
PROJECT NO: 3405-001



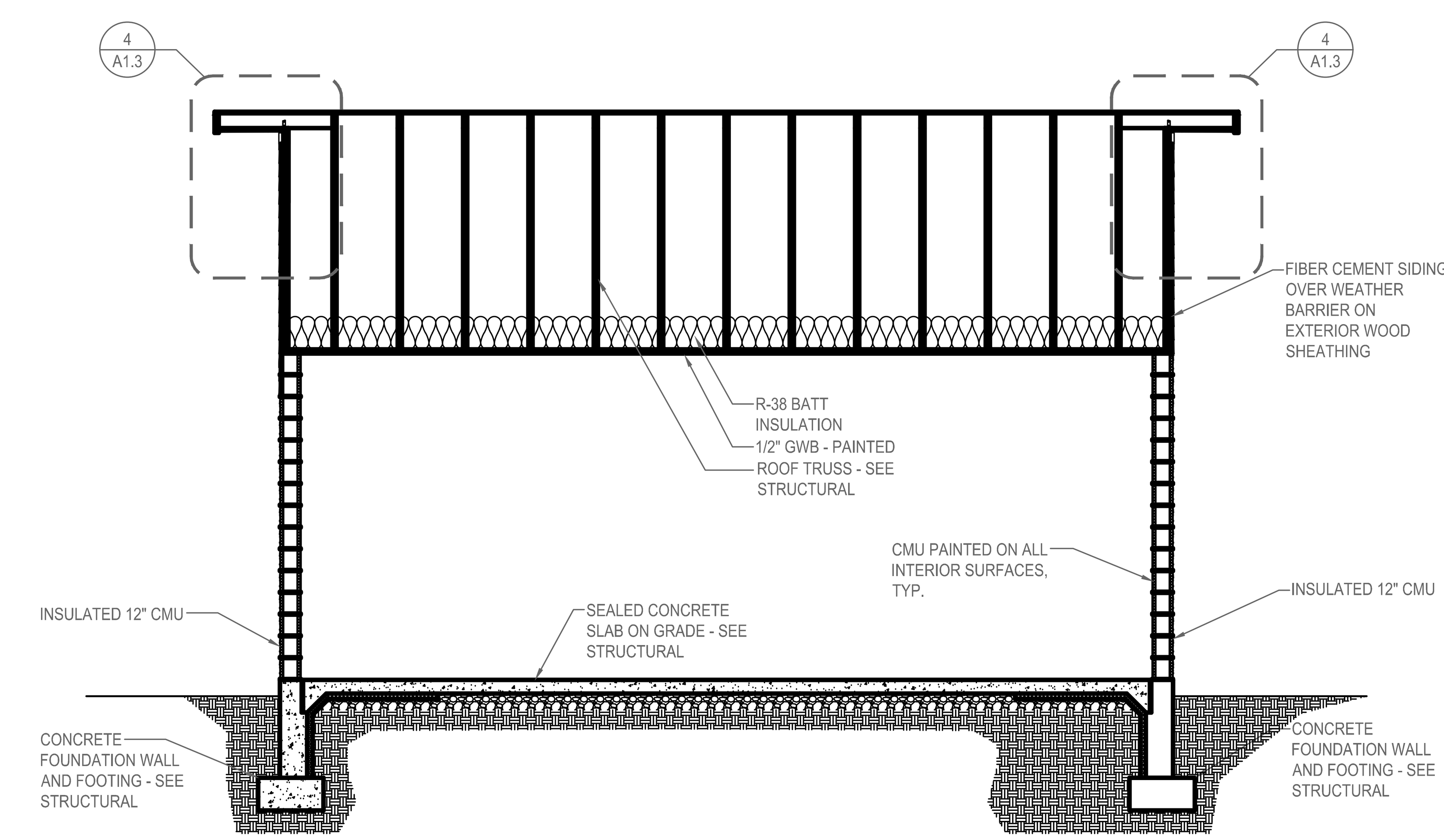
4 GABLE END SOFFIT DETAIL
3/4" = 1'-0"



2 BUILDING SECTION
1/4" = 1'-0"



3 SOFFIT DETAIL
3/4" = 1'-0"



1 BUILDING SECTION
1/4" = 1'-0"

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SECTIONS AND DETAILS

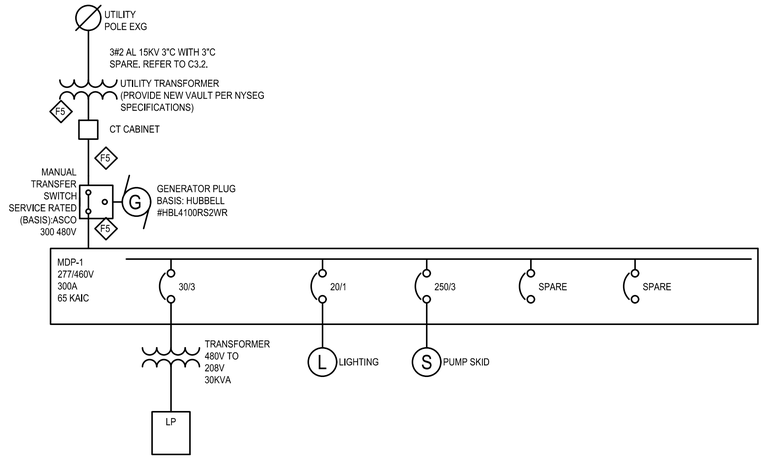
EWB POTABLE WATER PRESSURE BOOSTING PUMP STATION

ELMIRA WATER BOARD

ELMIRA, NY 14901

A1.3

PROJECT NO: 3405-001



2 ONELINE DIAGRAM
NTS

FEEDER SCHEDULE

NAME ◇	DESCRIPTION	MAX. AMPERAGE ASSUMES NO VOLTAGE DROP
F1	(4-SETS) 4- #600, 4"C	1600 *
F2	(3-SETS) 4- #600, 4"C	1200 *
F3	(2-SETS) 4- #600, 1-#1/0G, 3 1/2"C	800
F4	(2-SETS) 4-#350, 1-#1G, 3"C	600
F5	4- #600, 1#3G, 4"C	400
F6	4-#4/0, 1-#4G, 2 1/2"C	225
F7	4-#3/0, 1-#6G, 2 1/2"C	200
F8	4-#2/0, 1-#6G, 2"C	175
F9	4-#1/0, 1-#6G, 2"C	150
F10	4-#1/0, 1-#6G, 2"C	125
F11	4-#1, 1-#8G, 1 1/2"C	100
F12	4-#4, 1-#10G, 1 1/4"C	60

* SERVICE ENTRANCE FEEDER WITH NO GROUND.
REFER TO GROUND GRID DETAIL.
* EQUIPMENT GROUNDING SHOWN IN SCHEDULE.
GROUNDING JUMPER TO MEET OR EXCEED BASED ON NEC.

PANEL LP

CIRC. #	DESCRIPTION	AMP	CIRCUIT BREAKERS	AMP	DESCRIPTION	CIRC. #
1	RECEPTACLES	20A	1 2	20A	TANK #1	2
3	TANK #2	20A	3 4 — 50A	UH-1		4
5	EF-1	20A	5 6 — 50A	UH-1		6
7	CHART RECORDER	20A	7 8			8
9			9 10			10
11			11 12			12
13			13 14			14
15			15 16			16

VOLTS: 120/208V — SPACES: 16 — REMARKS:
WIRE: 4W — MOUNTING: SURFACE
MAIN: 100A MCB — FEED: PAD MT. TRANSFORMER
AIC: 18 KAIC — LOCATION: PUMP HOUSE

WIRING & CONTROLS SCHEDULE

EQUIPMENT (LOCATION)	CONTROLLER/PANEL (LOCATION)	VOLTAGE	CURRENT RATING	WIRES	NOTES
PUMP CONTROLLER	MDP-1	480V 3PH	250A	4#350, 1#2G, 2-1/2"C	-
TANK #1	LP	120V 1PH	6A	2#12, 1#12G	-
TANK #2	LP	120V 1PH	6A	2#12, 1#12G	-
PUMP CONTROLLER	CHART RECORDER	-	-	(1)CAT#6 (2)2#16	-
VFD #1	PUMP CONTROLLER	480V 3PH	50A	3#6, 1#8G, 2"C	-
PUMP #1	VFD #1	480V 3PH	50A	3#6, 1#8G, 2"C	-
VFD #2	PUMP CONTROLLER	480V 3PH	50A	3#6, 1#8G, 2"C	-
PUMP #2	VFD #2	480V 3PH	50A	3#6, 1#8G, 2"C	-
VFD #3	PUMP CONTROLLER	480V 3PH	50A	3#6, 1#8G, 2"C	-
PUMP #3	VFD #3	480V 3PH	50A	3#6, 1#8G, 2"C	-
VFD #4	PUMP CONTROLLER	480V 3PH	50A	3#6, 1#8G, 2"C	-
PUMP #4	VFD #4	480V 3PH	50A	3#6, 1#8G, 2"C	-
FLOW METER	CHART RECORDER	-	4-20mA	(2)2#16	-
PRESSURE TRANSDUCER #1	CHART RECORDER	-	4-20mA	(2)2#16	-
PRESSURE TRANSDUCER #2	PUMP CONTROLLER	-	4-20mA	(2)2#16	-
PRESSURE SWITCH #1	PUMP CONTROLLER	-	4-20mA	(2)2#16	-
UH-1	LP	208V 1PH	37A	3#6, 1#8G	-
EF-1	LP	120V 1PH	4A	2#12, 1#12G	-

WIRING & CONTROLS SCHEDULE NOTES:

