

**STATE OF VERMONT  
AGENCY OF TRANSPORTATION**

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**PROPOSED IMPROVEMENTS  
MIDDLEBURY STATE AIRPORT  
MIDDLEBURY, VERMONT**

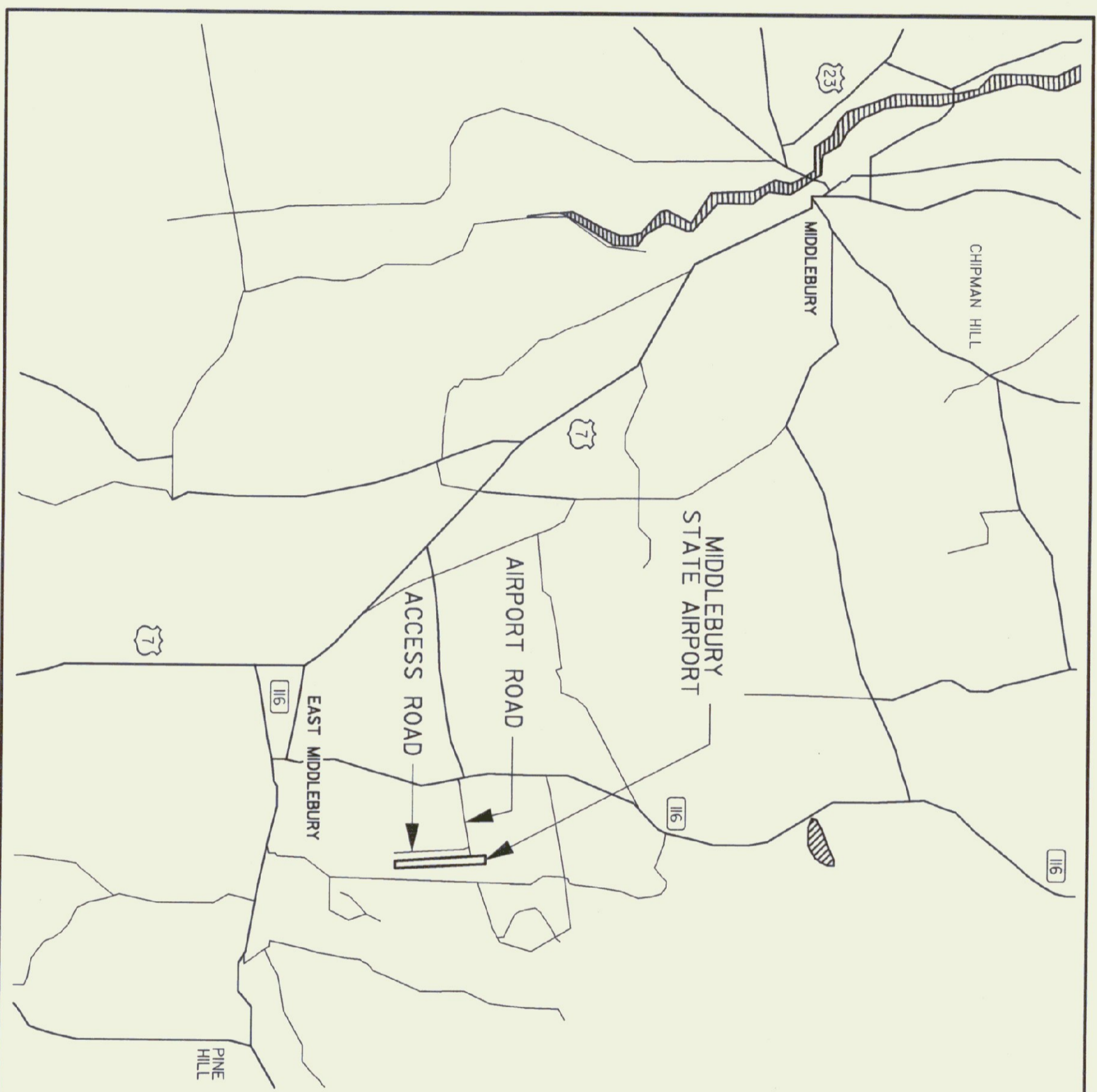
**MVT-000**

DESCRIPTION: INSTALLATION OF 744 LINEAR FEET OF 8" DUCTILE IRON WATERLINE ALONG AIRPORT ACCESS ROAD, INCLUDING TWO (2) NEW HYDRANTS AND FIVE (5) SERVICE CORPORATION STOPS.

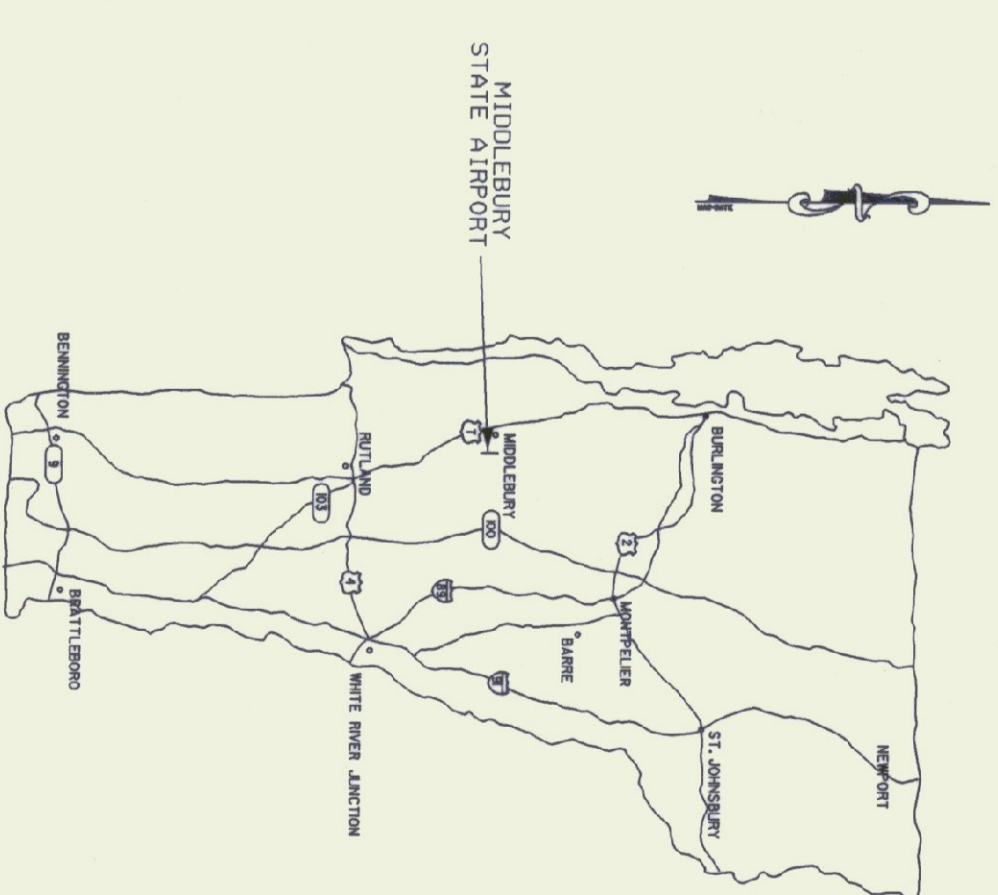
**FINAL PLAN SUBMISSION**

**LIST OF QUANTITIES**

ITEM #	DESCRIPTION	QUANT.	UNITS
201.10	CLEARING AND GRUBBING	1.0	L.S.
203.30	EARTH BORROW	20.0	C.Y.
204.20	TRENCH EXCAVATION OF EARTH	660.0	C.Y.
204.21	TRENCH EXCAVATION OF ROCK	20.0	C.Y.
204.30	GRANULAR BACKFILL FOR STRUCTURES	160.0	C.Y.
301.15	SUBBASE OF GRAVEL	20.0	C.Y.
301.26	SUBBASE OF CRUSHED GRAVEL (FINE GRADED)	10.0	C.Y.
406.25	BITUMINOUS CONCRETE PAVEMENT	10.0	TON
625.10	SLEEVES FOR UTILITIES	104.0	L.F.
629.23	SEAMLESS COPPER WATER TUBE	180.0	L.F.
629.24	6" DUCTILE IRON PIPE	8.0	L.F.
629.24	8" DUCTILE IRON PIPE	744.0	L.F.
629.25	EXTENSION SERVICE BOX AND CURB STOP	5.0	EA.
629.27	6" GATE VALVE WITH VALVE BOX	3.0	EA.
629.27	8" GATE VALVE WITH VALVE BOX	2.0	EA.
629.28	HYDRANT	2.0	EA.
629.39	CORPORATION STOP	5.0	EA.
629.44	PIPE INSULATION	50.0	L.F.
635.10	MOBILIZATION	1.0	L.S.
649.51	GEOTEXTILE FOR SILT FENCE	100.0	S.Y.
651.15	SEED	40.0	LB.
651.18	FERTILIZER	250.0	LB.
651.20	LIME	1.0	TON
651.25	HAY MULCH	1.0	TON
651.26	HAY BALES FOR EROSION CONTROL	20.0	EA.



