

# THE CONSTRUCTION PLANS FOR 2011 ROAD IMPROVEMENT PROGRAM

**BOROUGH OF MADISON  
MORRIS COUNTY, NEW JERSEY**

SCALE AS INDICATED

SEPTEMBER, 2011

## BOROUGH COUNCIL

MARY-ANNA HOLDEN, Mayor  
VINCENT A. ESPOSITO, Council President  
ROBERT H. CONLEY, Council Member  
JEANNIE TSUKAMOTO, Council President  
SEBASTIAN J. CERCIELLO Council Member  
DONALD R. LINKS, Council Member  
ROBERT G. CATALANELLO, Council Member

UTILITY COMPANIES	
GAS - PUBLIC SERVICE ELECTRIC & GAS	(908) 522-7411
SEWER - BOROUGH OF MADISON	(973) 593-3088
ELECTRIC - BOROUGH OF MADISON	(973) 593-3091
WATER - BOROUGH OF MADISON	(973) 593-3092
TELE - VERIZON	(800) 427-9977
CABLE - CABLEVISION	(973) 884-2293
NEW JERSEY ONE-CALL	(800) 272-1000 or 811

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DWG.	DESCRIPTION	REV.
1	COVER SHEET	
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**NOTE:**

LOCATION OF UTILITIES AS SHOWN ON THESE PLANS ARE PLOTTED FROM AVAILABLE DATA ON FILE WITH THE UTILITY COMPANIES AND FIELD OBSERVATIONS BY THE BOROUGH ENGINEERING DEPARTMENT AND ARE NOT GUARANTEED AS TO EXACTNESS. THE CONTRACTOR IS TO CONTACT UTILITY COMPANIES 72 HOURS PRIOR TO CONSTRUCTION TO DETERMINE EXACT LOCATION AND DEPTH OF ALL UTILITIES IN ACCORDANCE WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL USE THE UTILITY LOCATIONS AS AN AID IN DETERMINING EXACT UTILITY LOCATIONS.

### BOROUGH ADMINISTRATOR

RAYMOND M. CODEY

### BOROUGH ENGINEER

ROBERT A. VOGEL, P.E., C.M.E.

### BOROUGH ATTORNEY

JOSEPH MEZZACCA, JR., ESQ.