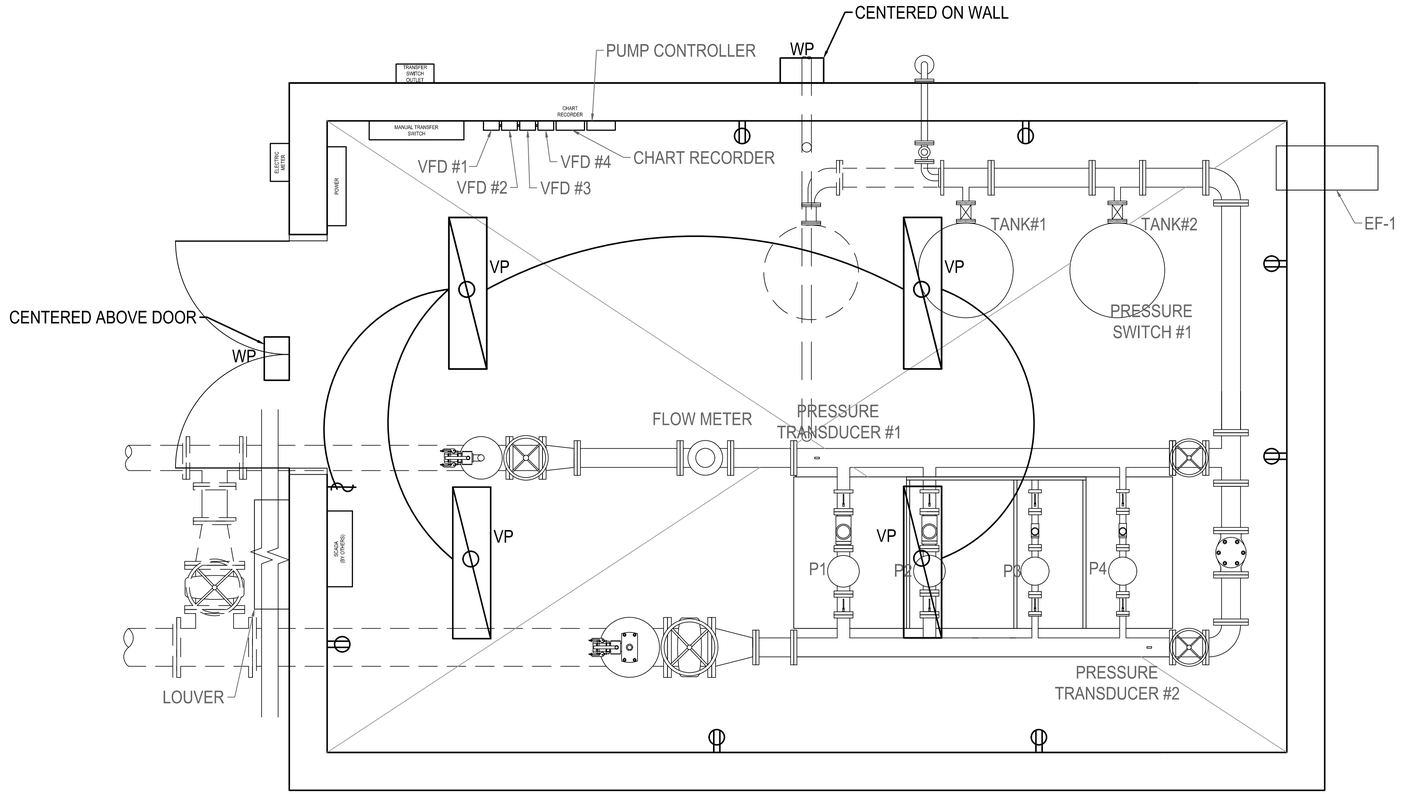
1. RESERVED FOR FUTURE USE.

LIGHTING FIXTURE SCHEDULE

TYPE	DESCRIPTION	MFG./CAT. NO.	NOTES
VP	VAPOR TIGHT	DWAE443L840-UNV	-
WP	WALLPACK	GWM-A07-750-T3M-BK	1

LIGHTING FIXTURE SCHEDULE NOTES:

1. FIXTURE TO HAVE OS SENSOR AND PHOTOEYE TO CONTROL.



1 FLOOR PLAN
1/2" = 1'-0"

GENERAL NOTES - ELECTRICAL:

A. CONTRACTOR IS RESPONSIBLE FOR ALL WORK ON THIS DRAWING UNLESS CLEARLY INDICATED TO BE PART OF ANOTHER PRIME CONTRACT.
B. CONTRACTOR IS RESPONSIBLE FOR ALL NEW WALL OPENINGS, EXCAVATIONS, AND PENETRATIONS, UNLESS SPECIFICALLY NOTED. UPON COMPLETION, ALL PENETRATIONS TO BE SEALED TO MAINTAIN FIRE RATING AS SPECIFIED ON ARCHITECTURAL DRAWINGS.
C. CONTRACTOR IS RESPONSIBLE FOR ALL CUTTING AND PATCHING UNLESS CLEARLY INDICATED AS PART OF ANOTHER PRIME CONTRACT.
D. MINIMUM CONDUIT SIZE USED ON THIS PROJECT SHALL BE 3/4" UNLESS OTHERWISE NOTED.
E. MINIMUM WIRE SIZE USED ON THIS PROJECT SHALL BE #12 THHN/THWN, UNLESS OTHERWISE NOTED.
F. ALL CABLING INSTALLATIONS AND TERMINATIONS TO ADHERE TO CURRENT NEC CODES AND RELATED ANSI/TIA/EIA STANDARDS.
G. ELECTRICAL DEVICES, MATERIALS AND PACKAGED EQUIPMENT SHALL BE LISTED AND LABELED BY UNDERWRITERS LABORATORIES INC. (UL).
H. THE SHORT-CIRCUIT RATINGS OF ALL PROTECTIVE DEVICES SHALL BE EQUAL TO OR EXCEED THE AVAILABLE SHORT-CIRCUIT CURRENT.
I. ALL WORK TO CONFORM TO CURRENT NEC AND ALL APPLICABLE CODES.
J. CONTRACTOR TO NOTIFY ELECTRICAL ENGINEER FOR INSPECTION OF ALL INSTALLATIONS BEFORE BEING BURIED OR COVERED.
K. CONTRACTOR IS RESPONSIBLE FOR COORDINATING ALL CONDUIT LOCATIONS IN FIREWALLS. A MAXIMUM OF ONE PIECE OF CONDUIT IS ALLOWED IN A NON-REINFORCED CORE. NO CONDUIT SHALL BE PLACED IN A VERTICALLY REINFORCED CORE IN A FIREWALL.

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FLOOR PLAN AND SCHEDULES
EWB POTABLE WATER PRESSURE BOOSTING PUMP STATION
ELMIRA WATER BOARD
ELMIRA, NY 14901

E1.1

PROJECT NO: 3405-001

UNIT HEATER SCHEDULE

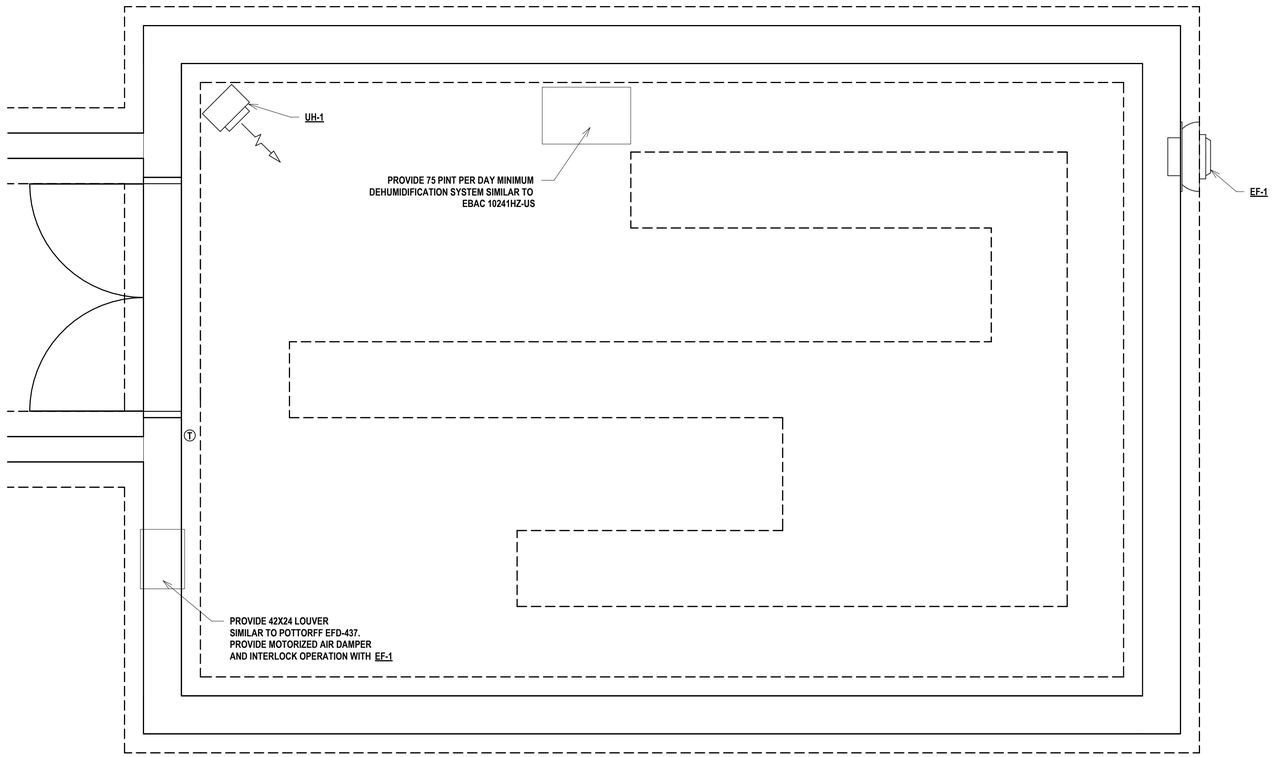
UNIT #	LOCATION	HEATING COIL DATA			ELECTRICAL			MODEL #	REMARKS & NOTES
		CFM	EAT	KW	MOP	VOLTS	PHASE		
UH-1	M3.2	700	50	7.5	50	208 V	1	TRANE UHEC-0072 AACA	1,2

NOTES: 1. PROVIDE FACTORY MOUNTED AND WIRED DISCONNECT.
2. PROVIDE THERMOSTAT.