LOCATION MAP  
NTS

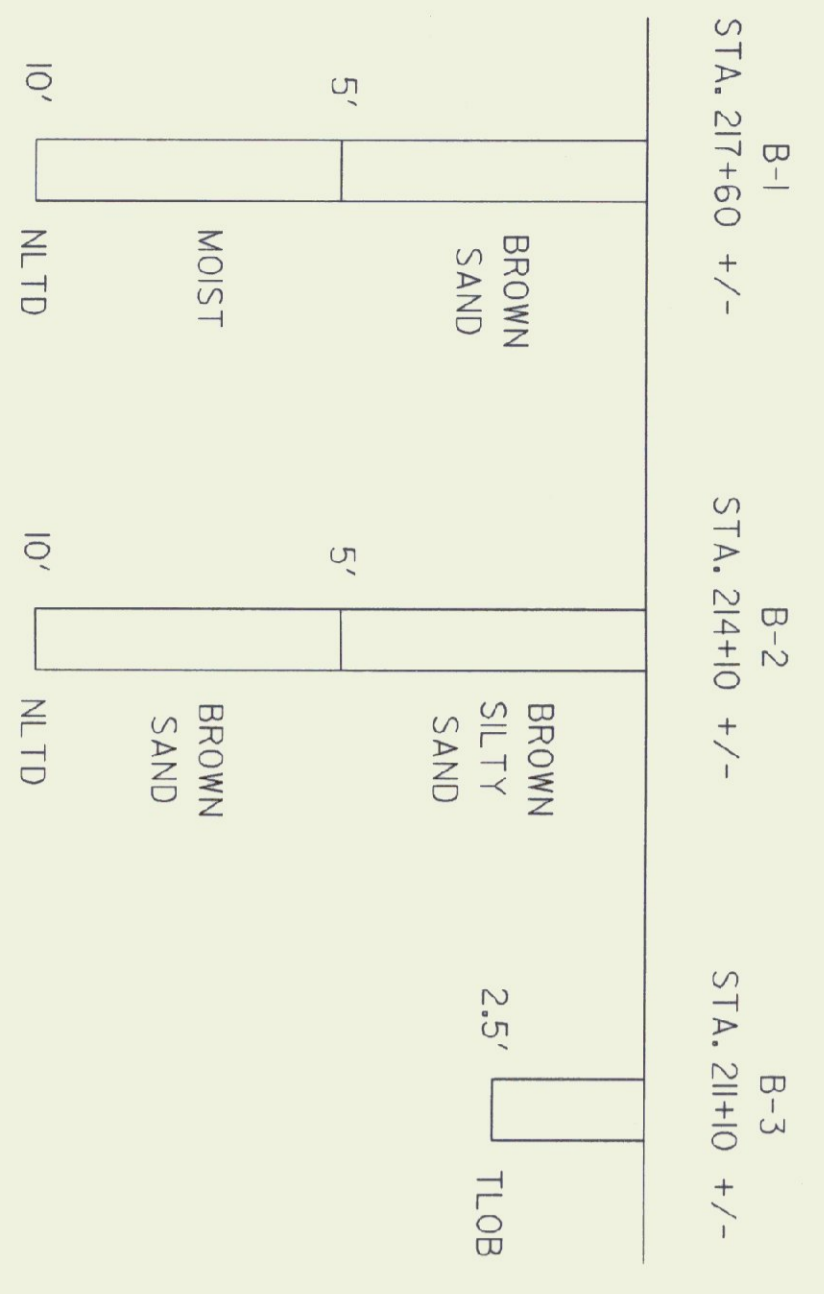


APPROXIMATE SCALE  
1" = 50 MILES

**STANDARD NOTE**  
 THESE PLANS ARE SUBJECT TO SUCH ENGINEERING CHANGES AS MAY BE REQUIRED BY THE DIRECTOR OF MAINTENANCE AND AVIATION.  
 CONSTRUCTION IS TO BE CARRIED ON IN ACCORDANCE WITH THESE PLANS AND THE STANDARD SPECIFICATIONS FOR CONSTRUCTION, DATED 2001, AS APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION ON JANUARY 3, 2001, FOR USE ON THIS PROJECT, INCLUDING ALL SUBSEQUENT REVISIONS AND SUCH REVISED SPECIFICATIONS AND SPECIAL PROVISIONS AS ARE INCORPORATED IN THESE PLANS.

STATE OF VERMONT  
 APPROVED  
*David A. Dineen*  
 AVIATION PROGRAM MANAGER  
 DIRECTOR, MAINTENANCE AND AVIATION  
 DATE 8/1/02

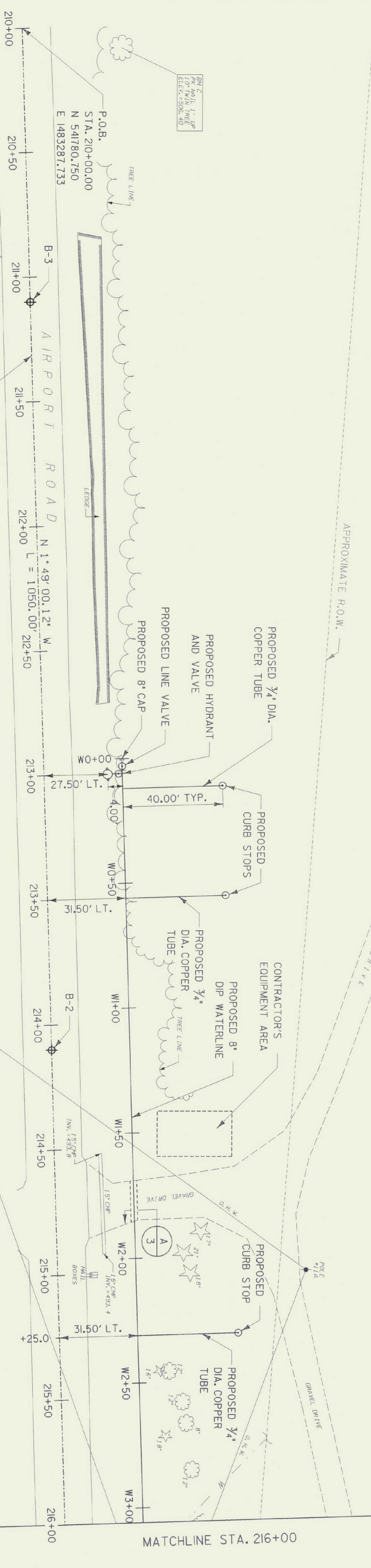
**BORING INFORMATION**



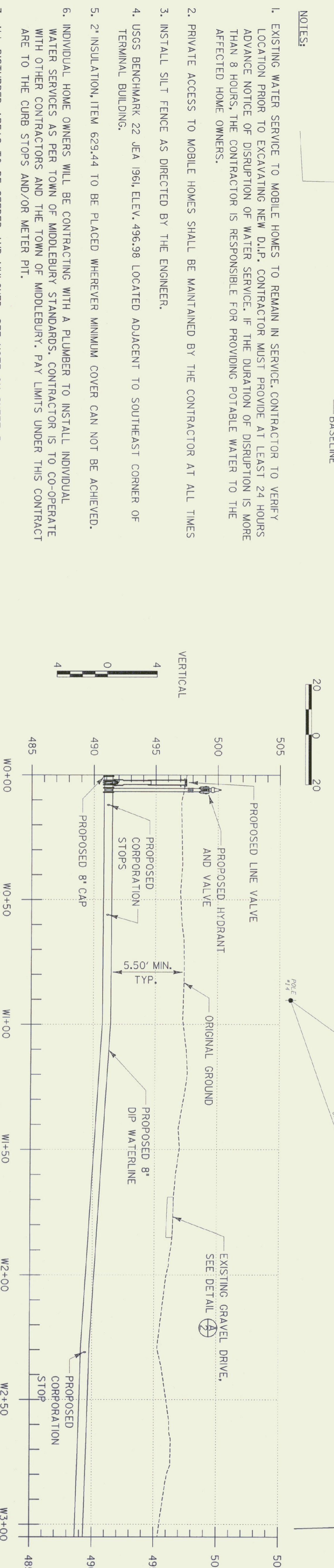
N/F BRENT YOUNG  
RFD BOX 466  
MIDDLEBURY, 05753

N/F GLADYS QUESNEL  
BOX 363  
EAST MIDDLEBURY, 05740

N/F ROGER GRAM  
462 AIRPORT ROAD  
MIDDLEBURY, 05753



**PLAN**



**PROFILE**

**NOTES:**

- EXISTING WATER SERVICE TO MOBILE HOMES TO REMAIN IN SERVICE. CONTRACTOR TO VERIFY LOCATION PRIOR TO EXCAVATING NEW D.I.P. CONTRACTOR MUST PROVIDE AT LEAST 24 HOURS ADVANCE NOTICE OF DISRUPTION OF WATER SERVICE. IF THE DURATION OF DISRUPTION IS MORE THAN 8 HOURS, THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING POTABLE WATER TO THE AFFECTED HOME OWNERS.
- PRIVATE ACCESS TO MOBILE HOMES SHALL BE MAINTAINED BY THE CONTRACTOR AT ALL TIMES
- INSTALL SILT FENCE AS DIRECTED BY THE ENGINEER.
- USGS BENCHMARK 22 JEA 1961 ELEV. 496.98 LOCATED ADJACENT TO SOUTHEAST CORNER OF TERMINAL BUILDING.
- 2" INSULATION, ITEM 629.44 TO BE PLACED WHEREVER MINIMUM COVER CAN NOT BE ACHIEVED.
- INDIVIDUAL HOME OWNERS WILL BE CONTRACTING WITH A PLUMBER TO INSTALL INDIVIDUAL WATER SERVICES AS PER TOWN OF MIDDLEBURY STANDARDS. CONTRACTOR IS TO CO-OPERATE WITH OTHER CONTRACTORS AND THE TOWN OF MIDDLEBURY. PAY LIMITS UNDER THIS CONTRACT ARE TO THE CURB STOPS AND/OR METER PIT.
- ALL DISTURBED AREAS TO BE SEEDED AND MULCHED. SEE NOTE ON SHEET 5.
- CONTRACTOR IS TO SUPPLY AS-BUILT PLANS TO VTRANS.
- SEE SHEET 5 FOR SURVEY DATA.
- CONTRACTOR TO SUPPLY A MAINTENANCE BOND TO TOWN OF MIDDLEBURY.

- ALL LINES ARE TO BE PRESSURE TESTED TO 150 PERCENT OF WORKING PRESSURE, AFTER SATISFACTORY COMPLETION OF THE PRESSURE TEST, ALL LINES SHALL BE TESTED FOR LEAKAGE. TESTING SHALL BE IN ACCORDANCE WITH AWWA C600 AND WITH VTRANS STANDARD SPECIFICATIONS SECTION 629- WATER SYSTEMS.
- BEFORE PLACING THE NEW WATERLINE IN SERVICE, IT SHALL BE DISINFECTED IN ACCORDANCE WITH AWWA C601 AND VTRANS STANDARD SPECIFICATIONS SECTION 629- WATER SYSTEMS.

Designed by: R.M.M.  
 Drawn by: C.L.S.  
 Checked by: M.K.C.  
 Approved by: G.W.D.