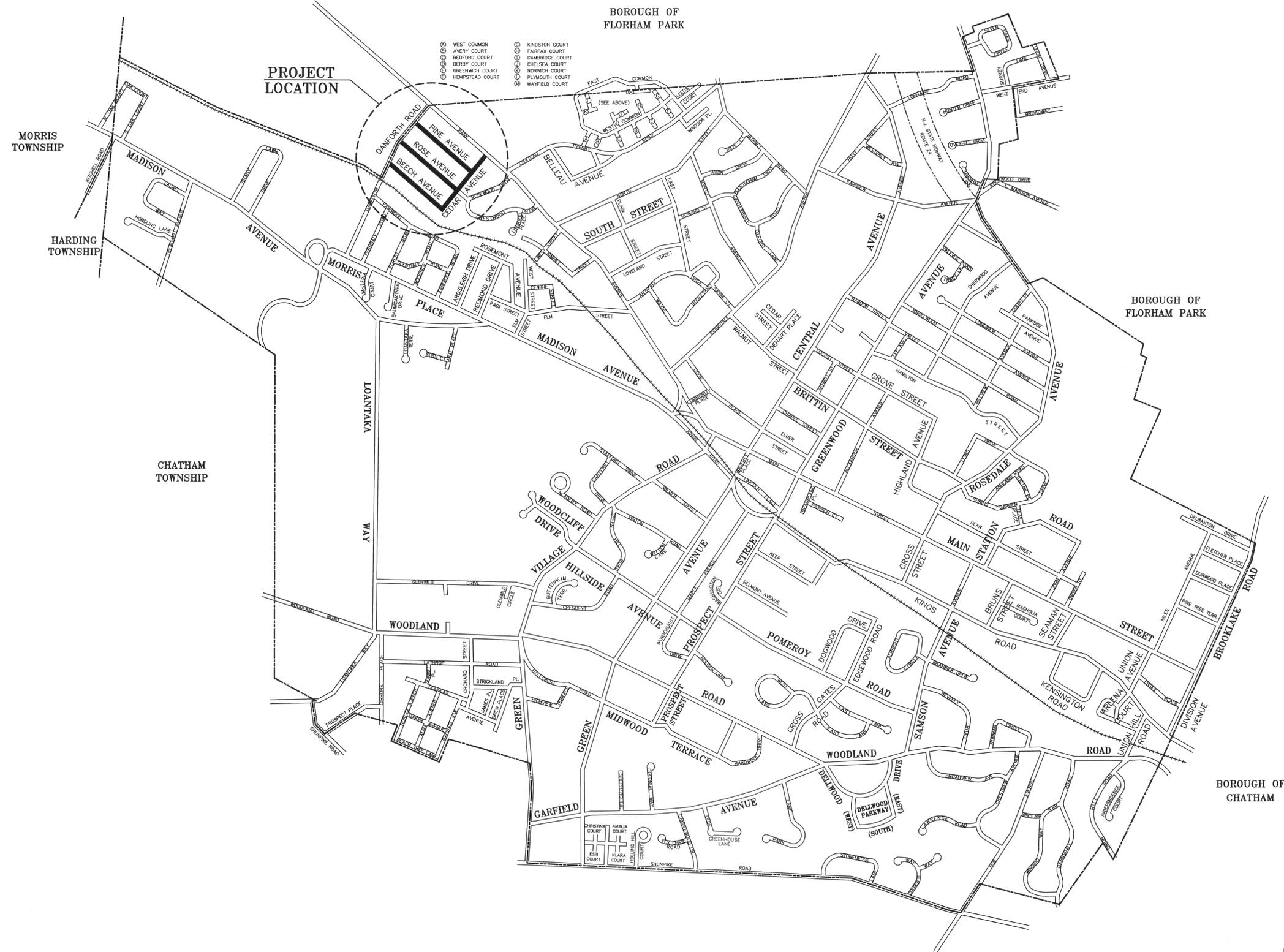
HARTLEY DODGE MEMORIAL  
BOROUGH OF MADISON  
MADISON, NEW JERSEY 07940

2007 STANDARD SPECIFICATIONS FOR ROAD & BRIDGE CONSTRUCTION  
CURRENT NJDOT SUPPLEMENTAL SPECIFICATIONS

BOROUGH OF MADISON  
DEPARTMENT OF ENGINEERING  
HARTLEY DODGE MEMORIAL  
MADISON, MORRIS COUNTY, N.J. 07940  
(973) 593-3060

DATE \_\_\_\_\_  
**ROBERT A. VOGEL, P.E.**  
PROFESSIONAL ENGINEER N.J. LIC. NO. 34463

NO.	REVISIONS	DATE	BY	CHK.	APPR.



2011 ROAD LOCO 9-14-11.DWG

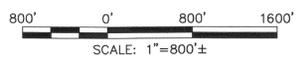
**2011 ROAD IMPROVEMENT PROGRAM  
LOCATION PLAN**

BOROUGH OF MADISON  
DEPARTMENT OF ENGINEERING  
HARTLEY DODGE MEMORIAL  
MADISON, MORRIS COUNTY, N.J. 07940  
(973) 593-3060

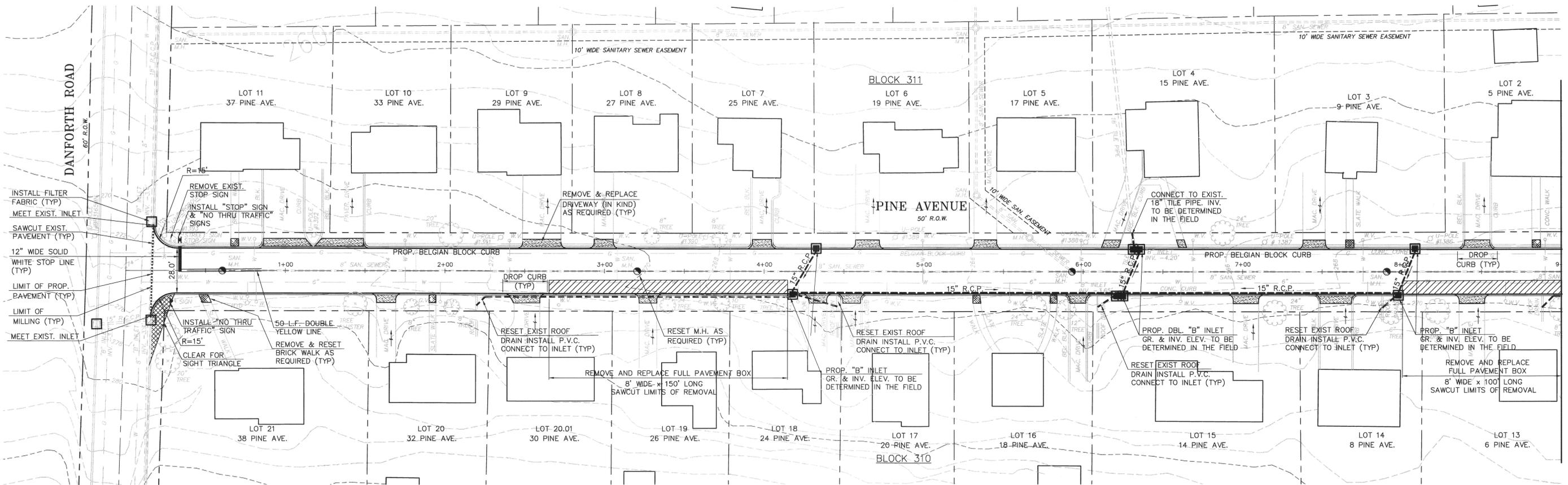
NO.	REVISIONS	DATE	BY	CHK.	APPR.