FAN SCHEDULE

FAN #	LOCATION	CFM	MODEL	RPM	ELECTRICAL			SONES	MAX SP	DRIVE	REMARKS & NOTES
					HP	VOLTS	PHASE				
EF-1	M3.2	1389	COOK 16A17D	1725	1/4	120 V	1	15.5	0.35	ECM	1,2,3,4

NOTES: 1. PROVIDE FACTORY MOUNTED AND WIRED DISCONNECT.
2. PROVIDE MOTORIZED BACK DRAFT DAMPER AND HEATER HOOD.
3. PROVIDE INLET GAURD.
4. START/STOP BY THERMOSTAT



1 MECHANICAL PLAN
1/2" = 1'-0"

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MECH PUMP STATION
EWB POTABLE WATER PRESSURE BOOSTING PUMP STATION
ELMIRA WATER BOARD
Elmira, NY

M1.1

PROJECT NO: 3405-001

GENERAL STRUCTURAL NOTES

A. BUILDING CODES AND STANDARDS

1. THE FOLLOWING CODES AND STANDARDS, INCLUDING ALL SPECIFICATION REFERENCED WITHIN, SHALL APPLY TO THE DESIGN, CONSTRUCTION, QUALITY CONTROL AND SAFETY OF ALL WORK PERFORMED ON THE PROJECT.
   a. "2025 BUILDING CODE OF NEW YORK STATE"
   b. "MINIMUM DESIGN LOADS FOR BUILDING AND OTHER STRUCTURES", (ANSI/ASCE 7) AMERICAN SOCIETY OF CIVIL ENGINEERS.
2. ADDITIONAL CODES FOR MATERIALS SHALL BE FOUND IN THE APPROPRIATE SECTIONS THAT FOLLOW. SEE THOSE SECTIONS FOR THE APPLICABLE CODES.

B. DESIGN LOADS

1. GRAVITY - DEAD LOADS

AREA	PSF
NEW ROOF	20 PSF

2. GRAVITY - LIVE LOADS
   a. ROOF LIVE LOAD 20 PSF MIN. (SNOW LOAD USED WHEN GREATER)
   b. UNFACTORED SNOW LOAD 63 PSF

(1) OCCUPANCY RISK CATEGORY	IV
(2) GROUND SNOW LOAD	(Pg) = 90 PSF
(3) EXPOSURE FACTOR	(Ce) =1.0
(4) THERMAL FACTOR	(Ct) =1.00
(5) SLOPE FACTOR	(Cs) =1.00
(6) UNBALANCED SNOW LOAD	PER ASCE 7-22

   c. FLOOR LIVE LOADS

AREA	PSF
SLAB-ON-GRADE, TYPICAL U.N.O.	100 PSF

3. WIND LOADS

a. BASIC WIND SPEED	(V) = 123 MPH
b. OCCUPANCY RISK CATEGORY	IV
c. WIND EXPOSURE CATEGORY	B
d. ENCLOSED BUILDING	(GCpi) = ±0.18
e. MODIFICATION FACTORS	(Kz)=0.7, (Kzt) = 1.0, (Kd) = 0.85, (Ke) = 1.0
f. MAIN WIND-FORCE RESISTING SYSTEM LOADS (PSF)	

WINDWARD (PER ZONE)		LEEWARD (PER ZONE)		OVERHANG (PER ZONE)	
INTERIOR	END	INTERIOR	END	END	CORNER
WALL: ROOF:	WALL: ROOF:	WALL: ROOF:	WALL: ROOF:	ROOF:	ROOF:
47.8 -20.0	13.8 -28.8	-13.7 -14.9	-18.4 -19.7	-32.0	-40.8

   g. COMPONENTS AND CLADDING - WALL NET DESIGN WIND PRESSURES (PSF)

EFFECTIVE AREA	INTERIOR ZONE	END ZONE
10SF	+27.2 -29.5	+27.2 -36.4
500SF	+20.3 -22.6	+20.3 -22.6

   h. COMPONENTS AND CLADDING - ROOF NET DESIGN WIND PRESSURES ROOF SLOPE (18.4°)

EFFECTIVE AREA	INTERIOR ZONE	END ZONE	CORNER ZONE
10 SF	+27.2 -27.2	+50.2 -50.2	+73.3 -73.3
100SF	+23.4 -23.4	+46.5 -46.5	+69.5 -68.7

   i. COMPONENTS AND CLADDING - ROOF OVERHANG NET DESIGN WIND PRESSURES (PSF) ROOF SLOPE (18.4°)

EFFECTIVE AREA	END ZONE	CORNER ZONE
10 SF	-46.1	-69.1
100 SF	-46.1	-69.1

4. LATERAL LOADS: SEISMIC

a. SEISMIC BASE SHEAR:	(V) = 1.5 KIPS
b. OCCUPANCY RISK CATEGORY	III
c. IMPORTANCE FACTOR	(I) = 1.25
d. SITE CLASS	D (ASSUMED)
e. SEISMIC DESIGN CATEGORY	A
f. SPECTRAL RESPONSE ACCELERATION	(Sds) = 0.11 (Ss) = 0.013 (Sd1) = 0.056 (S1) = 0.039
g. SEISMIC FORCE-RESISTING SYSTEM	ORDINARY REINFORCED MASONRY WALLS
h. RESPONSE MODIFICATION FACTOR	(R)=2
i. ANALYSIS PROCEDURE	EQUIVALENT LATERAL FORCE

5. FLOOD LOAD
   a. AREA OUTSIDE 100 YEAR FLOOD AREA PER FEMA FLOOD INSURANCE MAP #3601510005C.
6. ROOF RAIN LOAD DATA
   a. RAIN INTENSITY (100 YEAR 60 MIN. DURATION) (i) = 2.35 IN/HR.

C. FOUNDATION/EARTHWORK/GEOTECHNICAL REPORT

1. DESIGN DATA:
   a. NO GEOTECHNICAL INFORMATION HAS BEEN PROVIDED BY THE OWNER AT THIS TIME. FOUNDATIONS ARE DESIGNED BASED ON ASSUMED BEARING PRESSURES AND SHALL BE CONFIRMED BY A GEOTECHNICAL ENGINEER BEFORE PLACEMENT OF FOUNDATIONS.
   b. ALL EXTERIOR FOUNDATIONS SHALL BEAR A MINIMUM OF 4'-0" BELOW GRADE AND 1'-6" BELOW INTERIOR FINISHED FLOOR GRADE. IN CASE OF CONFLICT, NOTIFY THE ARCHITECT AND STRUCTURAL ENGINEER IN ADVANCE OF ANY CONSTRUCTION TO ALLOW FOR ADJUSTMENT.
2. FOUNDATION SYSTEM
   a. SPREAD FOOTINGS
      (1) BUILDING SPREAD AND STRIP FOOTINGS SHALL BEAR ON UNDISTURBED NATURAL SOILS OR PROPERLY PLACED AND COMPACTED ENGINEERED FILL WITH A MINIMUM ALLOWABLE BEARING PRESSURE OF 2000 PSF. BEARING PRESSURES SHALL BE VERIFIED BY AN EXPERIENCED QUALIFIED GEOTECHINCAL ENGINEER PRIOR TO PLACEMENT OF FOUNDATIONS.
3. GENERAL
   a. SEE THE SPECIFICATIONS AND GEOTECHNICAL REPORT FOR EXCAVATION, DEWATERING AND PREPARATION OF THE FOUNDATION AND SLAB-ON-GRADE SUBGRADE, INCLUDING COMPACTION PROCEDURES. REQUIREMENTS CONTAINED IN THE GEOTECHNICAL REPORTS ARE PART OF THIS WORK.
   b. CONTRACTOR SHALL VERIFY ALL EXISTING FIELD CONDITIONS THAT MAY AFFECT THE INSTALLATION OF THE FOUNDATION SYSTEM AS SHOWN PRIOR TO STARTING WORK.
   c. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATION AND PROTECTING ALL EXISTING UTILITIES, EXISTING STRUCTURES, ETC., WHETHER INDICATED OR NOT, WHICH MAY BE AFFECTED BY THE CONSTRUCTION PROCESS.
   d. UTILITY LINES SHALL NOT BE PLACED THROUGH OR BELOW FOUNDATIONS WITHOUT THE STRUCTURAL ENGINEER'S APPROVAL.
   e. BEARING ELEVATIONS INDICATED ON THE DRAWINGS ARE ESTIMATED FROM SOIL BEARING AND EXISTING FOUNDATION ELEVATION DATA. PRIOR TO PLACING FOUNDATIONS, AN EXPERIENCED, QUALIFIED GEOTECHNICAL ENGINEER SHALL MAKE DETERMINATION OF FINAL BEARING ELEVATIONS AND VERIFICATION OF ALLOWABLE BEARING PRESSURE.
   f. CONCRETE FOR FOUNDATIONS SHALL BE POURED ON THE SAME DAY SUBGRADE APPROVAL IS GIVEN BY THE GEOTECHNICAL ENGINEER.
   g. THE SLOPE BETWEEN THE LOWER EDGES OF ADJACENT FOUNDATIONS SHALL NOT EXCEED 45 DEGREES WITH THE HORIZONTAL, UNLESS INDICATED OTHERWISE ON PLANS. MAINTAIN A 1:1 SLOPE FROM BOTTOM EDGE OF ANY EXCAVATION.
   h. FOLLOWING REQUIRED STRIPPING OPERATIONS, ANY PROOFROLLING SHALL BE AS DIRECTED BY AN EXPERIENCED, QUALIFIED GEOTECHNICAL ENGINEER. THE PURPOSE OF THE PROOFROLLING WILL BE TO LOCATE ANY ISOLATED AREAS OF SOFT OR LOOSE SOILS REQUIRING IMPROVEMENT OR REPLACEMENT. SOFT AREAS SHALL BE UNDERCUT AND REPLACED BY PROPERLY COMPACTED MATERIALS.
   i. ALL SHORING, SHEETING, AND DEWATERING SHALL BE THE TOTAL RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR'S ENGINEER REGISTERED IN THE PROJECT'S JURISDICTION SHALL DESIGN SHEETING AND SHORING. ALL SUBMITTALS SHALL BEAR THE ENGINEER'S SEAL AND SIGNATURE.
4. BACKFILL
   a. ALL BACKFILL SHALL BE ACCOMPLISHED USING MATERIAL APPROVED BY THE GEOTECHNICAL ENGINEER, WITH OPTIMUM MOISTURE CONTENT FOR COMPACTING AND SHALL BE FREE OF DEBRIS.
   b. NO BACKFILL MATERIAL SHALL BE PLACED AGAINST FOUNDATION WALLS UNTIL THE UPPER BRACING FLOORS ARE IN PLACE FOR AT LEAST 7 DAYS, OR ADEQUATE BRACING, AS DESIGNED BY THE CONTRACTOR'S ENGINEER, IS INSTALLED. THE CONTRACTOR'S ENGINEER REGISTERED IN THE PROJECT'S JURISDICTION SHALL DESIGN BRACING. ALL SUBMITTALS SHALL BEAR THE ENGINEER'S SEAL AND SIGNATURE.
   c. WHERE THE FINAL GRADE ELEVATIONS ARE APPROXIMATELY EQUAL ON BOTH SIDES OF A WALL, BACKFILL IN LIFTS TO MAINTAIN LEVEL ELEVATIONS WITHIN 10" ON BOTH SIDES AT ANY TIME.
5. STRUCTURAL FILL
   a. REFER TO SPECIFICATIONS FOR COMPACTED STRUCTURAL FILL. INSPECTION OF THE PLACEMENT OF COMPACTED STRUCTURAL FILL SHALL BE BY AN EXPERIENCED, QUALIFIED GEOTECHNICAL ENGINEER.
   b. APPROVED MATERIAL SHOULD BE PLACED IN 8" MINIMUM INDIVIDUAL MOISTURE CONDITIONED AS REQUIRED TO ACHIEVE COMPACTION TO A MINIMUM IN PLACE DENSITY OF 95% MAX. IN ACCORDANCE WITH ASTM SPECIFICATION D-1557 (MODIFIED PROCTOR) FOR FILL BELOW FOOTINGS AND SLABS-ON-GRADE.