Scale: AS SHOWN

Date: APRIL, 2002

Sheet 2 of 5

Sheet No. **2**

**URS**  
 1 NORTHWAY LN.  
 LATHAM, NEW YORK

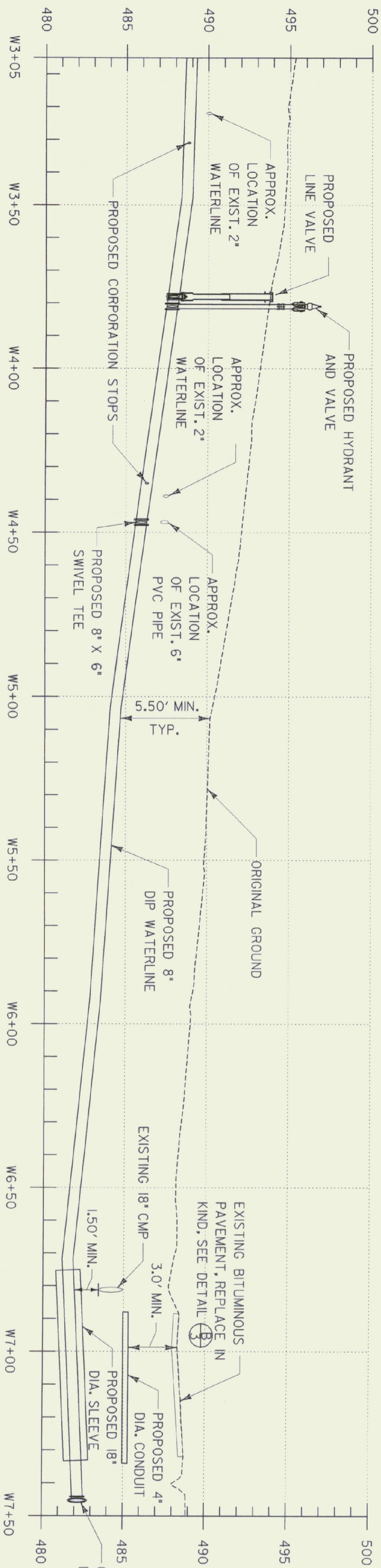
MIDDLEBURY STATE AIRPORT  
 MIDDLEBURY, VERMONT

**PROJECT LAYOUT**

REV.	DATE	DESCRIPTION

Job No. F200002177.00      File No. F2217700SH2.DGN



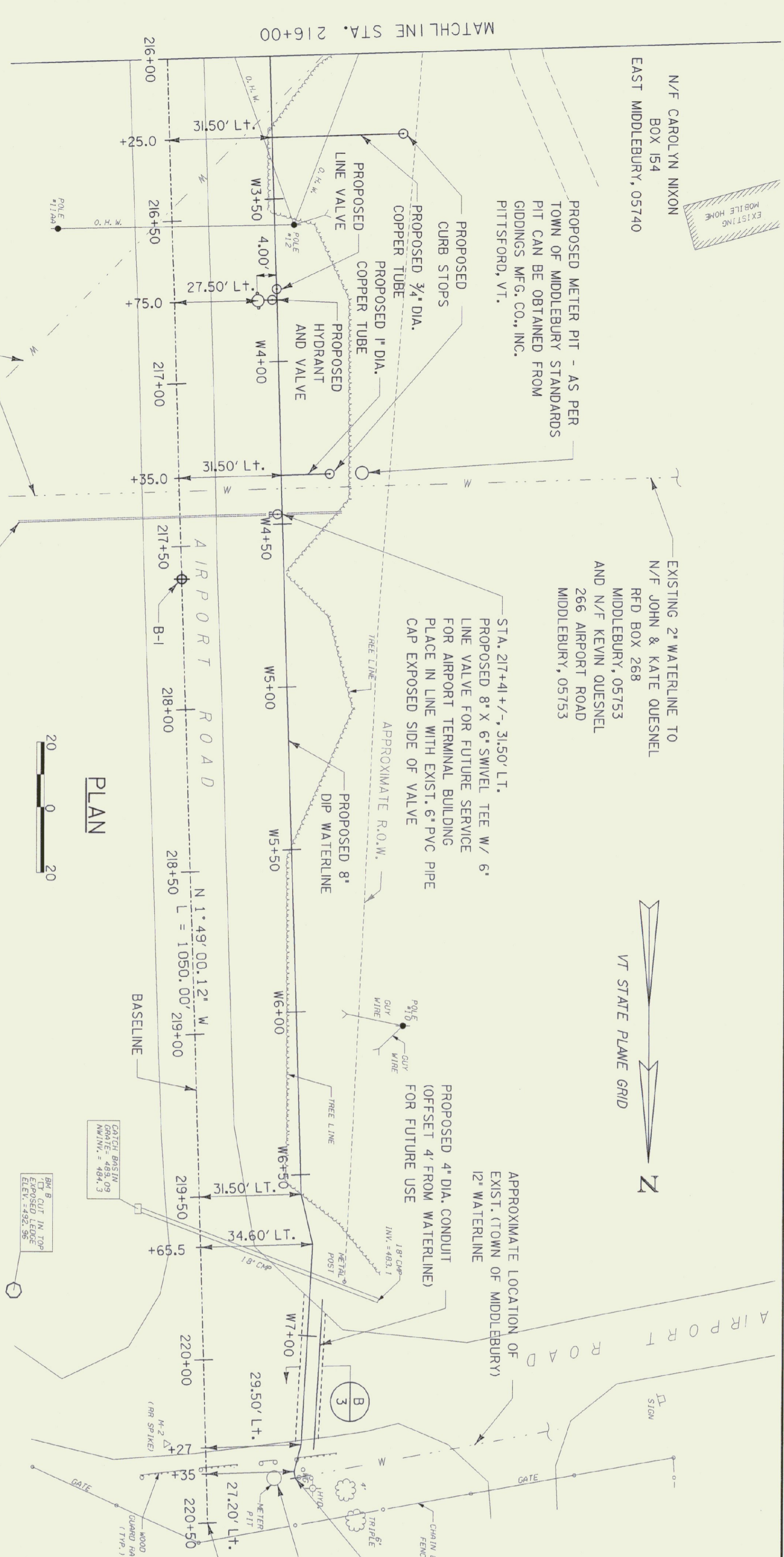
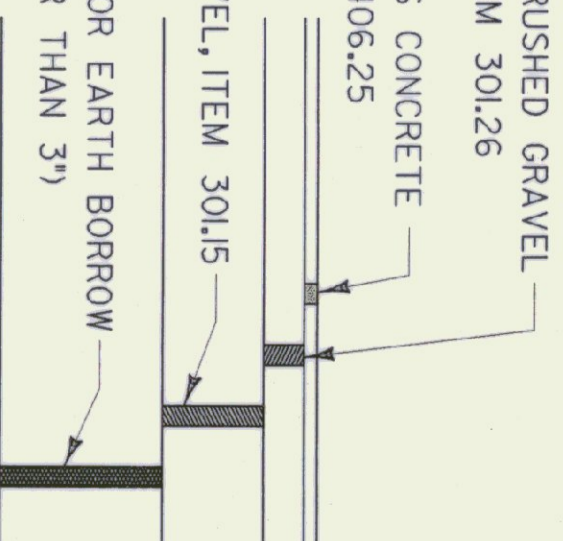


**PROFILE**  
HORIZONTAL  
20 0 20

VERTICAL  
4 0 4

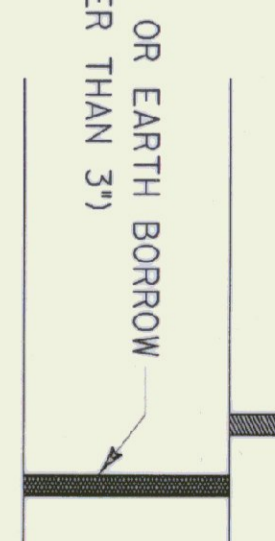
(B)  
3  
ROADWAY PAVEMENT  
N. T. S.

BACKFILL W/PARENT MATERIAL OR EARTH BORROW  
(NO LEDGE OR STONES GREATER THAN 3")



**PLAN**  
20 0 20

BACKFILL W/PARENT MATERIAL OR EARTH BORROW  
(NO LEDGE OR STONES GREATER THAN 3")



(A)  
2  
GRAVEL DRIVE  
N. T. S.

P.O.E.  
STA. 220+50.00  
N 542830.219  
E 148254.446

REPLACE EXISTING WOOD COVER WITH  
NEW 66\"/>

BEGIN CONSTRUCTION

CONNECT TO EXIST.  
12\"/>

WITH A 12\"/>

CAP EAST END OF TEE

REPLACE EXISTING WOOD COVER WITH  
NEW 66\"/>

SEE DETAIL ON SHEET 4

APPROX. LOCATION OF  
EXIST. WATER SERVICES  
(TO REMAIN) SEE NOTE #1

NOTE:  
USE OF EXISTING PUMP HOUSE AND WELL TO BE DISCONTINUED.  
VTRANS TO PROVIDE CERTIFICATION TO ANR/WATER SUPPLY DIVISION  
UPON COMPLETION OF PROJECT.

APPROX. LOCATION OF  
EXIST. 6\"/>

EXIST.  
PUMP  
HOUSE

APPROXIMATE LOCATION OF  
EXIST. (TOWN OF MIDDLEBURY)  
12\"/>

PROPOSED 4\"/>

PROPOSED 8\"/>

PROPOSED 8\"/>

PROPOSED 8\"/>

PROPOSED 8\"/>

PROPOSED 8\"/>

PROPOSED 8\"/>

PROPOSED 8\"/>

PROPOSED 8\"/>

PROPOSED 8\"/>

PROPOSED 8\"/>

CONNECT TO EXIST.  
12\"/>

WITH A 12\"/>

CAP EAST END OF TEE

REPLACE EXISTING WOOD COVER WITH  
NEW 66\"/>

SEE DETAIL ON SHEET 4

P.O.E.  
STA. 220+50.00  
N 542830.219  
E 148254.446

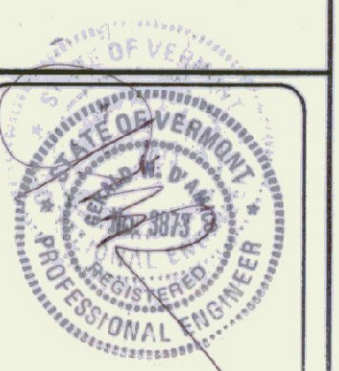
MIDDLEBURY STATE AIRPORT  
MIDDLEBURY, VERMONT