DATE: \_\_\_\_\_  
**ROBERT A. VOGEL, P.E.**  
 PROFESSIONAL ENGINEER N.J. LIC. NO. 34463

SCALE: 1"=800'±  
 DATE: 9-14-11  
 DR. BY: D. BUCK  
 DWG. NO. 2 of 9

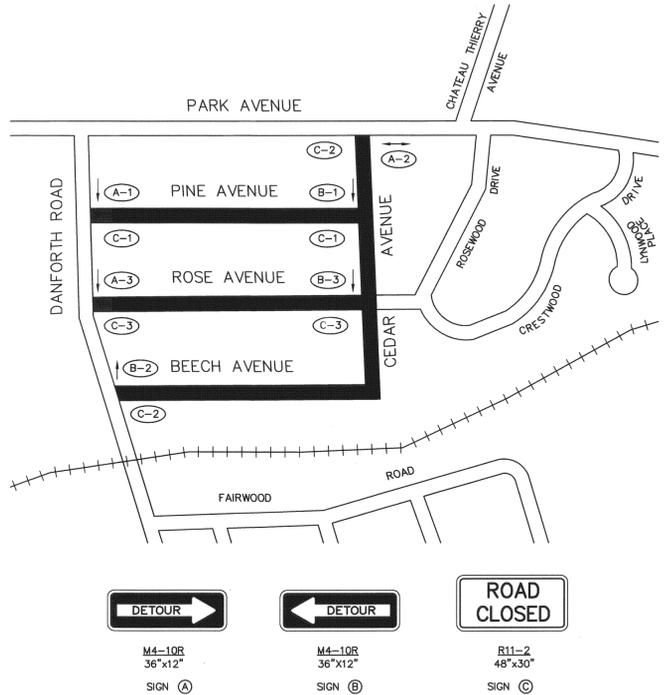
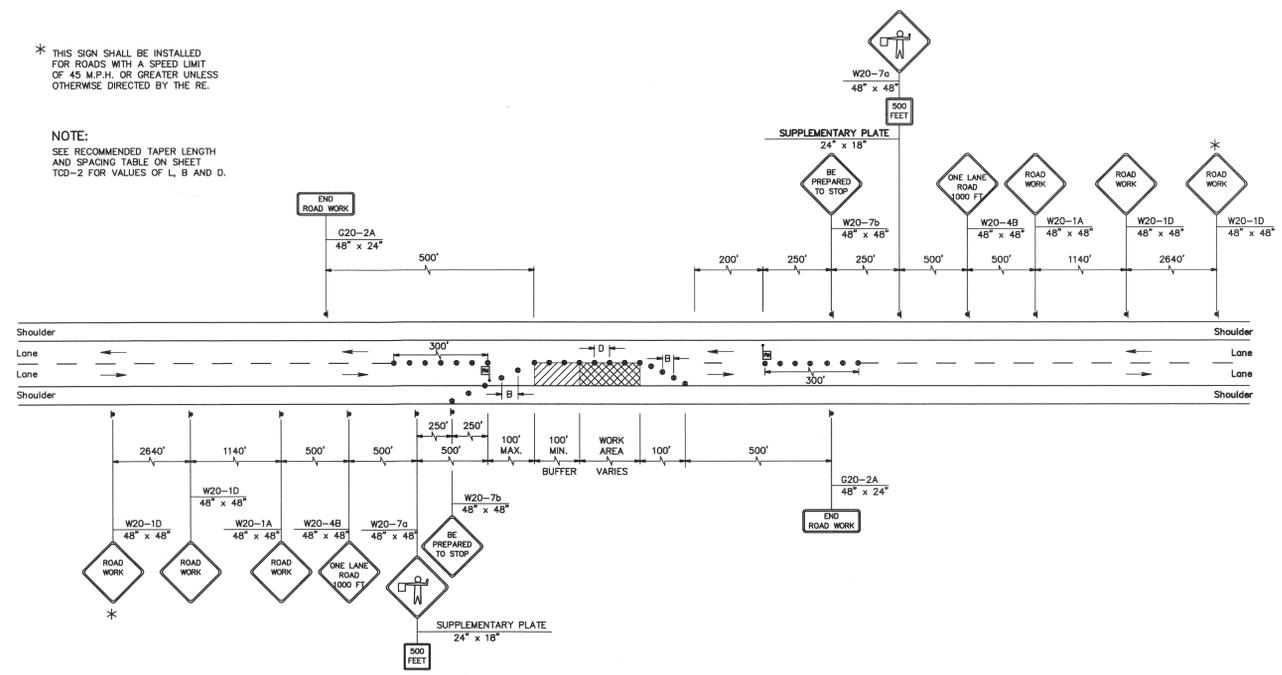






\* THIS SIGN SHALL BE INSTALLED FOR ROADS WITH A SPEED LIMIT OF 45 M.P.H. OR GREATER UNLESS OTHERWISE DIRECTED BY THE RE.

NOTE:  
 SEE RECOMMENDED TAPER LENGTH AND SPACING TABLE ON SHEET TCD-2 FOR VALUES OF L, B AND D.



**GENERAL NOTES**

- R.O.W. LINES, PROPERTY LINES AND LOT INFORMATION SHOWN ON THIS PLAN ARE BASED UPON BOROUGH OF MADISON TAX MAPS.
- ROADWAY UTILITIES SHOWN HEREON ARE BASED UPON FIELD OBSERVATIONS PERFORMED BY THE BOROUGH OF MADISON ENGINEERING DEPARTMENT AND ARE APPROXIMATE IN LOCATION.
- THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL EXISTING UTILITIES PRIOR TO CONSTRUCTION.
- ALL PAVEMENT REMOVAL SHALL BE SAW CUT.
- CONTRATOR TO VERIFY CONDITION OF ALL EXISTING WATER SERVICE RISERS, REPLACE AS DIRECTED BY BOROUGH WATER DEPARTMENT.