D. CONSTRUCTION

1. GENERAL
   a. UNAUTHORIZED REPRODUCTION OF ANY PORTION OF THE STRUCTURAL CONTRACT DRAWINGS FOR RESUBMITTAL AS SHOP DRAWINGS IS PROHIBITED. SHOP DRAWINGS PRODUCED IN SUCH A MANNER WILL BE REJECTED AND RETURNED.
   b. THESE DRAWINGS REPRESENT THE COMPLETED PROJECT WHICH HAS BEEN DESIGNED FOR THE WEIGHTS OF MATERIALS INDICATED ON THE DRAWINGS AND FOR THE SUPERIMPOSED LOADS INDICATED ON THE DRAWINGS AND FOR THE SUPERIMPOSED LOADS INDICATED IN THE DESIGN LOADS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DETERMINE ALLOWABLE CONSTRUCTION LOADS AND TO PROVIDE PROPER DESIGN AND CONSTRUCTION OF FALSE WORK, STAGINGS, BRACING, SHEETING AND SHORING, ETC. ALL SHORING CALCULATIONS AND DRAWINGS SHALL BE SIGNED AND SEALED BY AN ENGINEER REGISTERED IN THE PROJECTS JURISDICTION.
   c. IN CASE OF CONFLICT BETWEEN THE GENERAL NOTES, DETAILS AND SPECIFICATIONS, THE MOST RIGID REQUIREMENTS SHALL GOVERN.
   d. IMPLEMENTING JOB SITE SAFETY AND CONSTRUCTION PROCEDURES ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
   e. ALL COSTS OF INVESTIGATION AND/OR REDESIGN, DUE TO THE CONTRACTOR MIS LOCATION OF STRUCTURAL ELEMENTS OR OTHER LACK OF CONFORMANCE WITH THE PROJECT DOCUMENTS, SHALL BE AT THE CONTRACTOR'S EXPENSE.
   f. CONTRACTOR SHALL REFER TO ARCHITECTURAL, MECHANICAL, PLUMBING, ELECTRICAL AND OTHER APPLICABLE DRAWINGS FOR SIZE AND LOCATIONS OF OPENINGS, SLEEVES, CONCRETE HOUSEKEEPING PADS, INSERTS, AND DEPRESSIONS.
   g. SEE ARCHITECTURAL DRAWINGS AND SPECIFICATIONS FOR DETAILED INFORMATION REGARDING FINISHES, FIREPROOFING, WATERPROOFING, ETC.
   h. CONTRACTOR SHALL FURNISH DIMENSIONED SHOP DRAWINGS AT ALL LEVELS LOCATING FLOOR AND ROOF EDGES FOR REVIEW BY THE ARCHITECT AND STRUCTURAL ENGINEER.
   i. CONTRACTOR SHALL FURNISH DIMENSIONED SHOP DRAWINGS AT ALL LEVELS SHOWING THE LOCATIONS OF ALL SLEEVES AND OPENINGS REQUIRED BY ALL TRADES.
   j. THE CONTRACTOR SHALL SUBMIT, FOR REVIEW, DRAWINGS AND CALCULATIONS SIGNED AND SEALED BY A STRUCTURAL ENGINEER REGISTERED IN THE PROJECT'S JURISDICTION FOR THE FOLLOWING ASSEMBLIES. THIS REVIEW SHALL BE FOR GENERAL CONFORMANCE WITH THE PROJECT PARAMETERS AS INDICATED ON THE DRAWINGS AND IN THE GENERAL NOTES. THE DESIGN OF THESE ASSEMBLIES IS THE RESPONSIBILITY OF THE ENGINEER WHO HAS SIGNED AND SEALED THESE DRAWINGS AND CALCULATIONS. THE DESIGN OF THESE ASSEMBLIES SHALL TAKE INTO ACCOUNT ALL VERTICAL AND LATERAL LOADS REQUIRED BY APPLICABLE BUILDING CODES.
      (1) WOOD AND COLD FORMED METAL TRUSSES AND RELATED CONNECTIONS: THE SUBMITTED DRAWINGS SHALL CLEARLY SHOW THE LOAD REACTIONS AS APPLIED TO THE BUILDING STRUCTURE.
   k. WORK NOT INCLUDED ON THE DRAWINGS BUT IMPLIED TO BE SIMILAR TO THAT SHOWN AT CORRESPONDING PLACES ELSEWHERE ON THE DRAWINGS SHALL BE REPEATED.

E. CONCRETE

1. CODES
   a. "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE, ACI 318", AMERICAN CONCRETE INSTITUTE.
   b. "ACI MANUAL OF CONCRETE PRACTICE - PARTS 1 THROUGH 5".
   c. "MANUAL OF STANDARD PRACTICE", CONCRETE REINFORCING STEEL INSTITUTE.
2. MATERIALS
   a. THE FOLLOWING ASTM STANDARDS AND DESIGN STRESSES SHALL BE USED FOR THE APPROPRIATE MATERIALS USED IN THE CONSTRUCTION OF THIS PROJECT.

APPLICATION	f'c 28 DAYS	WIEGHT (PCF)	W/C(MAX)*
SLABS-ON-GRADE (INTERIOR)	3500	145	0.50
SLABS-ON-GRADE (EXTERIOR)	4000	145	0.45
FOOTINGS	3000	145	0.55
WALLS	4000	145	0.50

   *PUMP MIXES: MAXIMUM WATER/CEMENT RATIO MUST BE MAINTAINED. IF ADDITIONAL WORKABILITY IS REQUIRED FOR PUMPED PLACEMENT, THE HIGH OR MID-RANGE WATER REDUCERS SHALL BE USED IN LIEU OF ADDITIONAL WATER.

b. CEMENT:	ASTM C150; TYPE I OR III ASTM C150; TYPE II FOR CONCRETE IN CONTACT WITH EARTH.
c. CEMENT SUBSTITUTES:	ASTM C595, TYPE IS (LIMIT TO 50% MAX OF CEMENTITIOUS CONTENT BY WEIGHT)
d. AGGREGATES:	ASTM C33 (NORMAL WEIGHT) ASTM C330 (STRUCTURAL LIGHTWEIGHT)
e. AIR:	ASTM C260 CONCRETE EXPOSED TO WEATHER SHALL BE AIR-ENTRAINED (5%±) (1-1/2%) BY VOLUME.
f. REINFORCEMENT:	
DEFORMED REINFORCING BARS	ASTM A615, GRADE 60
WELDABLE DEFORMED REINF. BARS	ASTM A706 OR APPROVED EQUAL
WELDED WIRE FABRIC (WWF)	ASTM A1064
THREADBAR AND COUPLER	DYWIDAG MEETING ACI 318-12.14.3.4 SPLICES OR APPROVED EQUAL
g. ANCHORING SYSTEM:	
ADHESIVE REINFORCING EXPANSION BOLTS	HILTI HY-200 SYSTEM OR APPROVED EQUAL HILTI KWIK BOLT TZ OR APPROVED EQUAL