PROJECT LAYOUT

REV.	DATE	DESCRIPTION

Job No. F200002177.00

File No. F2217700SH3.DGN

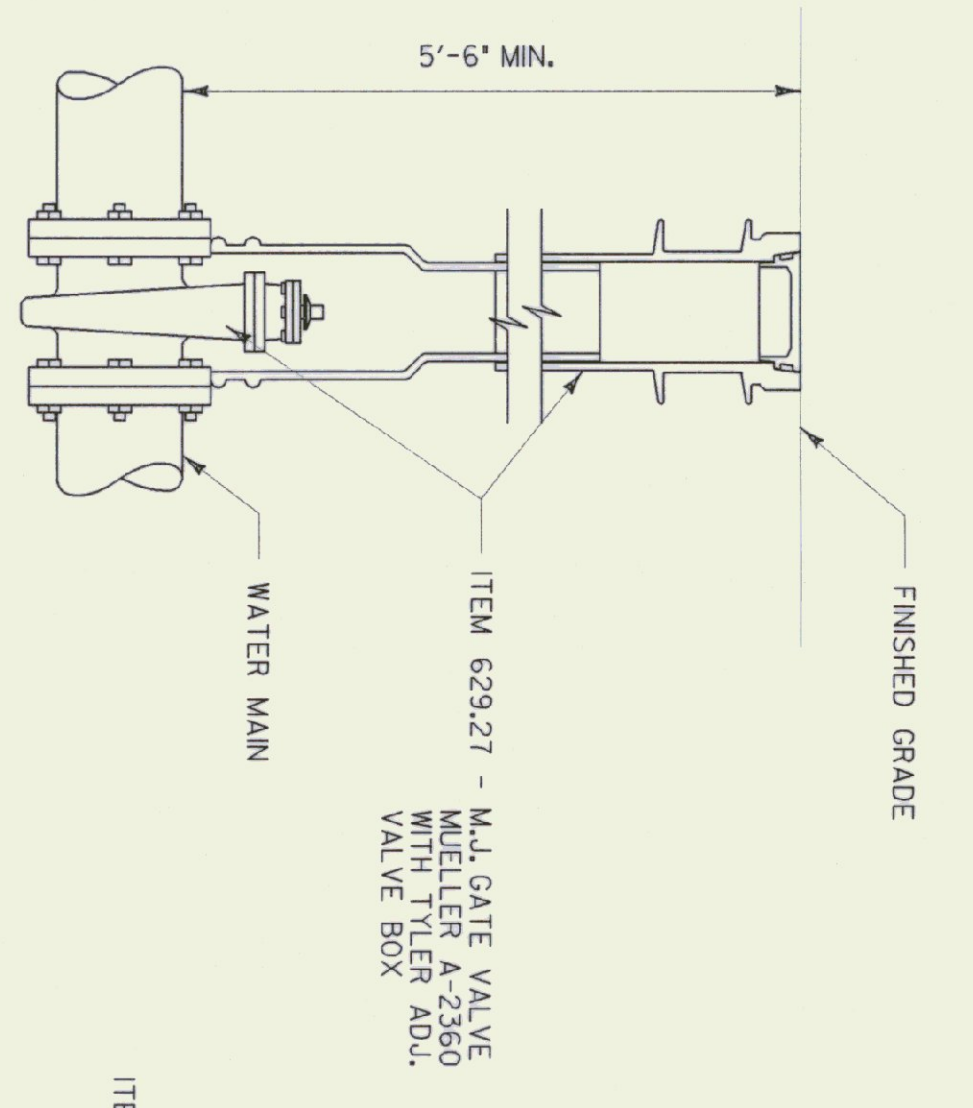


Designed by: R.M.M.  
Drawn by: C.L.S.  
Checked by: M.K.C.  
Approved by: G.W.D.

Scale: AS SHOWN  
Date: APRIL, 2002

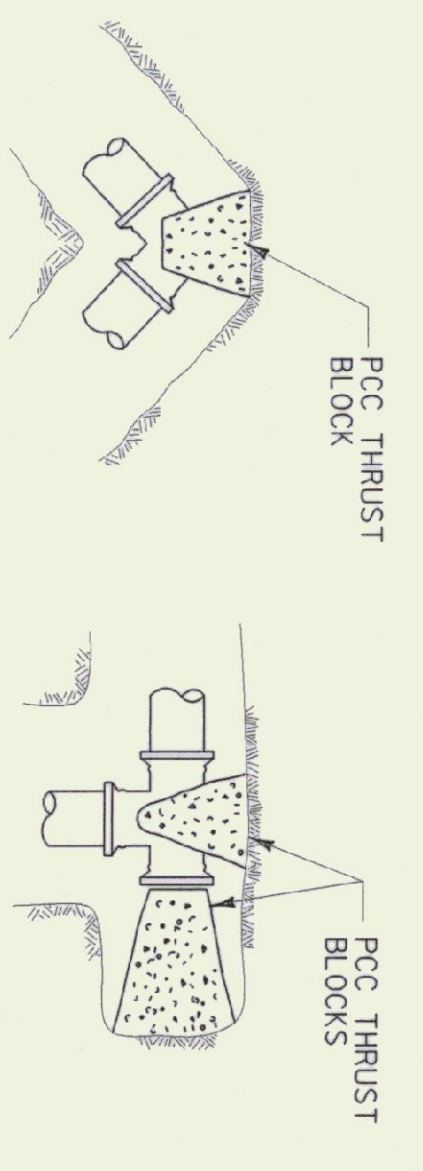
Sheet No. 3  
Sheet 3 of 5

**URS**  
1 NORTHWAY LN.  
LATHAM, NEW YORK



NOTE:  
1. ALL MECHANICAL JOINT FITTINGS SHALL HAVE METALLOG RETAINER GLANDS.

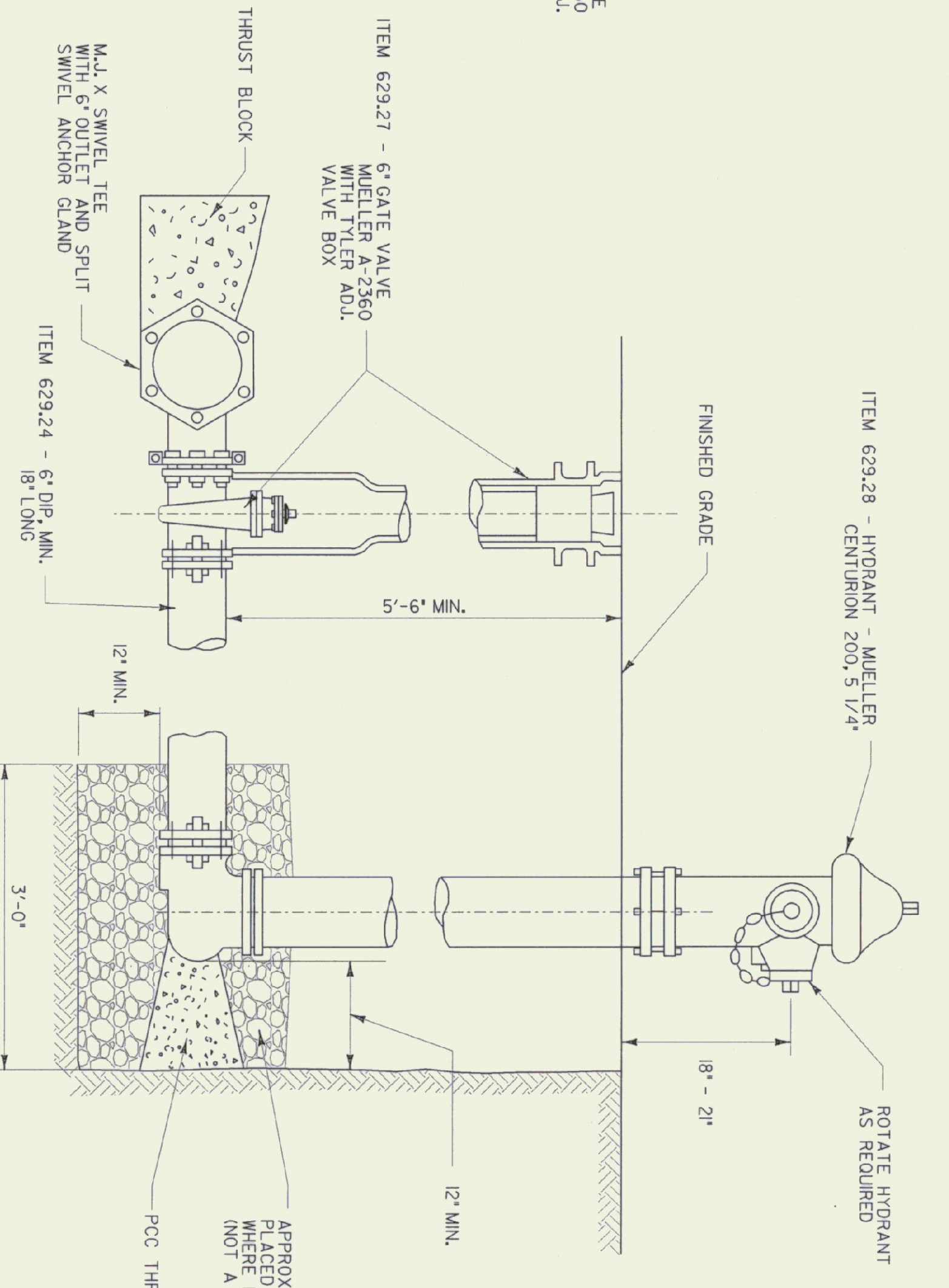
**BURIED GATE VALVE DETAIL**  
N. T. S.



PIPE SIZE (IN)	SOFT WET CLAY, SAND OR SILT	DRY SAND	COMPACT COARSE SAND OR GRAVEL HARDPAN
8 OR LESS	15	5	4
10	24	8	6
12	34	11	8
16	60	20	15
20	94	31	24
24	136	45	34
8 OR LESS	1/4 BEND	7	5
10	33	11	8
12	48	16	12
16	85	28	21
20	133	44	33
24	192	64	48
8 OR LESS	1/8 BEND	4	3
10	18	6	5
12	26	9	7
16	46	15	12
20	72	24	18
24	104	35	26
8 OR LESS	1/16 BEND	2	2
10	6	2	2
12	9	3	3
16	13	4	4
20	20	6	6
24	31	9	9
24	53	18	13