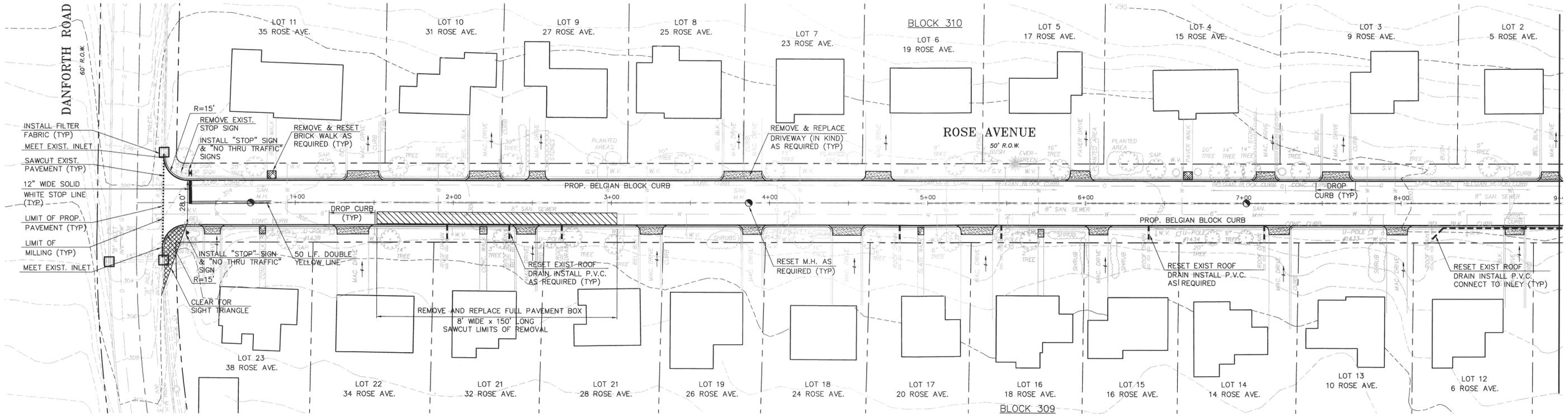
NO.	REVISIONS	DATE	BY	CHK.	APPR

**2011 ROAD IMPROVEMENTS PROGRAM**  
**PINE AVENUE**

BOROUGH OF MADISON  
 DEPARTMENT OF ENGINEERING  
 HARTLEY DODGE MEMORIAL  
 MADISON, MORRIS COUNTY, N.J. 07940  
 (973) 593-3060

DATE: \_\_\_\_\_  
 SCALE: 1"=30'  
 DATE: 9-14-11  
 DR. BY: D.C.B.  
 DWG. NO. 4 of 9

**ROBERT A. VOGEL, P.E.**  
 PROFESSIONAL ENGINEER N.J. LIC. NO. 34463



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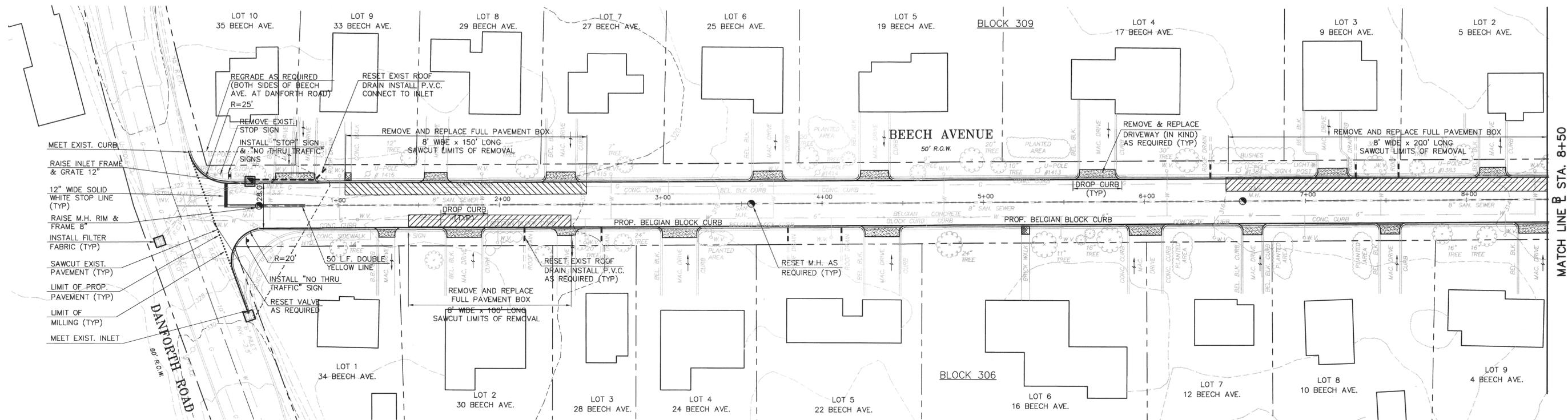
**2011 ROAD IMPROVEMENT PROGRAM  
ROSE AVENUE**

BOROUGH OF MADISON  
DEPARTMENT OF ENGINEERING  
HARTLEY DODGE MEMORIAL  
MADISON, MORRIS COUNTY, N.J. 07940  
(973) 593-3080

DATE \_\_\_\_\_  
**ROBERT A. VOGEL, P.E.**  
PROFESSIONAL ENGINEER N.J. LIC. NO. 34463

SCALE: 1"=30'  
DATE: 9-14-11  
DR. BY: D.C.B.  
DWG. NO. 5 of 9

NO.	REVISIONS	DATE	BY	CHK.	APPR.



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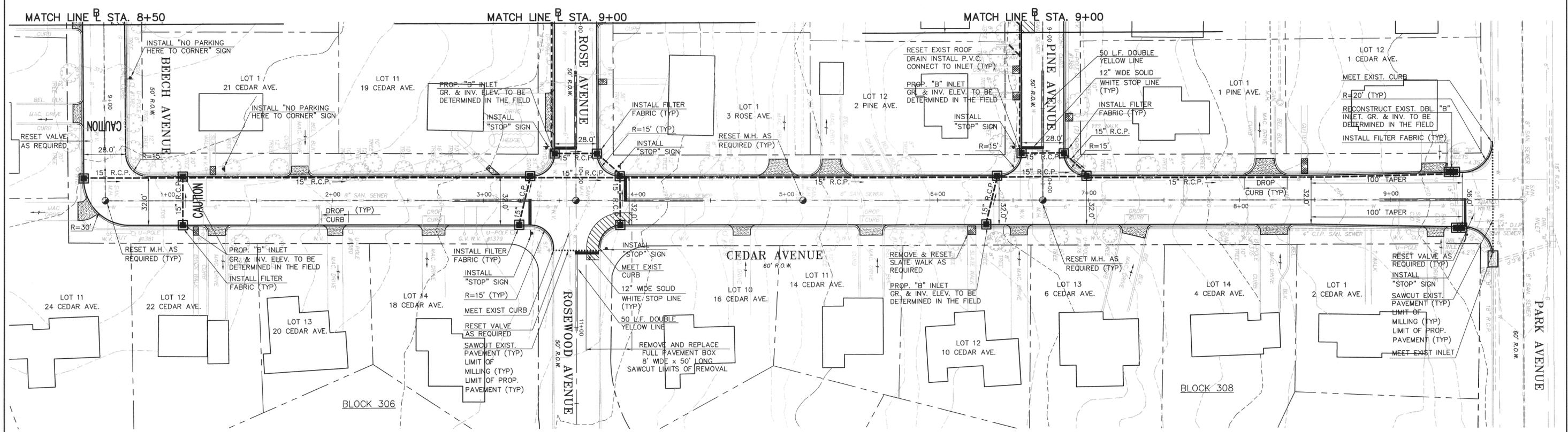
**2011 ROAD IMPROVEMENTS PROGRAM  
BEECH AVENUE**