3. CAST-IN-PLACE
   a. REINFORCING STEEL CLEAR COVER SHALL BE AS FOLLOWS UNLESS NOTED OTHERWISE:

(1) NONPRESTRESSED/ NON-POST-TENSIONED CONCRETE:	COVER
a. CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH	3"
b. CONCRETE EXPOSED TO EARTH OR WEATHER:	
• #6 BARS AND LARGER	2"
• #5 BARS AND SMALLER	1-1/2"
c. CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND:	
• SLABS, WALLS AND JOISTS: #11 BARS AND SMALLER	3/4"
d. BEAMS, AND COLUMNS:	
• PRIMARY REINFORCEMENT, TIES, STIRRUPS, AND SPIRALS	1-1/2"

   b. NO SPLICES OF REINFORCEMENT SHALL BE PERMITTED EXCEPT AS DETAILED OR AUTHORIZED BY THE STRUCTURAL ENGINEER. MAKE BARS CONTINUOUS AROUND CORNERS. WHEN PERMITTED, SPLICES SHALL BE MADE BY CONTACT TENSION LAP SPLICES, UNLESS OTHERWISE NOTED.
   c. WELDED WIRE FABRIC REINFORCEMENT SHALL BE SUPPLIED IN SHEETS, EXCEPT FOR SLAB ON GRADE CONSTRUCTION WHERE ROLLS MAY BE LAP TWO FULL MESH LENGTHS AT SPLICES AND WIRE TOGETHER.
   d. NO WELDING OF REINFORCING SHALL BE PERMITTED UNLESS SPECIFICALLY CALLED FOR OR APPROVED BY THE STRUCTURAL ENGINEER.
   e. PROVIDE PLASTIC TIPPED BOLSTERS AND CHAIRS AT ALL LOCATIONS WHERE THE CONCRETE SURFACE IN CONTACT WITH THE BOLSTERS OR CHAIRS ARE EXPOSED.
   f. CONSTRUCTION JOINTS AND CONTROL JOINTS IN SLABS ON GRADE SHALL BE ARRANGED TO LIMIT MAXIMUM LENGTH BETWEEN JOINTS TO 15'-0" IN ANY DIRECTION. ALLOW A MINIMUM OF 48 HOURS TIME BETWEEN PLACEMENT OF ADJACENT SECTIONS.
   g. ALL FORMWORK, SHORING, AND RESHORING, SHALL BE DESIGNED BY THE CONTRACTOR'S ENGINEER REGISTERED IN THE PROJECT'S JURISDICTION. ALL SUBMISSIONS SHALL BEAR THE ENGINEER'S SEAL AND SIGNATURE.
   h. NO SLEEVES SHALL BE PLACED THROUGH ANY CONCRETE ELEMENT UNLESS SHOWN ON THE STRUCTURAL DRAWINGS, APPROVED SLEEVING SHOP DRAWINGS OR SPECIFICALLY AUTHORIZED IN WRITING BY THE STRUCTURAL ENGINEER.
   i. ALL INSERTS AND SLEEVES SHALL BE CAST-IN-PLACE WHENEVER FEASIBLE. DRILLED OR POWDER DRIVEN FASTENERS WILL BE PERMITTED WHEN PROVEN TO THE SATISFACTION OF THE STRUCTURAL ENGINEER THAT THE FASTENERS WILL NOT SPALL THE CONCRETE AND HAVE THE SAME CAPACITY AS CAST-IN-PLACE INSERTS.
   j. WHEN INSTALLING EXPANSION BOLTS OR ADHESIVE ANCHORS, THE CONTRACTOR SHALL TAKE MEASURES TO AVOID DRILLING OR CUTTING OF ANY EXISTING REINFORCING AND DESTRUCTION OF CONCRETE. HOLES SHALL BE BLOWN CLEAN PRIOR TO PLACING BOLTS OR ADHESIVE ANCHORS.
   k. CHAMFER ALL EXPOSED CONCRETE CORNERS, 3/4" x 3/4" MINIMUM, UNLESS NOTED THERWISE ON ARCHITECTURAL DRAWINGS.
   l. THE CONCRETE SLABS SHALL BE FINISHED, WITHIN TOLERANCE, TO THE ELEVATIONS INDICATED ON THE DRAWINGS.
   m. THE BEARING ELEVATION OF A THICKENED SLAB SHALL NOT SLOPE MORE THAN 1" FOR EVERY 2" OF HORIZONTAL DISTANCE UNLESS NOTED OTHERWISE.
   n. CONCRETE SLABS ON GRADE SHALL BE PLACED ON A MINIMUM 6" LAYER OF CLEAN, WELL-GRADED GRAVEL OR CRUSHED STONE CONFORMING TO THE SPECIFICATIONS OVER PROPERLY COMPACTED SUBGRADE. A VAPOR BARRIER SHALL BE PLACED ON TOP OF THE LAYER OF GRAVEL AT INTERIOR SLABS.
4. INSPECTION AND TESTING
   a. REFER TO SPECIFICATION SECTIONS 014000, 014533 AND 033000.

F. MASONRY

1. CODES
   a. "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES, TMS 402 /ACI 530 / ASCE 5" AND "SPECIFICATIONS FOR MASONRY STRUCTURES, TMS 602 / ACI 530.1 / ASCE 6" MASONRY STANDARDS JOINT COMMITTEE.
2. MATERIALS

a. LOAD BEARING CONCRETE HOLLOW AND SOLID	ASTM C90	-MEDIUM WEIGHT
b. MORTAR	ASTM C270	-TYPE M (BELOW GRADE) -TYPE S (ABOVE GRADE)
c. GROUT	ASTM C476	-f'c = 3000 PSI MIN.
d. PRISM STRENGTH	f'm = 2000 PSI, UNIT STRENGTH METHOD	
e. HORIZONTAL JOINT REINFORCEMENT	ASTM A951, GALVANIZED PER ASTM A153, CLASS B2	

3. GENERAL
   a. PROVIDE GALVANIZED HORIZONTAL JOINT REINFORCEMENT IN ALL WALLS AND PARTITIONS AT 16" O.C. UNLESS OTHERWISE SHOWN OR NOTED. PROVIDE ONE PIECE PREFABRICATED UNITS AT 8" O.C. AT ALL WALL CORNERS AND INTERSECTIONS.
   b. PROVIDE MASONRY ANCHORS AT 16" O.C. SET ON COURSING AND ATTACHED TO ALL BEAMS, COLUMNS, PARTITIONS AND WALLS ABUTTING OR EMBEDDED IN MASONRY.
   c. PROVIDE BOND BEAMS WITH (2) #5 HORIZONTAL REINFORCEMENT CONTINUOUS IN ALL MASONRY WALLS AT EACH FRAMING LEVEL, AND TOP OF WALL UNLESS NOTED OTHERWISE.
   d. ALL PIERS AND PARTITIONS SHALL BE BONDED OR ANCHORED TO ADJACENT MASONRY WALLS. PROVIDE TIES TO ADJACENT FLOOR AND ROOF CONSTRUCTION IN ACCORDANCE WITH DETAILS AND DRAWINGS.
   e. IN GROUTED AND/OR REINFORCED MASONRY WALLS, USE MASONRY UNITS WITH CORES THAT ALIGN VERTICALLY TO PROVIDE CONTINUOUS UNOBSTRUCTED CELLS FOR GROUTING AND REINFORCING STEEL PLACEMENT.
   f. LAP SPLICES FOR DEFORMED REINFORCING BARS USED IN MASONRY CONSTRUCTION SHALL BE 50 BAR DIAMETERS.
   g. ALL WALL SECTIONS AND PIERS LESS THAN 4 SQUARE FEET IN CROSS-SECTIONAL AREA TO BE FULLY GROUTED OR OF 100% SOLID MASONRY
   h. SUBMIT GROUT MIX DESIGN AND MASONRY UNIT CERTIFICATIONS TO THE STRUCTURAL ENGINEER FOR APPROVAL.
   i. CONTRACTOR SHALL PROVIDE ADEQUATE BRACING AND SUPPORT FOR ALL MASONRY WORK UNTIL PERMANENT CONSTRUCTION IS IN PLACE.
   j. SEE SPECIFICATIONS AND DETAILS FOR GENERAL CONTROL JOINT REQUIREMENTS. JOINTS ARE TO BE CONSTRUCTED IN ALL WALLS AND PARTITIONS.
   k. THE CONTRACTOR SHALL PROVIDE LINTELS FOR NON-LOAD BEARING WALLS AND PARTITIONS PER PLANS AND DETAILS.
   l. THE CONTRACTOR SHALL VERIFY ALL OPENINGS BELOW LINTELS INDICATED ARE ADEQUATE TO ACCEPT DOOR FRAMES, LOUVERS, ETC. AS SHOWN ON THE ARCHITECTURAL AND MECHANICAL DRAWINGS. NOTIFY THE ARCHITECT AND STRUCTURAL ENGINEER OF ANY DISCREPANCIES PRIOR TO LINTEL INSTALLATION.
   m. NO OPENINGS SHALL BE PLACED ABOVE ANY LINTEL WITHIN A HEIGHT LESS THAN OR EQUAL TO THE WIDTH OF THE CLEAR OPENING BELOW THE LINTEL, UNLESS SPECIFICALLY SHOWN OR APPROVED BY THE STRUCTURAL ENGINEER.
   n. PROVIDE #4 BARS AT 48" O.C. MINIMUM VERTICAL REINFORCING IN SOLID GROUTED CORES FOR ALL MASONRY WALLS UNLESS NOTED OTHERWISE.
4. INSPECTION AND TESTING
   a. REFER TO SPECIFICATION SECTIONS 01 40 00, 01 45 33 AND 04 20 00.