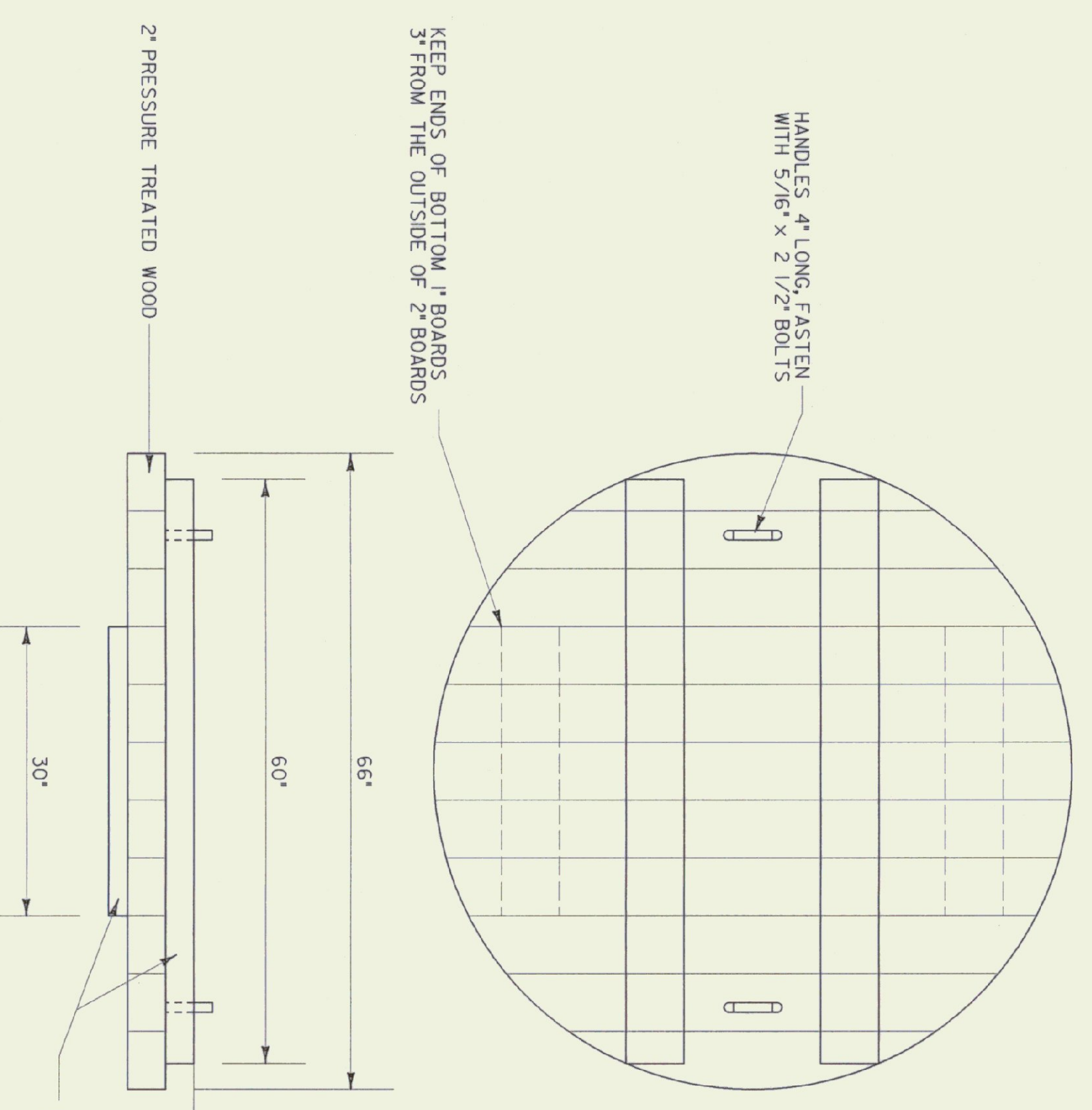
**THRUST BLOCK TABLE NOTES**

1. FIGURES BASED ON 300 PSI.
2. FOR PIPE SIZES NOT LISTED USE NEXT LARGER PIPE SIZE.
3. WHEN MORE THAN ONE SOIL TYPE IS ENCOUNTERED, THE ONE WITH LEAST BEARING CAPACITY SHALL BE USED.
4. THRUST BLOCKS TO BE INSTALLED AT ALL DEAD ENDS, T/S AND BENDS IN WATERLINES.

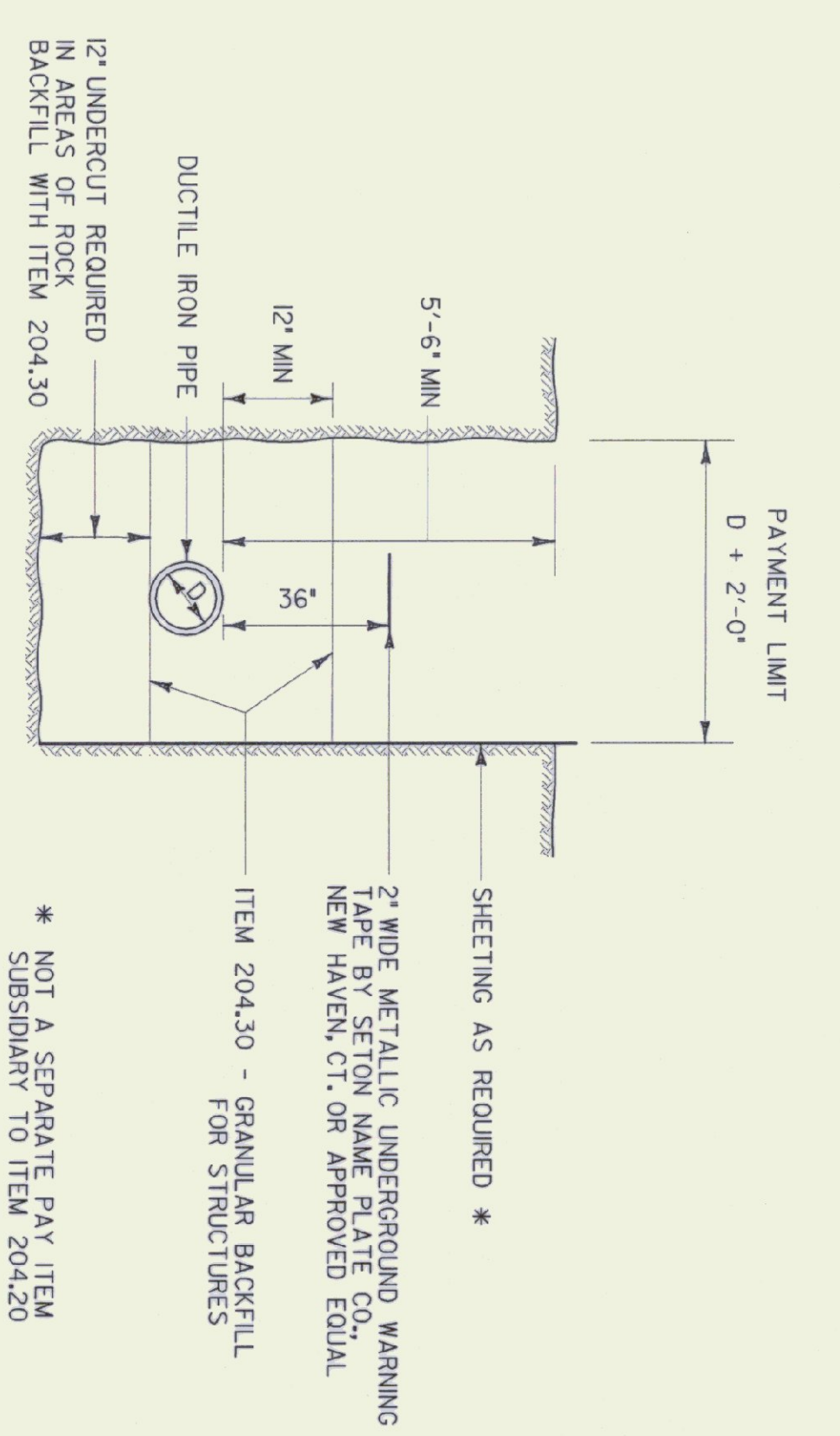


NOTES:  
1. ALL MECHANICAL JOINT FITTINGS SHALL HAVE METALLOG RETAINER GLANDS.  
2. BACKFILL HYDRANT AND VALVE BOX WITH PIPE ENVELOPE MATERIAL.  
3. HYDRANTS MAY BE PURCHASED FROM THE TOWN OF MIDDLEBURY OR REPLACED IN KIND WITH PRIOR AGREEMENT OF THE TOWN.

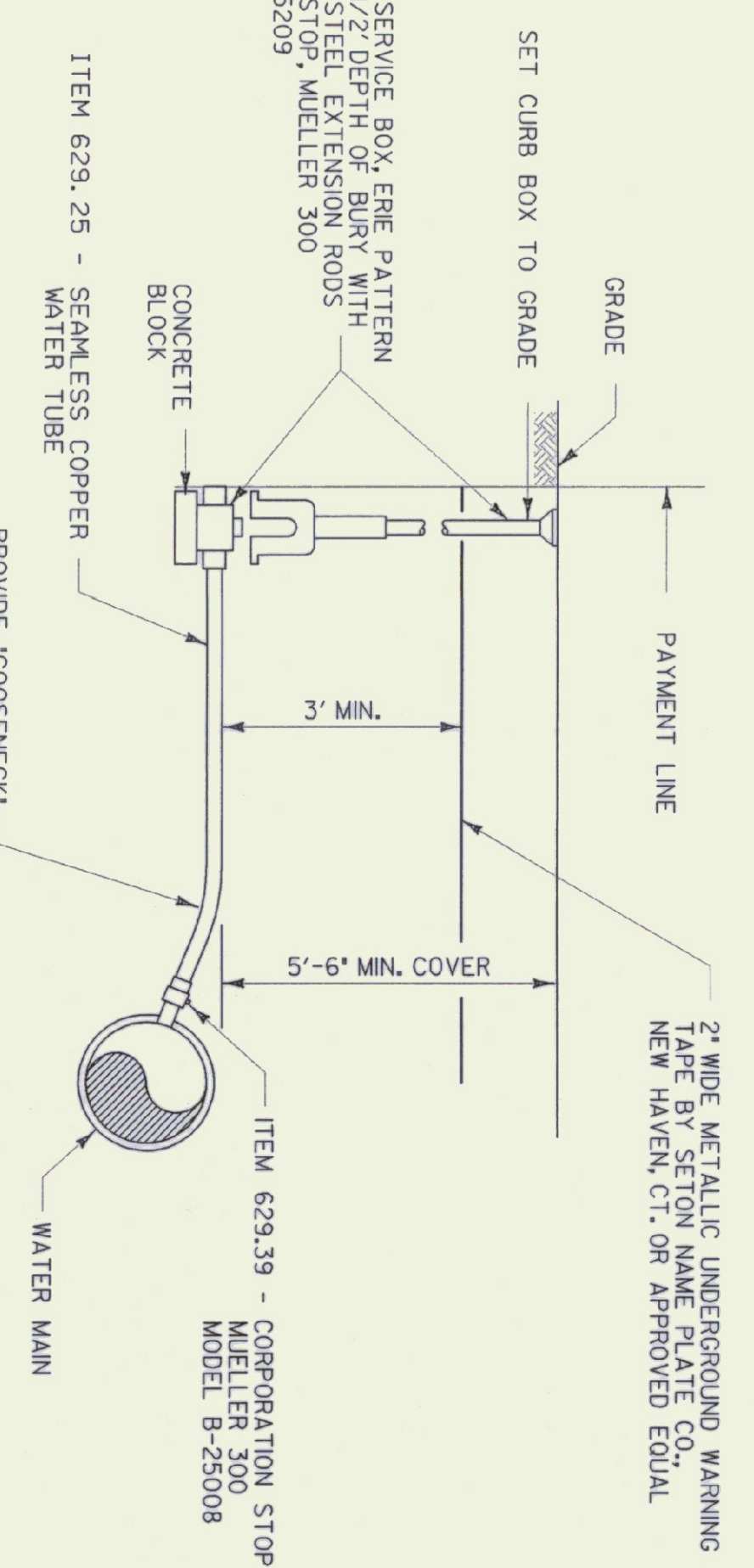
**HYDRANT AND VALVE DETAIL**  
N. T. S.