BOROUGH OF MADISON  
DEPARTMENT OF ENGINEERING  
HARTLEY DODGE MEMORIAL  
MADISON, MORRIS COUNTY, N.J. 07940  
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NO.	REVISIONS	DATE	BY	CHK.	APPR.

SCALE: 1"=30'  
DATE: 9-14-11  
DR. BY: D.C.B.  
DWG. NO: 6 of 9



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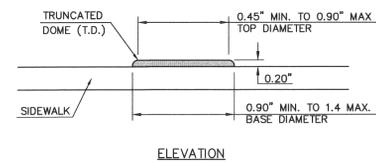
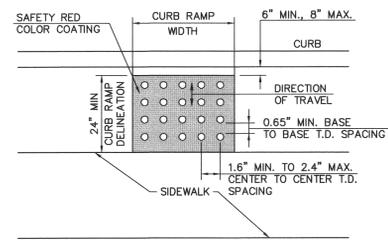
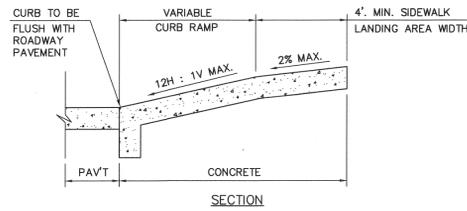
**2011 ROAD IMPROVEMENTS PROGRAM  
CEDAR AVENUE**

BOROUGH OF MADISON  
DEPARTMENT OF ENGINEERING  
HARTLEY DODGE MEMORIAL  
MADISON, MORRIS COUNTY, N.J. 07940  
(973) 593-3060

DATE \_\_\_\_\_  
**ROBERT A. VOGEL, P.E.**  
PROFESSIONAL ENGINEER N.J. LIC. NO. 34463

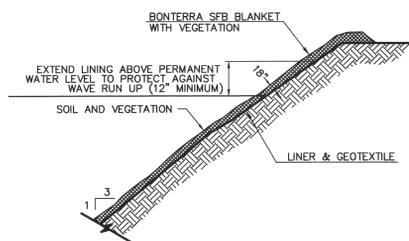
NO.	REVISIONS	DATE	BY	CHK.	APPR.

SCALE: 1"=30'  
DATE: 9-14-11  
DR. BY: D.C.B.  
DWG. NO. 7 of 9

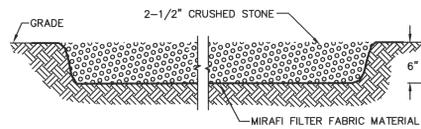


**DETECTABLE WARNING SURFACE**  
N.T.S.

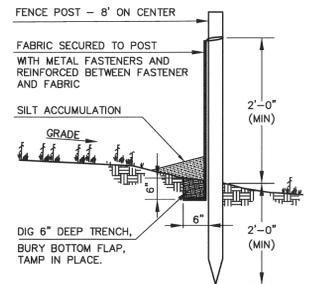
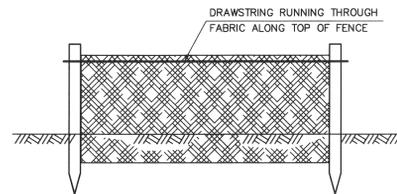
- FOR CONCRETE RAMPS, USE SURFACE APPLIED SYSTEM.
- FOR BRICK PAVER RAMPS, MODULAR PAVER SYSTEM.



**VEGETATIVE ARMOR DETAIL**  
3:1 SLOPE DETAIL



**TRACKING PAD**  
N.T.S.



**REQUIREMENTS FOR SILT FENCE**

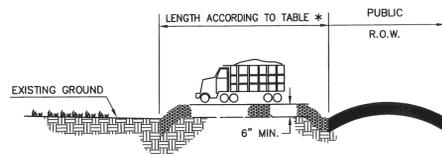
- FENCE POSTS SHALL BE SPACED 8 FEET CENTER-TO-CENTER OR CLOSER. THEY SHALL EXTEND AT LEAST 2 FEET INTO THE GROUND AND EXTEND AT LEAST 2 FEET ABOVE GROUND. POSTS SHALL BE CONSTRUCTED OF HARDWOOD WITH A MINIMUM DIAMETER THICKNESS OF 1-1/2 INCHES.
- A METAL FENCE WITH 6 INCH OR SMALLER OPENINGS AND AT LEAST 2 FEET HIGH MAY BE UTILIZED, FASTENED TO THE FENCE POSTS, TO PROVIDE REINFORCEMENT AND SUPPORT TO THE GEOTEXTILE FABRIC WHERE SPACE FOR OTHER PRACTICES IS LIMITED AND HEAVY SEDIMENT LOADING IS EXPECTED.
- A GEOTEXTILE FABRIC, RECOMMENDED FOR SUCH USE BY THE MANUFACTURER, SHALL BE BURIED AT LEAST 6 INCHES DEEP IN THE GROUND. THE FABRIC SHALL EXTEND AT LEAST 2 FEET ABOVE THE GROUND. THE FABRIC MUST BE SECURELY FASTENED TO THE POST USING A SYSTEM CONSISTING OF METAL FASTENERS (NAILS OR STAPLES) AND A HIGH STRENGTH REINFORCEMENT MATERIAL (NYLON WEBBING, GROMMETS, WASHERS ETC.) PLACED BETWEEN THE FASTENER AND THE GEOTEXTILE FABRIC. THE FASTENING SYSTEM SHALL RESIST TEARING AWAY FROM THE POST. THE FABRIC SHALL INCORPORATE A DRAWSTRING IN THE TOP PORTION OF THE FENCE FOR ADDED STRENGTH.