G. WOOD

1. CODE
   a. ANSI/AWC NDS2015 "NATIONAL DESIGN SPECIFICATION (NDS) FOR WOOD CONSTRUCTION", AMERICAN WOOD COUNCIL
   b. AWC SDPWS2015 "SPECIAL DESIGN PROVISIONS FOR WIND AND SEISMIC", AMERICAN WOOD COUNCIL
   c. "PERFORMANCE STANDARD AND POLICIES FOR STRUCTURAL USE PANELS," PRP-108, AMERICAN PLYWOOD ASSOCIATION (APA)
2. MATERIALS

a. SAWN LUMBER	DOC PS20
b. STRUCTURAL PANELS	ANSI/APA PRP210 OR DOC PS1/PS2
c. PRESERVATIVE TREATMENT	AWPA U1&M4
d. GLUE-LAMINATED TIMBER	ANSI/AITC A190.1 & ASTM D3737
e. TIMBER PILES	ASTM D25
f. TIMBER POLES	ASTM D3200
g. WOOD I-JOISTS	ASTM D5055
h. LAMINATED VENEER LUMBER	ASTM D5456

3. SAWN LUMBER
   a. SAWN LUMBER ALL SAWN LUMBER SHALL HAVE 19% MAXIMUM MOISTURE CONTENT AND SHALL BE SURFACE DRY SOUTHERN PINE WITH THE FOLLOWING MIN. BASE DESIGN VALUES:

      CEILING JOISTS/RAFTER/BEAMS: NUMBER II OR BETTER
      Fb = 875 psi Fc (PAR) = 1150 psi Fv = 135 psi
      Ft = 450psi Fc (PERP) = 425 psi E = 1,400,000 psi

   b. MEMBERS SHALL BE SET WITH CROWN SIDE UP AND HAVE A MINIMUM OF 3" BEARING.
   c. MEMBERS FRAMING TO BEAMS, HEADERS, ETC. SHALL BE SECURED WITH SIMPSON STRONG-TIE FRAMING ANCHORS OR APPROVED EQUAL, UNLESS OTHERWISE NOTED OR SHOWN.
   d. DESIGN OF TRUSSES, TRUSS BRACING AND DETAILING OF TRUSS CONNECTIONS IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS SHALL BE BY THE FABRICATOR'S ENGINEER REGISTERED IN THE PROJECT'S JURISDICTION. CALCULATIONS AND SHOP DRAWINGS CONSISTING OF TRUSS LAYOUT PLANS AND TRUSS DETAILS, SHALL BE SUBMITTED BEARING THIS ENGINEER'S SEAL AND SIGNATURE.
   e. ALL BOLTS AND LAG BOLTS SHALL BE FITTED WITH GALVANIZED, MALLEABLE IRON OR STEEL PLATE WASHERS.
   f. CONNECTION DETAILS SHOW ARRANGEMENT OF STRUCTURAL MEMBERS DESIGN OF CONNECTIONS SHALL BE THE RESPONSIBILITY OF THE BUILDER/FABRICATOR.
   g. ALL JOISTS AND RAFTERS SHALL BE RIGIDLY BRIDGED AT INTERVALS NOT EXCEEDING 8'-0".
4. PLYWOOD PANELS
   a. APA PERFORMANCE RATED PLYWOOD PANELS
      (1) PLYWOOD WALL SHEATHING 19/32" THICK, EXPOSURE 1, SPAN RATING 32/16
   b. FACTORY-MARK EACH CONSTRUCTION PANEL WITH APA TRADEMARK EVIDENCING COMPLIANCE WITH GRADE REQUIREMENTS.
   c. INSTALL PANELS WITH FACE GRAIN PERPENDICULAR TO THE SUPPORTING MEMBERS, UNLESS SHOWN OTHERWISE.
5. WOOD PRESERVATIVE TREATMENT
   a. WHERE LUMBER OR PLYWOOD IS INDICATED AS "TREATED" OR "PRESSURE TREATED", COMPLY WITH APPLICABLE REQUIREMENTS OF AMERICAN WOOD PRESERVERS ASSOCIATION (AWPA) STANDARDS U1 AND M4.
   b. TREAT INDICATED ITEMS AND WOOD SILLS, SLEEPERS, BLOCKING AND SIMILAR CONCEALED MEMBERS IN CONTACT WITH MASONRY OR CONCRETE.
   c. PARALLAM PRESERVATIVE TREATMENT: COPPER AZOLE OR CCA FOR SERVICE LEVEL 2.

DRAWN BY:	MKB
CHECKED BY:	NGB
DATE:	01/28/2026
PHASE:	BID

#	DATE:	DESCRIPTION OF REVISION:

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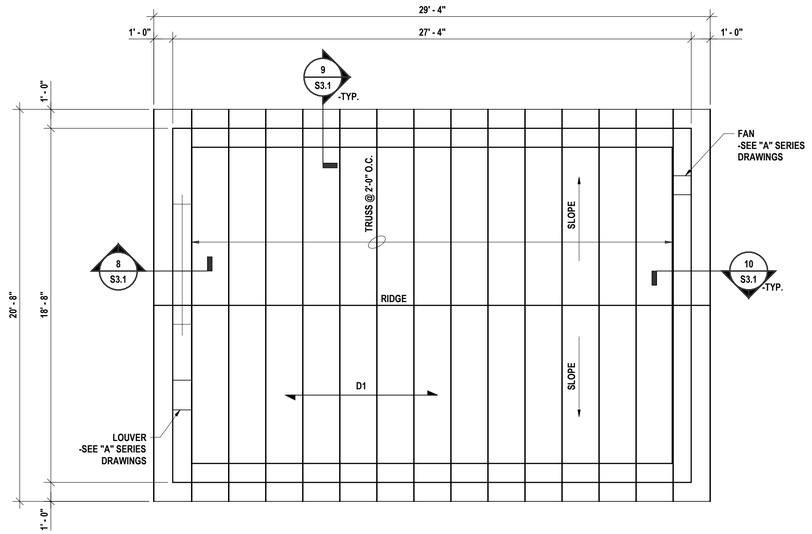
ALBANY, NY 607 - 798 - 8081 WWW.HUNT-EAS.COM
NY CERTIFICATE NO. 0018220 PA CERTIFICATE NO. TSC2203131464-1

STRUCTURAL GENERAL NOTES

EWB POTABLE WATER PRESSURE BOOSTING PUMP STATION
ELMIRA WATER BOARD
ELMIRA, NY

S0.1

PROJECT NO: 3405-001

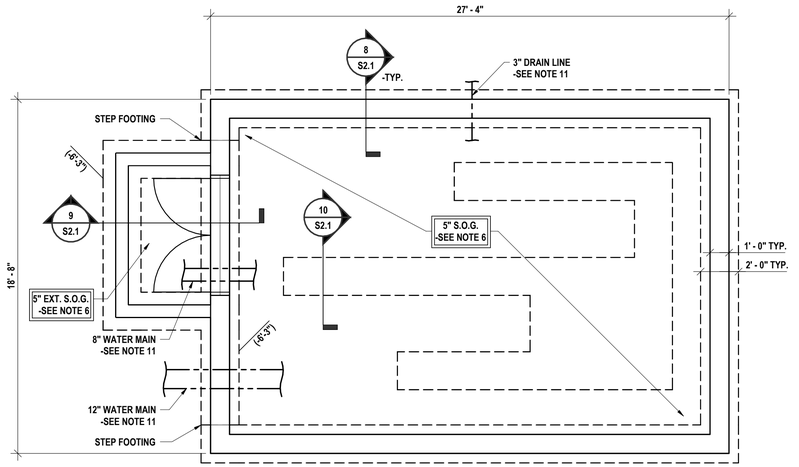


2 ROOF FRAMING PLAN

1/4" = 1'-0"

PLAN NOTES:

1. TOP OF ROOF STEEL = 10'-0" (967.89' ± V.I.F.), UNLESS NOTED. THIS IS TO BE THE REFERENCE ELEVATION FOR THIS LEVEL. ALL ELEVATIONS INDICATED (±0'-0") ARE TAKEN FROM THIS REFERENCE ELEVATION.
2. SEE S0.1 FOR GENERAL NOTES.
3. SEE S3.1 FOR TYPICAL DETAILS.
4. D1= PLYWOOD SHEATHING 5/8" THICK EXPOSURE 1, APA PERFORMANCE RATED PLANEL WITH SPAN RATING 40/20.
5. SEE DETAIL 8/S3.1 FOR LINTEL DETAIL. PROVIDE LINTELS FOR ALL OPENINGS SHOWN ON "A" SERIES DRAWINGS.
6. ALL TRUSSES ARE SPACED EVENLY BETWEEN WALL LINES UNLESS NOTED.
7. COORDINATE SIZE AND LOCATION OF ALL OPENINGS, INFILLS, AND SLEEVES WITH OTHER CONTRACTED WORK. PROVIDE SUPPORTS AT CURBS AND OPENINGS PER THE TYPICAL DETAILS.
8. SEE SHEET S3.1 FOR TRUSS LOADING DIAGRAMS AND PROFILES.
9. TRUSSES SHALL BE CONNECTED AT ALL BEARING POINTS WITH HURRICANE ANCHORS THAT MEET OR EXCEED THE UPLIFT REACTIONS LISTED IN THE TRUSS MANUFACTURER'S SUBMITTED CALCULATIONS.