**WOOD COVER FOR METER PIT DETAIL**  
N. T. S.

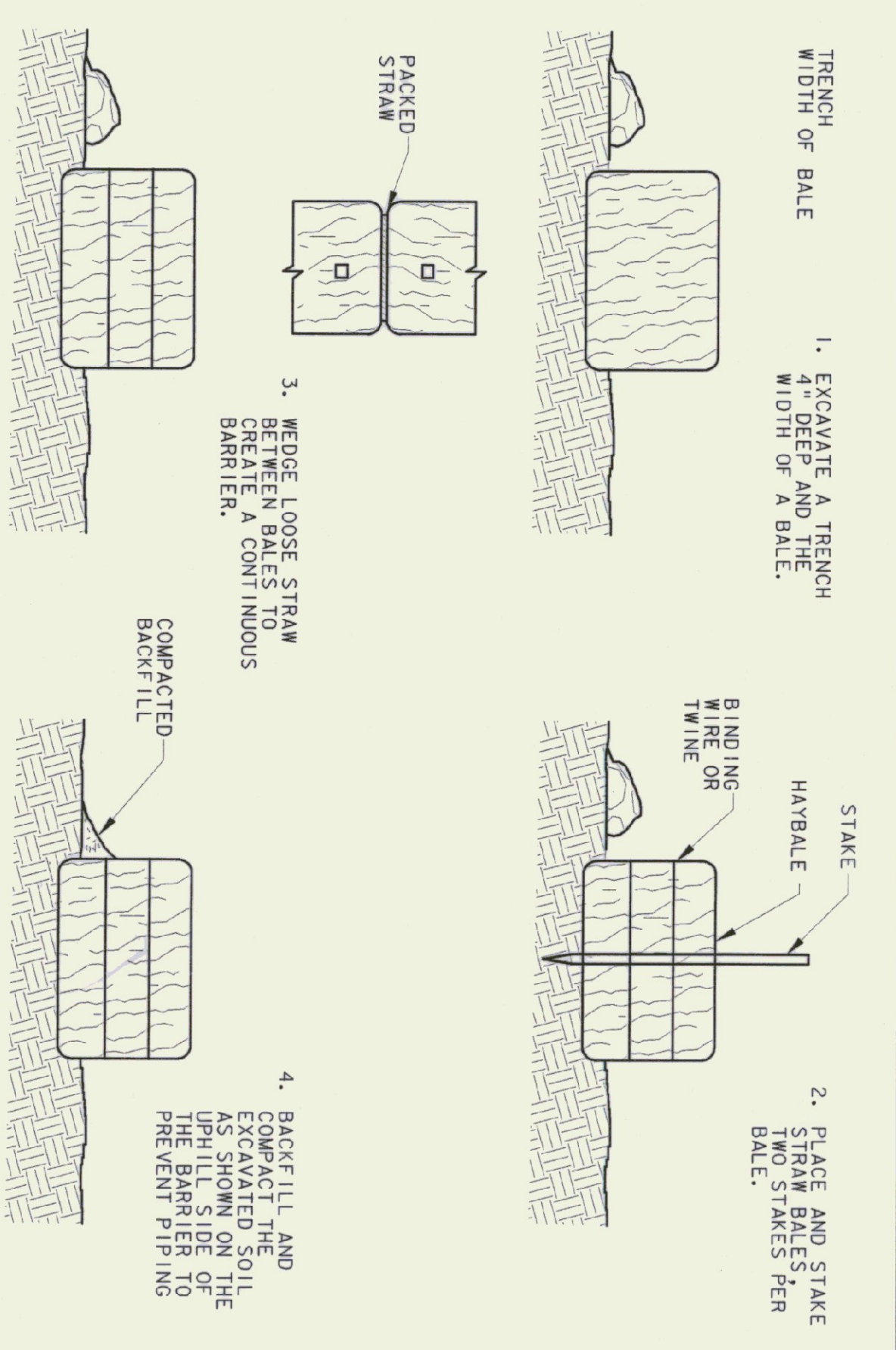


**DIP WATER MAIN TRENCH SECTION**  
N. T. S.

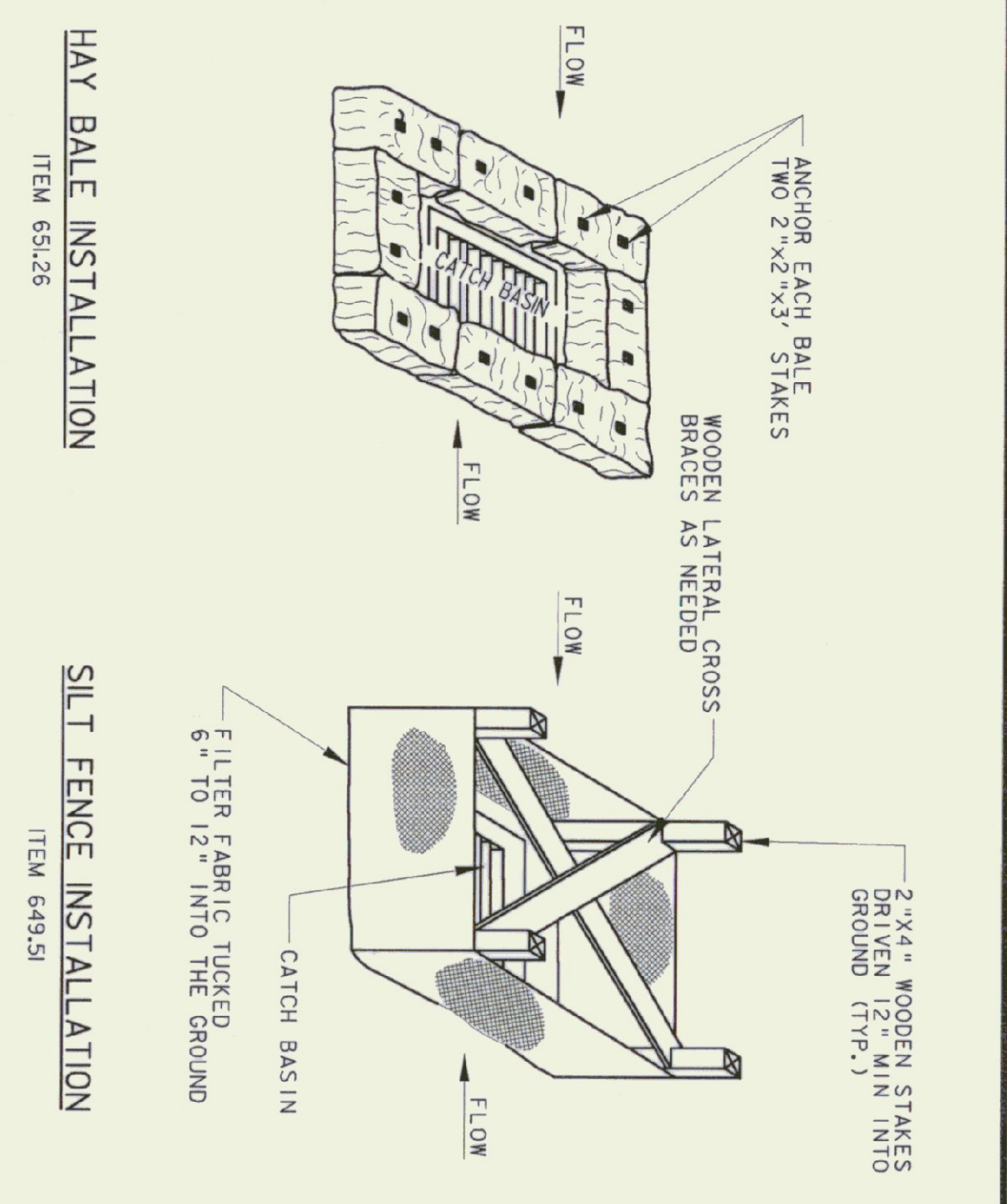


NOTES:  
1. SERVICE CONNECTIONS TO BE INSTALLED AT THE LOCATIONS SHOWN ON THE PLANS AND AS DIRECTED BY THE ENGINEER. CURB STOPS TO BE MARKED WITH 2" X 4" POST, 4" IN THE GROUND AND 4" ABOVE GROUND. CONTRACTOR TO LOCATE ALL CURB STOPS ON AS BUILT DRAWINGS WITH 3 SWING TIES.  
2. CORPORATION STOPS TO BE INSTALLED AT APPROXIMATELY 2:00 OR 10:00 O'CLOCK POSITION ON THE WATER MAIN WITH CC AWMA TAPER THREAD.  
3. STRAP TYPE SADDLES SHALL BE USED ON WATER MAINS WHERE SERVICE CONNECTION IS LARGER THAN 1".  
4. SERVICE PIPE SHALL BE TYPE "K" COPPER TUBING MEETING THE REQUIREMENTS OF ITEM 629.25. ALL PIPE SHALL BE BEDDED IN SAND A MINIMUM OF 8" ALL AROUND.  
5. CURB STOP AND BOX TO BE BACKFILLED WITH SAND TO FINISHED GRADE, MIN. 12" ALL AROUND BOX. (NOT A SEPARATE PAY ITEM)