**SILT FENCE**  
N.T.S.

PERCENT SLOPE OF ROADWAY	LENGTH OF STONE REQUIRED	
	COURSE GRAINED SOILS	FINE GRAINED SOILS
0 TO 2%	50 FT	100 FT
2% TO 5%	100 FT	200 FT
>5%	ENTIRE SURFACE STABILIZED WITH FABC BASE COURSE <sup>1</sup>	

- AS PRESCRIBED BY LOCAL ORDINANCE OR OTHER GOVERNING AUTHORITY.

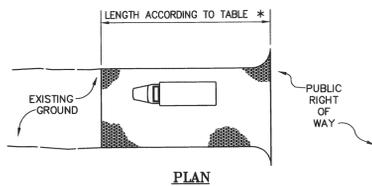
**LENGTHS OF CONSTRUCTION EXITS ON SLOPING ROADBEDS**



**PROFILE**

USE ASTM C-33, SIZE No. 2 2-1/2" TO 1-1/2" OR No. 3 2" TO 1". USE CLEAN CRUSHED ANGULAR STONE. CRUSHED CONCRETE OR SIMILAR SIZE MAY BE SUBSTITUTED BUT WILL REQUIRE MORE FREQUENT UPGRADING AND MAINTENANCE.

PROVIDE APPROPRIATE TRANSITION BETWEEN STABILIZED CONSTRUCTION ENTRANCE AND PUBLIC R.O.W.



**PLAN**

\* NOTE INDIVIDUAL LOT ACCESS POINTS MAY REQUIRE STABILIZATION THICKNESS SHOWN IS FOR CONSTRUCTION ENTRANCE ONLY. (TYP)

**STABILIZED CONSTRUCTION ENTRANCE DETAIL**

**DUST CONTROL MATERIALS**

MATERIAL	WATER DILUTION	TYPE OF NOZZLE	APPLY GALLON/ACRE
ANIONIC ASPHALT EMULSION	7:1	COARSE SPRAY	1200
LATEX EMULSION	12.5:1	FINE SPRAY	235
RESIN IN WATER	4:1	FINE SPRAY	300
POLYACRYLAMIDE (PAM) (SPRAY-ON)			
POLYACRYLAMIDE (PAM) (DRY SPREAD)			
ACIDULATED SOY BEAN SOUP STICK	NONE	COARSE SPRAY	1200

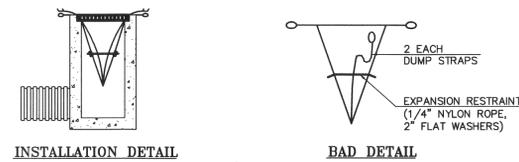
**TILLAGE:**  
TO ROUGHEN SURFACE AND BRING CLODS TO THE SURFACE. THIS IS A TEMPORARY EMERGENCY MEASURE WHICH SHOULD BE USED BEFORE SOIL BLOWING STARTS. BEGIN PLOWING ON WINDWARD SIDE OF SITE. CHISEL-TYPE FLOWS PLACED ABOUT 12 INCHES APART, AND SPRING TOOTHED HARROWS ARE EXAMPLES OF EQUIPMENT WHICH MAY PRODUCE THE DESIRED EFFECT.

**SPRINKLING:**  
SITE IS SPRINKLED UNTIL THE SURFACE IS WET.

**BARRIERS:**  
SOLID BOARD FENCES, SNOW FENCES, BURLAP FENCES, GRATE WALLS, BALES OF HAY, AND SIMILAR MATERIALS CAN BE USED TO CONTROL AIR CURRENTS AND SOIL BLOWING.

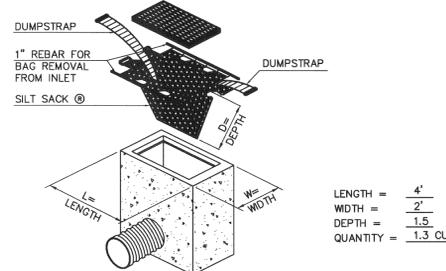
**CALCIUM CHLORIDE:**  
SHALL BE IN THE FORM OF LOOSE, DRY GRANULES OR FLAKES FINE ENOUGH TO FEED THROUGH COMMONLY USED SPREADERS AT A RATE THAT WILL KEEP SURFACE MOST BUT NOT CAUSE POLLUTION OR PLANT DAMAGE. IF USED ON STEEPER SLOPES, THEN USE OTHER PRACTICES TO PREVENT WASHING INTO STREAMS OR ACCUMULATION AROUND PLANTS.