1 FOUNDATION PLAN

1/4" = 1'-0"

PLAN NOTES:

1. TOP OF SLAB EL.=0'-0" (957.89' +/- V.I.F.) UNLESS NOTED. FLOOR ELEVATION TO MATCH EXISTING FLOOR ELEVATION. THIS IS TO BE THE REFERENCE ELEVATION FOR THIS LEVEL. ALL ELEVATIONS INDICATED (±0'-0") ARE TAKEN FROM THIS REFERENCE ELEVATION.
2. SEE SHEET S0.1 FOR GENERAL NOTES. INCLUDING COMPACTION REQUIREMENTS FOR FOUNDATIONS AND SLABS.
3. SEE SHEET S2.1 FOR TYPICAL DETAILS.
4. TOP OF EXTERIOR FOOTING ELEVATION = (-4'-0") UNLESS NOTED. TOP OF WALL FOOTING ELEVATION TO MATCH ADJACENT COLUMN FOOTING. STEP FOOTING AS REQUIRED PER THE TYPICAL DETAILS.
5. SEE "A" SERIES DRAWINGS FOR DIMENSIONS NOT SHOWN.
6. 5" FIBER REINFORCED SLAB ON GRADE ADDITIONALLY REINFORCED WITH 6x6-W2.0xW2.0 WWF. PROVIDE SUPPORT CHAIRS TO HOLD WWF IN POSITION DURING CONCRETE PLACEMENT. PROVIDE AIR ENTRAINMENT AND 2% SLOPE AT EXTERIOR SLABS.
7. AT SLABS PROVIDE CONSTRUCTION OR CONTROL JOINTS AT A SPACING NOT TO EXCEED 15'-0" UNLESS NOTED C.J. ON PLANS. FOR ADDITIONAL INFORMATION SEE TYPICAL DETAILS.
8. PROVIDE (2) #5x4'-0" MID-DEPTH OF SLAB AT ALL INTERIOR CORNERS.
9. SLOPE SLABS AS REQUIRED FOR DRAINAGE (MIN 1/8" PER FOOT), SEE "A & P" SERIES DRAWINGS.
10. SLOPE SLAB 1/4" PER FOOT SLOPE TO DRAIN WITHIN 2'-0" OF EACH DRAIN LOCATION. COORDINATE LOCATIONS WITH "A & P" SERIES DRAWINGS.
11. ALL SLEEVES FOR OTHER TRADES SHALL CROSS THROUGH THE FOUNDATION WALL. STEP FOOTING AS REQUIRED. COORDINATE SIZE, LOCATION AND INVERT WITH "L" SERIES DRAWINGS AND OTHER CONTRACTED WORK.
12. 12" NRG INSULATED MASONRY WITH #5 BARS AT 48" O.C. MINIMUM VERTICAL REINFORCEMENT IN FULLY GROUTED CORES. PROVIDE CONTINUOUS 8" BOND BEAMS REINFORCED WITH (1) #5 BAR AT THE TOP OF WALL.

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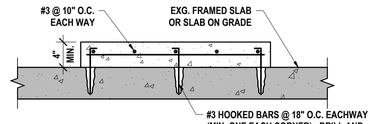
FOUNDATION AND ROOF FRAMING PLANS

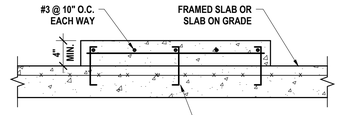
EWB POTABLE WATER PRESSURE BOOSTING PUMP STATION

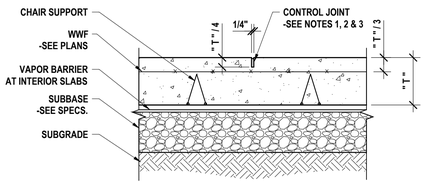
ELMIRA WATER BOARD
ELMIRA, NY

S1.1

PROJECT NO: 3405-001







TENSION LAP SPLICE LENGTHS FOR WALLS AND SLABS (INCH)

fy=60,000PSI
fc'=4,000PSI
LAP CLASS B

BAR SIZE	CONCRETE COVER 3/4"		CONCRETE COVER 1 1/2"		CONCRETE COVER 2"		CONCRETE COVER 3"	
	TOP	OTHER	TOP	OTHER	TOP	OTHER	TOP	OTHER
#3	15	12	15	12	15	12	15	12
#4	24	19	20	15	20	15	20	15
#5	36	28	24	19	24	19	24	19
#6	48	37	29	22	29	22	29	22
#7	-	-	48	37	42	33	42	33
#8	-	-	60	47	48	37	48	37

NOTES:
1. TABULATED VALUES ARE BASED ON UNCOATED 60,000PSI REINFORCEMENT AND NORMAL WEIGHT 4,000PSI CONCRETE.
2. TENSION LAP SPLICE LENGTHS ARE CALCULATED PER ACI 318-14. SECTIONS 25.4.2 AND 25.5.
3. CENTER-CENTER SPACING OF SHALL AT MINIMUM BE ONE BAR DIAMETER PLUS TWICE THE COVER TO USE THIS TABLE.
4. TYPICAL CENTER-CENTER SPACING AT LAPPED BARS IS 2"
5. TOP BARS ARE HORIZONTAL WITH MORE THAN 12" OF CONCRETE CAST BELOW.
6. FOR LIGHTWEIGHT CONCRETE MULTIPLY ALL LENGTHS IN THE TABLE BY 1.33

TENSION LAP SPLICE LENGTHS FOR WALLS AND SLABS (INCH)

fy=60,000PSI
fc'=3,500PSI
LAP CLASS B

BAR SIZE	CONCRETE COVER 3/4"		CONCRETE COVER 1 1/2"		CONCRETE COVER 2"		CONCRETE COVER 3"	
	TOP	OTHER	TOP	OTHER	TOP	OTHER	TOP	OTHER
#3	12	12	12	12	12	12	12	12
#4	20	16	16	13	16	13	16	13
#5	30	24	20	16	20	16	20	16
#6	40	31	24	19	24	19	24	19
#7	-	-	40	31	35	27	35	27
#8	-	-	50	38	40	31	40	31

NOTES:
1. TABULATED VALUES ARE BASED ON UNCOATED 60,000PSI REINFORCEMENT AND NORMAL WEIGHT 3,500PSI CONCRETE.
2. TENSION LAP SPLICE LENGTHS ARE CALCULATED PER ACI 318-14. SECTIONS 25.4.2 AND 25.5.
3. CENTER-CENTER SPACING OF SHALL AT MINIMUM BE ONE BAR DIAMETER PLUS TWICE THE COVER TO USE THIS TABLE.
4. TYPICAL CENTER-CENTER SPACING AT LAPPED BARS IS 2"
5. TOP BARS ARE HORIZONTAL WITH MORE THAN 12" OF CONCRETE CAST BELOW.
6. FOR LIGHTWEIGHT CONCRETE MULTIPLY ALL LENGTHS IN THE TABLE BY 1.33

B EXISTING CONSTRUCTION

A NEW CONSTRUCTION

10 CONCRETE PAD FOR EQUIPMENT

1" = 1'-0"

9 TYPICAL FROST WALL AT ENTRANCE

3/4" = 1'-0"

8 TYPICAL WALL FOUNDATION

3/4" = 1'-0"

NOTES:
1. CONSTRUCTION JOINT MAY REPLACE CONTROL JOINT -OMIT REMOVABLE CAP STRIP.
2. REFER TO "A" SERIES DRAWINGS FOR JOINT FILLER WHERE REQUIRED.
3. USE CONSTRUCTION JOINT BETWEEN SLAB PLACEMENTS.

7 SLAB ON GRADE CONSTRUCTION JOINT

1 1/2" = 1'-0"

NOTES:
1. FORM THE CONTOL JOINT USING A PREFORMED REMOVABLE PLASTIC OR HARD BOARD INSERT. TOOL THE EDGES ON EACH SIDE OF INSERT.
2. SAW CUTS ARE PERMITTED AS CONTROL JOINTS. A "SOFF-CUT" MACHINE OR EQUAL SHALL BE USED DIRECTLY AFTER FINISHING SLAB.
3. FILL CONTROL JOINT WITH SEALANT AFTER THE SLAB HAS BEEN CURED

6 TYPICAL SLAB ON GRADE AND CONTROL JOINT

1 1/2" = 1'-0"

NOTES:
1. SEE WALL DETAIL FOR TYPICAL REINFORCEMENT
2. DO NOT USE THIS DETAIL FOR SHEAR WALLS OR WALLS THAT SPAN HORIZONTALLY.
3. NO SPECIAL REINFORCEMENT REQUIRED BELOW 1'-0" OPENING

5 REINFORCEMENT AT WALL OPENING

3/8" = 1'-0"

NOTES:
1. DOWEL BARS SHALL BE THE SAME SIZE AND SPACING AND HORIZONTAL REINFORCEMENT.
2. SEE TENSION LAP SPLICE SCHEDULE FOR LAP LENGTHS

4 CONCRETE WALL PLAN AT TEE

3/4" = 1'-0"

NOTES:
1. DOWEL BARS SHALL BE THE SAME SIZE AND SPACING AND HORIZONTAL REINFORCEMENT.
2. SEE TENSION LAP SPLICE SCHEDULE FOR LAP LENGTHS

3 CONCRETE WALL PLAN AT CORNER

3/4" = 1'-0"

PLAN VIEW

NOTES:
1. CONSTRUCTION JOINTS MAY REPLCE A CONTROL JOINT AS REQUIRED.
2. DO NOT USE THIS DETAIL FOR SHEARWALLS OR WALLS DESIGNED TO SPAN HORIZONTALLY (NOTED ON PLANS).