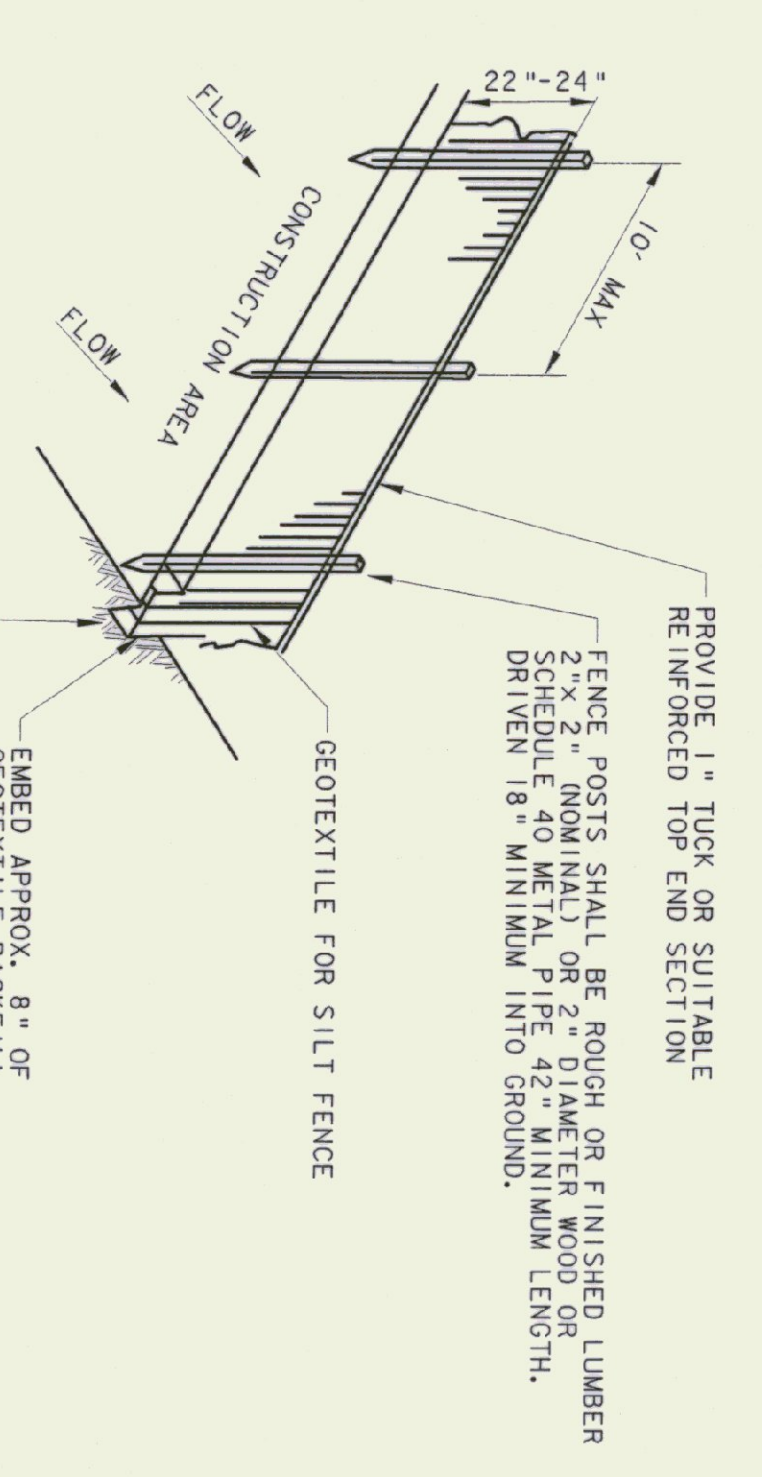
**TYPICAL SERVICE CONNECTION**  
N. T. S.



**SEDIMENTATION BARRIER - HAYBALE**  
**ITEM 651.26**  
 NOT TO SCALE



**SEDIMENTATION CONTROL INLET PROTECTION**  
 NOT TO SCALE

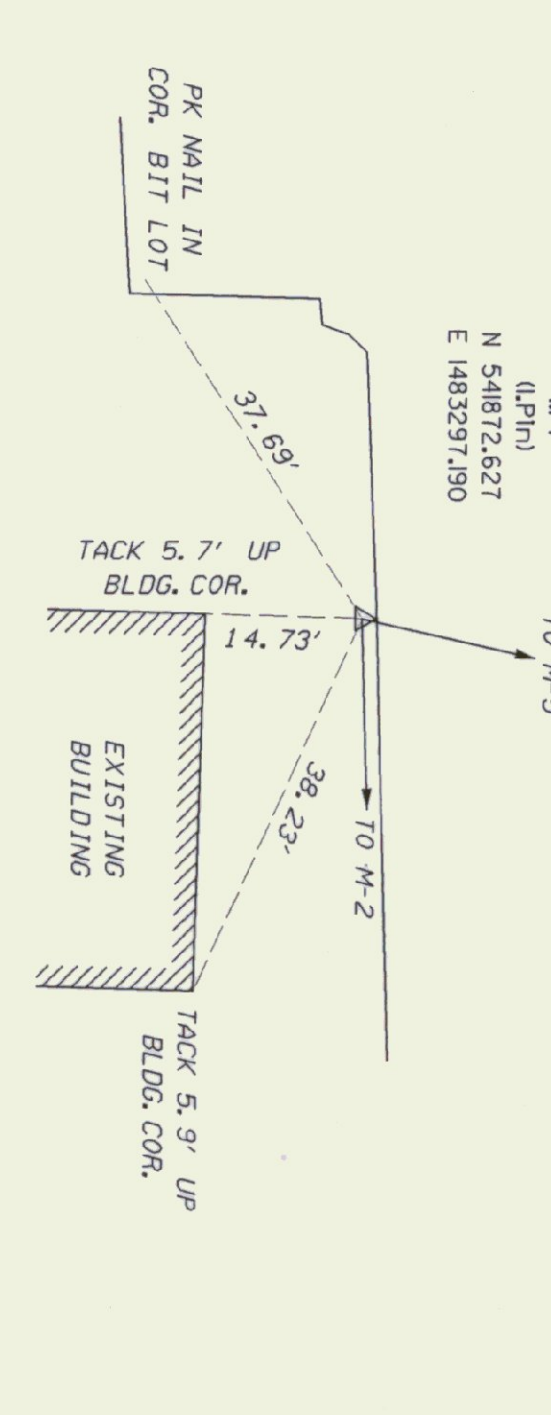


**PLAN VIEW SYMBOL**

**SILT FENCE**  
**ITEM 649.51**  
 NOT TO SCALE

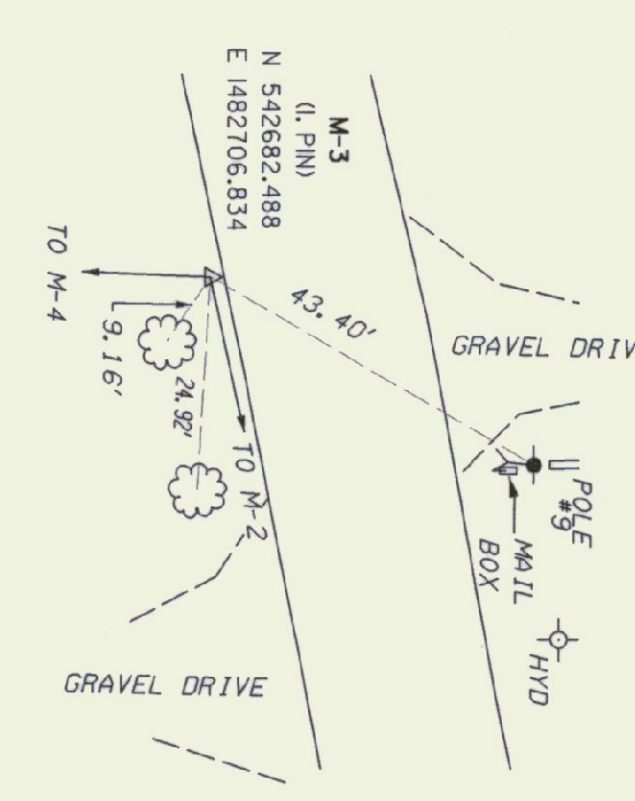
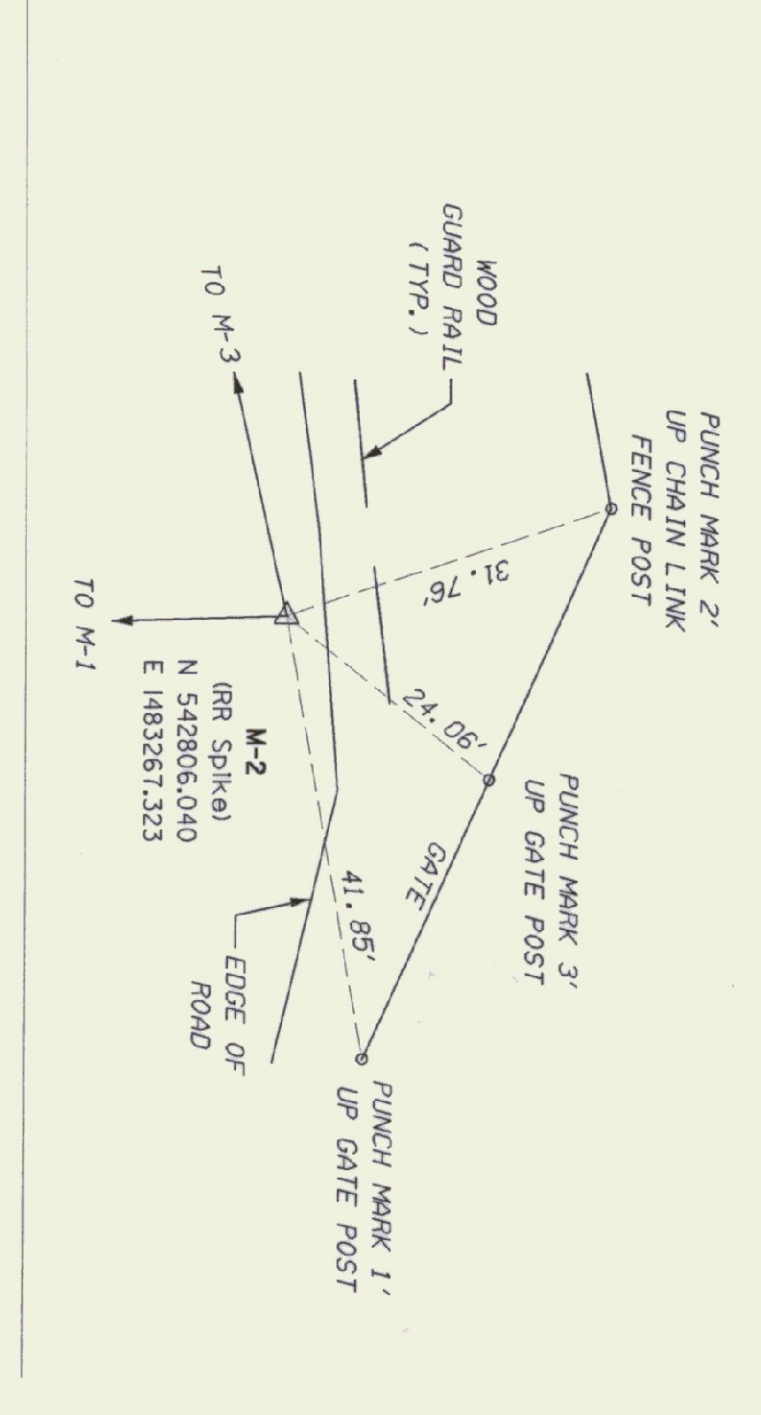
- NOTE**
1. GEOTEXTILE FABRIC TO BE FASTENED SECURELY TO FENCE POST BY USE OF WIRE TIES. 3 FASTENERS PER POST.
  2. ENDS OF INDIVIDUAL ROLLS OF GEOTEXTILE SHALL BE SECURELY FASTENED TO A COMMON POST OR OVERLAPPED 3\"/>
  3. TO BE PLACED AT LOCATIONS SHOWN ON PLANS OR AS ORDERED BY THE ENGINEER.