**STONE:**  
COVER SURFACE WITH CRUSHED STONE OR COARSE GRAVEL.



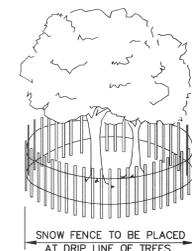
**INSTALLATION DETAIL**

**BAD DETAIL**



**INLET FILTER DETAIL**  
N.T.S.

LENGTH = 4'  
WIDTH = 2'  
DEPTH = 1.5'  
QUANTITY = 1.3 CU. FT.



**TREE PROTECTION DETAIL**  
N.T.S.

**PROPOSED CONSTRUCTION SEQUENCE**

- |  |            |
|--|------------|
| 1. INSTALL S.E.S.C. MEASURES   | 2 DAYS     |
| 2. TEMPORARY MEASURES FOR DISTURBED SOILS  | CONTINUOUS |
| 3. NO CONTINUOUS TRENCHING OR EXCAVATION SHALL BE LEFT OPEN OR EXPOSED FOR DRAINAGE, CURBING OR GRADING ACTIVITIES. ALL TRENCHING WITHIN PAVED CORRIDOR SHALL BE RESTORED WITH STABILIZED BASE WITHIN 72 HOURS MAXIMUM | 4 WEEKS    |
| 4. THE OVERALL PROJECT DURATION OF 90 DAYS SHALL BE STAGED TO MINIMIZE EXPOSURE OF BARE SOILS TO WIND AND RAIN.  | 1 WEEK     |
| 5. FINAL TOPSOIL AND SEED OPERATIONS ARE COMPLETED.  | 1 WEEK     |
| 6. REMOVAL OF SOIL EROSION AND SEDIMENT CONTROL MEASURES UPON PERMANENT GROWTH.  |            |

**TOTAL PROJECT DURATION = 90 DAYS**

NO.	REVISIONS	DATE	BY	CHK.	APPR.