2 CONCRETE WALL CONSTRUCTION JOINT

3/4" = 1'-0"

NOTES:
1. STEPS IN FOOTING ARE LIMITED TO GROUPS OF THREE WITH 8'-0" OF HORIZONTAL DISTANCE BETWEEN EACH GROUP (MIN).
2. ADD (2) #5 BARS AT EACH FACE OF WALL. RUN BARS PAST STEP BY 1'-0" MIN

1 TYPICAL STEPPED FOOTING

1/2" = 1'-0"

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NY CERTIFICATE NO. 0018220 PA CERTIFICATE NO. TSC2203131464-1

FOUNDATION DETAILS

EWB POTABLE WATER PRESSURE BOOSTING PUMP STATION
ELMIRA WATER BOARD
ELMIRA, NY

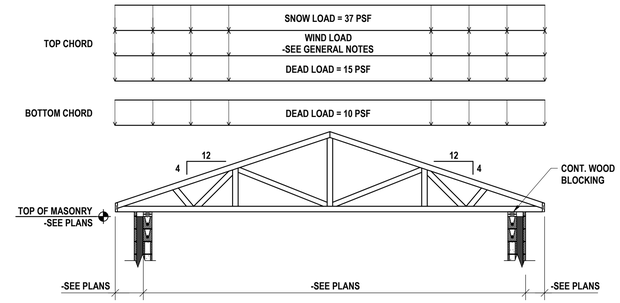
S2.1

PROJECT NO: 3405-001

STEEL LINTEL SCHEDULE

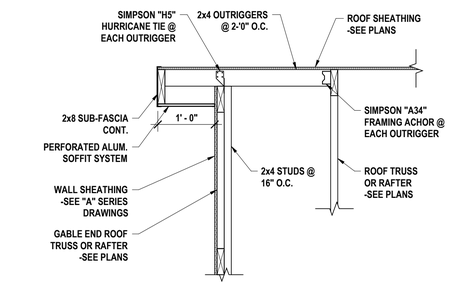
LINTEL MARK	WALL TYPE	WALL WIDTH	LINTEL TYPE	MAX. SPAN LENGTH	LINTEL SIZE	BEARING LENGTH	NOTES
L-1	12" NRG BLOCK	1'-0"	TYPE I	6'-4"	(2) L5x5x3/8 W/ 5/16" x 11" PLATE	8"	

NOTES:
1. COORDINATE MASONRY OPENINGS WITH ARCHITECTS FOR EXACT OPENING REQUIREMENTS.
2. CMU WALL SHALL BE GROUTED SOLID THREE COURSES BELOW LINTEL BEARING POINT FOR A WIDTH OF 24".
3. SEE 8/S3.1 FOR LINTEL TYPE DETAIL.
4. BOTTOM PLATE TO BE CUT 1/2" SHORTER THAN THE MASONRY OPENING.

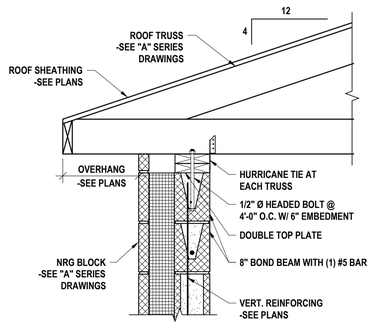


NOTES:
1. UNBALANCED SNOW LOAD SHOULD BE ADDED IN ACCORDANCE WITH THE INTERNATIONAL BUILDING CODE.

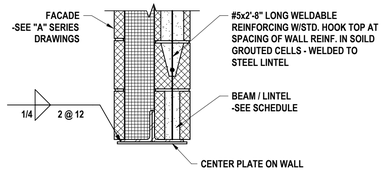
11 TRUSS LOADING DIAGRAM "T1"
1/4" = 1'-0"



10 OUTRIGGER DETAIL
3/4" = 1'-0"



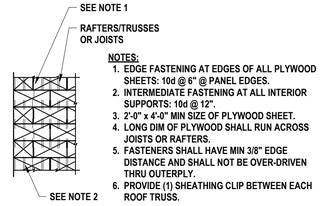
9 TRUSS BEARING DETAIL
1" = 1'-0"



TYPE I

NOTES:
1. ALL EXTERIOR LINTELS AND PLATES SHALL BE GALVANIZED.
2. INFILL ALL LINTELS WITH CMU AND GROUT SOLID.

8 LINTEL DETAIL
1" = 1'-0"



NOTES:
1. EDGE FASTENING AT EDGES OF ALL PLYWOOD SHEETS: 10d @ 6" @ PANEL EDGES.
2. INTERMEDIATE FASTENING AT ALL INTERIOR SUPPORTS: 10d @ 12".
3. 2'-0" x 4'-0" MIN SIZE OF PLYWOOD SHEET.
4. LONG DIM OF PLYWOOD SHALL RUN ACROSS JOISTS OR RAFTERS.
5. FASTENERS SHALL HAVE MIN 3/8" EDGE DISTANCE AND SHALL NOT BE OVER-DRIVEN THRU OUTERPLY.
6. PROVIDE (1) SHEATHING CLIP BETWEEN EACH ROOF TRUSS.

7 NAILING FOR PLYWOOD SHEATHING
3/4" = 1'-0"

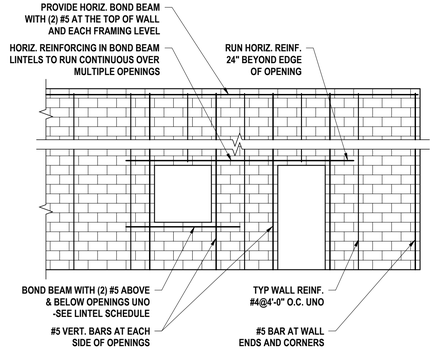
1. DESIGN:

A. DESIGN OF TRUSSES, TRUSS BRACING AND DETAILING OF TRUSS CONNECTION IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS SHALL BE BY THE FABRICATORS ENGINEER REGISTERED IN THE STATE OF NEW YORK. CALCULATIONS AND SHOP DRAWINGS CONSISTING OF TRUSS LAYOUT PLANS AND TRUSS DETAILS SHALL BE SUBMITTED BEARING THIS ENGINEERS SEAL AND SIGNATURE.
B. ALL TRUSS ELEVATIONS REPRESENT CHORD GEOMETRY AND BEARING LOCATIONS SCHEMATICALLY. ACTUAL TRUSS BRACING (WEB) CONFIGURATION IS LEFT TO THE DESIGNER AS NECESSARY TO MEET THE LOAD REQUIREMENTS.
C. TEMPORARY BRACING SHALL BE PROVIDED BY THE CONTRACTOR.

2. LOADING:

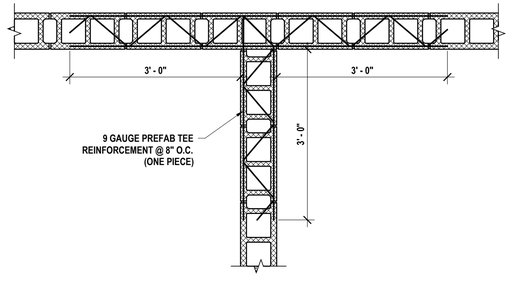
A. SEE GENERAL NOTES ON S0.1 FOR LOADING REQUIREMENTS. ALL LOADS SHOWN ARE UNFACTORED.
B. ACCOUNT FOR SPECIAL CONDITIONS SHOWN ON THE PLANS, SUCH AS MECHANICAL EQUIPMENT, ETC.
C. THE DESIGNER SHALL APPLY THE LOADS SHOWN IN APPROPRIATE LOAD COMBINATIONS, PER APPLICABLE WOOD TRUSS DESIGN CODES.

6 TRUSS NOTES
3/4" = 1'-0"



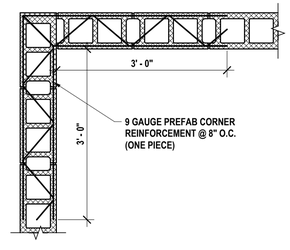
NOTES:
1. SEE "A" SERIES DRAWINGS FOR DOOR AND WINDOW SIZES AND WALL LAYOUTS.
2. ALL REINFORCEMENT IN THIS DETAIL TO BE IN ADDITION TO HORIZONTAL JOINT REINF. AND TO BE PLACED IN SOLID GROUTED CORES.
3. GROUT FULL DEPTH OF BOND BEAMS IN ONE POUR.

5 TYPICAL MASONRY WALL REINFORCING
3/16" = 1'-0"



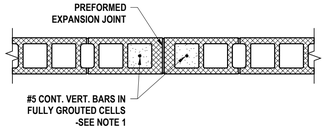
NOTES:
1. VERTICAL WALL REINFORCING NOT SHOWN FOR CLARITY

4 CONCRETE BLOCK - TEE REINFORCING
3/4" = 1'-0"



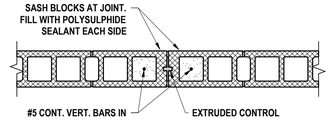
NOTES:
1. VERTICAL WALL REINFORCING NOT SHOWN FOR CLARITY

3 CONCRETE BLOCK - CORNER REINFORCING
3/4" = 1'-0"



NOTES:
1. SEE PLAN FOR TYPICAL VERTICAL WALL REINFORCING REQUIREMENTS

2 CONCRETE BLOCK - EXPANSION JOINT
3/4" = 1'-0"



NOTES:
1. PROVIDE JOINTS AT INTERVALS NOT TO EXCEED THE LESSER OF 24'-0" AND 1.5 TIMES THE WALL HEIGHT
2. AT CORNERS AND INTERSECTIONS PROVIDE ONE JOINT SPACED FROM THE CONER THE LESSER OF 12'-0 AND 0.75 TIMES THE WALL HEIGHT
2. HORIZONTAL WIRE JOINT REINFORCEMENT DOES NOT EXTEND THROUGH JOINT
3. HORIZONTAL BOND BEAM REINFORCING AT FLOOR LINES SHALL CONTINUE THROUGH JOINT
4. SEE PLAN FOR TYPICAL VERTICAL WALL REINFORCING REQUIREMENTS

1 CONCRETE BLOCK - CONTROL JOINT
3/4" = 1'-0"

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FRAMING AND MASONRY DETAILS

EWB POTABLE WATER PRESSURE BOOSTING PUMP STATION
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ELMIRA, NY

S3.1

PROJECT NO: 3405-001