- EROSION AND SEDIMENT CONTROL NOTES**
1. THE CONTRACTOR SHALL CONSTRUCT ALL EROSION AND SEDIMENT CONTROL MEASURES PER THE APPROVED PLAN AND CONSTRUCTION SEQUENCE AND SHALL HAVE THEM INSPECTED BY THE ENGINEER PRIOR TO BEGINNING ANY OTHER LAND DISTURBANCES. MINOR SEDIMENT CONTROL DEVICE LOCATION ADJUSTMENTS MAY BE MADE IN THE FIELD WITH THE APPROVAL OF THE ENGINEER. THE CONTRACTOR SHALL ENSURE THAT ALL RUNOFF FROM DISTURBED AREAS IS DIRECTED TO THE SEDIMENT CONTROL DEVICES, AND SHALL NOT REMOVE ANY EROSION OR SEDIMENT CONTROL MEASURE WITHOUT PRIOR PERMISSION FROM THE ENGINEER. THE CONTRACTOR MUST OBTAIN PRIOR APPROVAL FOR CHANGES TO THE SEDIMENT CONTROL PLAN AND/OR SEQUENCE OF CONSTRUCTION.
  2. THE CONTRACTOR SHALL MAINTAIN ALL EROSION AND SEDIMENT CONTROL MEASURES UNTIL THEY ARE REMOVED.
  3. THE CONTRACTOR SHALL APPLY SEED AND MULCH, OR OTHER APPROVED STABILIZATION MEASURES TO ALL DISTURBED AREAS AND STOCKPILES WITHIN FOURTEEN (14) CALENDAR DAYS AFTER STRIPPING AND GRADING ACTIVITIES HAVE CEASED IN THE AREA. MAINTENANCE SHALL BE PERFORMED AS NECESSARY TO ENSURE CONTINUED STABILIZATION. PERMANENT SOIL STABILIZATION SHALL BE PROVIDED WITHIN SEVEN (7) DAYS OF ESTABLISHMENT OF FINAL GRADE.
  4. THIS EROSION CONTROL PLAN SHALL BE IMPLEMENTED ON ALL DISTURBED AREAS WITHIN THE CONSTRUCTION SITE. ALL MEASURES INVOLVING EROSION CONTROL PRACTICES SHALL BE INSTALLED IN CONFORMANCE WITH "THE VERMONT HANDBOOK FOR SOIL EROSION AND SEDIMENT CONTROL ON CONSTRUCTION SITES" AS PUBLISHED BY THE VT. GEOLOGICAL SURVEY.
  5. DURING THE PERIOD OF CONSTRUCTION ACTIVITY, ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED BY THE CONTRACTOR. AT THE COMPLETION OF CONSTRUCTION, THE CONTRACTOR SHALL COORDINATE THE TRANSFER OF MAINTENANCE RESPONSIBILITIES, IF REQUIRED, TO THE VT AGENCY OF TRANSPORTATION.
  6. ALL TEMPORARY EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE REMOVED AND DISPOSED OF WITHIN THIRTY (30) DAYS AFTER FINAL SITE STABILIZATION IS ACHIEVED OR AFTER THE TEMPORARY PRACTICES ARE NO LONGER NEEDED. TRAPPED SEDIMENT SHALL BE STABILIZED OR REMOVED TO PREVENT FURTHER EROSION.
  7. EROSION CONTROL DEVICES REMOVED DURING GRADING OPERATIONS SHALL BE PUT BACK IN PLACE AT THE END OF THE DAY OR DURING INCLEMENT WEATHER AS DIRECTED BY THE ENGINEER.
  8. NO SOIL, ROCK, DEBRIS, OR ANY OTHER MATERIAL SHALL BE DUMPED OR PLACED INTO A WATER COURSE OR INTO SUCH PROXIMITY THAT IT MAY READILY SLOUGH, SLIP, OR ERODE INTO WATER COURSES UNLESS SUCH DUMPING IS AUTHORIZED BY THE ENGINEER AND WHEN APPLICABLE, CONSTRUCTION OF BRIDGES, CULVERTS, AND EROSION CONTROL STRUCTURES, BUT NOT LIMITED TO, CONSTRUCTION OF BRIDGES, CULVERTS, AND EROSION CONTROL STRUCTURES.
  9. PERMANENT SEEDING SHALL BE DONE BETWEEN APRIL 30 AND SEPTEMBER 15. IF SEEDING IS DONE AT OTHER TIMES, IT SHALL BE CLASSIFIED AS "TEMPORARY SEEDING." PERMANENT SEED SHALL CONFORM TO THE SEEDING MIXTURE STATED ON SHEET 5. TEMPORARY AND PERMANENT SEEDING SHALL CONSIST OF FERTILIZING, WATERING AND SEEDING PLACED AT RATES IN ACCORDANCE WITH THE SPECIFICATIONS. PERMANENT SEEDING AND MULCHING SHALL BE PAID FOR UNDER 651.15 AND 651.25 RESPECTIVELY. TEMPORARY SEED, MULCH, AND FERTILIZER FOR EROSION AND SEDIMENT CONTROL SHALL BE PLACED IN ACCORDANCE WITH THE SPECIFICATIONS. NO PAYMENT WILL BE MADE FOR TEMPORARY SEEDING OR MULCHING.
  10. SURFACE DRAINAGE FLOWS OVER UNSTABILIZED CUT AND FILL SLOPES SHALL BE CONTROLLED BY EITHER PREVENTING WRENCHING OF THE SLOPES OR BY INSTALLING PROTECTIVE DEVICES TO LOWER THE WRENCHING POTENTIAL. PROTECTIVE DEVICES SHALL BE INSTALLED AND MAINTAINED AT THE TOP OF CUT OR FILL SLOPES. DEVICES SHALL BE ANCHORED TO PROMOTE SHEET FLOW DRAINAGE. PROTECTIVE METHODS MUST BE PROVIDED AT POINTS OF CONCENTRATED FLOW WHERE EROSION IS LIKELY TO OCCUR.
  11. ALL POINTS OF CONSTRUCTION INGRESS AND EGRESS IN UNPAVED AREAS SHALL BE STABILIZED AND PROTECTED TO PREVENT TRACKING OF MUD ONTO PUBLIC OR PRIVATE ROADWAYS. (SUBSIDIARY TO ITEM 204.20)
  12. IF ROADWAYS ACCUMULATE DEBRIS, THE CONTRACTOR SHALL USE A POWER BROOM TO REMOVE THE SEDIMENT TO THE SATISFACTION OF THE ENGINEER. (SUBSIDIARY TO ITEM 204.20)
  13. TOPSOIL (TO BE STOCKPILED ON SITE) WILL BE PLACED ON WELL DRAINED LAND AWAY FROM STREAMS IN ACCORDANCE WITH APPROVED EROSION AND SEDIMENT CONTROL MEASURES. IT SHALL BE PLACED IN NEAT PILES. THE CONTRACTOR WILL PROVIDE AN ADEQUATE QUANTITY OF SILT FENCE TO CONTROL THE PERIMETER OF THE STOCKPILE. THE CONTRACTOR, WITH THE APPROVAL OF THE ENGINEER, MAY CONSTRUCT AN EARTH DIKE IN LIEU OF SILT FENCE.



**HAYBALE INSTALLATION**  
 ITEM 651.26

**SILT FENCE INSTALLATION**  
 ITEM 649.51



**SURVEY DATA**

**SITE DATA**

- PROJECT DESCRIPTION:**  
 AIRPORT DEVELOPMENT TO INCLUDE PAVING, CLEARING AND GRUBBING, EARTHWORK, AND UTILITIES.
- TOTAL SITE AREA:**  
 AREA WITHIN LIMITS OF WORK APPROX. 0.5 ACRES.
- EXISTING SOIL TYPES:**  
 - BROWN SILTY SAND UNDERTEENTS  
 - INFORMATION OBTAINED FROM HISTORICAL BORINGS.  
 - APPROXIMATELY 2' OF TOPSOIL.

**SEEDING AND MULCHING NOTES**

1. SEED, ITEM 651.15, TO BE APPLIED AS DIRECTED BY THE ENGINEER. SEED MIXTURE SHALL CONFORM TO VERMONT CONSERVATION MIX AND SHALL NOT HAVE A WEED CONTENT EXCEEDING 0.40% BY WEIGHT AND SHALL BE FREE OF ALL NOXIOUS SEED.
2. FERTILIZER, ITEM 651.18, FORMULA 10-20-10 TO BE USED WITH SEED, ITEM 651.15, APPLIED AT THE RATE OF 500 LBS. / ACRE.
3. LIME, ITEM 651.20, TO BE APPLIED AT THE RATE OF 2 TONS / ACRE.
4. HAY MULCH, ITEM 651.25, TO BE PLACED ON EARTH SLOPES AT THE RATE OF 2 TONS / ACRE.

REV.	DATE	DESCRIPTION

Job No. F200002177.00 File No. F20217700SH5

**MIDDLEBURY STATE AIRPORT**  
 MIDDLEBURY, VERMONT

**SEDIMENT AND EROSION CONTROL, SURVEY DATA**

**URS**  
 1 NORTHWAY LN.  
 LATHAM, NEW YORK

Designed by: G.W.D.  
 Drawn by: M.M.  
 Checked by: R.M.M.  
 Approved by: G.W.D.

Scales: NTS

Date: APRIL, 2002

Sheet 5 of 5

Sheet No. 5