**MORRIS COUNTY SOIL CONSERVATION DISTRICT**  
**SOIL EROSION AND SEDIMENT CONTROL NOTES**

- ALL SOIL EROSION AND SEDIMENT CONTROL PRACTICES WILL BE INSTALLED IN ACCORDANCE WITH THE STANDARDS FOR SOIL EROSION AND SEDIMENT CONTROL IN NEW JERSEY, AND WILL BE IN PLACE PRIOR TO ANY MAJOR SOIL DISTURBANCE, OR IN THEIR PROPER SEQUENCE AND MAINTAINED UNTIL PERMANENT PROTECTION IS ESTABLISHED.
- ANY DISTURBED AREA THAT WILL BE LEFT EXPOSED FOR MORE THAN THIRTY (30) DAYS AND NOT SUBJECT TO CONSTRUCTION TRAFFIC SHALL IMMEDIATELY RECEIVE A TEMPORARY SEEDING. IF THE SEASON PROHIBITS TEMPORARY SEEDING, THE DISTURBED AREAS WILL BE MULCHED WITH STRAW OR HAY AND TACKED IN ACCORDANCE WITH THE NEW JERSEY STANDARDS. SEE NOTE 21 BELOW.
- PERMANENT VEGETATION IS TO BE ESTABLISHED ON EXPOSED AREAS WITHIN TEN (10) DAYS AFTER FINAL GRADING. MULCH IS TO BE USED FOR PROTECTION UNTIL VEGETATION IS ESTABLISHED. SEE NOTE 22 BELOW.
- IMMEDIATELY FOLLOWING INITIAL DISTURBANCE OR ROUGH GRADING, ALL CRITICAL AREAS (STEEP SLOPES, SANDY SOILS, WET CONDITIONS) SUBJECT TO EROSION WILL RECEIVE A TEMPORARY SEEDING IN ACCORDANCE WITH NOTE 21 BELOW.
- TEMPORARY DIVERSION BERMS ARE TO BE INSTALLED ON ALL CLEARED ROADWAYS AND EASEMENT AREAS. SEE THE DIVERSION DETAIL.
- PERMANENT SEEDING AND STABILIZATION TO BE IN ACCORDANCE WITH THE STANDARDS FOR PERMANENT VEGETATIVE COVER FOR SOIL STABILIZATION COVER. SPECIFIED RATES AND LOCATIONS SHALL BE ON THE APPROVED SOIL EROSION AND SEDIMENT CONTROL PLAN.
- THE SITE SHALL AT ALL TIMES BE GRADED AND MAINTAINED SO THAT ALL STORMWATER RUNOFF IS DIVERTED TO SOIL EROSION AND SEDIMENT CONTROL FACILITIES.
- ALL SEDIMENTATION STRUCTURES (SILT FENCE, INLET FILTERS, AND SEDIMENT BASINS) WILL BE INSPECTED AND MAINTAINED DAILY.
- STOCKPILES SHALL NOT BE LOCATED WITHIN 50 FEET OF A FLOODPLAIN, SLOPE, DRAINAGE FACILITY, OR ROADWAY. ALL STOCKPILES BASES SHALL HAVE A SILT FENCE PROPERLY ENTRENCHED AT THE TOE OF SLOPE.
- A STABILIZED CONSTRUCTION ACCESS WILL BE INSTALLED, WHENEVER AN EARTHEN ROAD INTERSECTS WITH A PAVED ROAD. SEE THE STABILIZED CONSTRUCTION ACCESS DETAIL AND CHART FOR DIMENSIONS.
- ALL NEW ROADWAYS WILL BE TREATED WITH SUITABLE SUBBASE UPON ESTABLISHMENT OF FINAL GRADE ELEVATIONS.
- PAVED ROADWAYS MUST BE KEPT CLEAN AT ALL TIMES.
- BEFORE DISCHARGE POINTS BECOME OPERATIONAL, ALL STORM DRAINAGE OUTLETS WILL BE STABILIZED AS REQUIRED.
- ALL DOWATERING OPERATIONS MUST BE DISCHARGED DIRECTLY INTO A SEDIMENT FILTER AREA. THE FILTER SHOULD BE COMPOSED OF A FABRIC OR APPROVED MATERIAL. SEE THE DOWATERING DETAIL.
- ALL SEDIMENT BASINS WILL BE CLEANED WHEN THE CAPACITY HAS BEEN REDUCED BY 50% A CLEAN OUT ELEVATION WILL BE IDENTIFIED ON THE PLAN AND A MARKER INSTALLED ON THE SITE.
- DURING AND AFTER CONSTRUCTION, THE APPLICANT WILL BE RESPONSIBLE FOR THE MAINTENANCE AND UPKEEP OF THE DRAINAGE STRUCTURES, VEGETATION, AND ANY OTHER MEASURES DEEMED APPROPRIATE BY THE DISTRICT. SAID RESPONSIBILITY WILL END WHEN COMPLETED WORK IS APPROVED BY THE MORRIS COUNTY SOIL CONSERVATION DISTRICT.
- ALL TREES OUTSIDE THE DISTURBANCE LIMIT INDICATED ON THE SUBJECT PLAN OR THOSE TREES WITHIN THE DISTURBANCE AREA WHICH ARE DESIGNATED TO REMAIN AFTER CONSTRUCTION ARE TO BE PROTECTED WITH TREE PROTECTION DEVICES. SEE THE TREE PROTECTION DETAIL.
- THE MORRIS COUNTY SOIL CONSERVATION DISTRICT MAY REQUEST ADDITIONAL MEASURES TO MINIMIZE ON SITE OR OFF SITE EROSION PROBLEMS DURING CONSTRUCTION.
- THE MORRIS COUNTY SOIL CONSERVATION DISTRICT MUST BE NOTIFIED, IN WRITING, AT LEAST 72 HOURS PRIOR TO ANY LAND DISTURBANCE, AND A PRE-CONSTRUCTION MEETING HELD.
- CONTRACTOR TO SET UP A MEETING WITH THE INSPECTOR FOR PERIODIC INSPECTIONS OF THE TEMPORARY SEDIMENT BASIN PRIOR TO AND DURING ITS CONSTRUCTION.
- TOPSOIL STOCKPILE PROTECTION
  - APPLY GROUND LIMESTONE AT A RATE OF 90 LBS PER 1000 SQ. FT.
  - APPLY FERTILIZER (10-20-10) AT A RATE OF 11 LBS. PER 1000 SQ. FT.
  - APPLY PERENNIAL RYEGRASS SEED AT 1 LB. PER 1000 SQ. FT. AND ANNUAL RYEGRASS AT 1 LB. PER 1000 SQ. FT.
  - MULCH STOCKPILE WITH STRAW OR HAY AT A RATE OF 90 LBS. PER 1000 SQ. FT.
  - APPLY A LIQUID MULCH BINDER OR TACK TO STRAW OR HAY MULCH.
  - PROPERTY ENTRENCH A SILT FENCE AT THE BOTTOM OF THE STOCKPILE.
- TEMPORARY STABILIZATION SPECIFICATIONS
  - APPLY GROUND LIMESTONE AT A RATE OF 90 LBS PER 1000 SQ. FT.
  - APPLY FERTILIZER (10-20-10) AT A RATE OF 11 LBS. PER 1000 SQ. FT.
  - APPLY PERENNIAL RYEGRASS SEED AT 1 LB. PER 1000 SQ. FT. AND ANNUAL RYEGRASS AT 1 LB. PER 1000 SQ. FT.
  - MULCH STOCKPILE WITH STRAW OR HAY AT A RATE OF 90 LBS. PER 1000 SQ. FT.
  - APPLY A LIQUID MULCH BINDER OR TACK TO STRAW OR HAY MULCH.
- PERMANENT STABILIZATION SPECIFICATIONS
  - APPLY TOPSOIL TO A DEPTH OF 5 INCHES (UNSETTLED).
  - APPLY GROUND LIMESTONE AT A RATE OF 90 LBS PER 1000 SQ. FT. AND WORK FOUR INCHES INTO SOIL.
  - APPLY FERTILIZER (10-20-10) AT A RATE OF 11 LBS. PER 1000 SQ. FT.
  - APPLY HARD FESCUE SEED AT 2.7 LBS. PER 1000 SQ. FT. AND CREEPING RED FESCUE SEED AT 0.7 LBS PER 1000 SQ. FT. AND PERENNIAL RYEGRASS SEED AT 0.25 LBS PER 1000 SQ. FT.
  - MULCH STOCKPILE WITH STRAW OR HAY AT A RATE OF 90 LBS. PER 1000 SQ. FT.
  - APPLY A LIQUID MULCH BINDER OR TACK TO STRAW OR HAY MULCH.

\*NOTE: 72 HOURS PRIOR TO ANY SOIL DISTURBANCE, NOTICE IN WRITING, SHALL BE GIVEN TO THE MORRIS COUNTY SOIL CONSERVATION DISTRICT AND A PRE-CONSTRUCTION MEETING HELD.

**STANDARDS FOR DUST CONTROL**

**DEFINITIONS:**  
THE CONTROL OF DUST ON CONSTRUCTION SITES AND ROADS.

**PURPOSE:**  
TO PREVENT BLOWING AND MOVEMENT OF DUST FROM EXPOSED SOIL SURFACES, REDUCE ON-SITE AND OFF-SITE DAMAGE AND HEALTH HAZARDS, AND IMPROVE TRAFFIC SAFETY.

**CONDITIONS WHERE PRACTICE APPLIES:**  
THIS PRACTICE IS APPLICABLE TO AREAS SUBJECT TO DUST BLOWING AND MOVEMENT WHERE ON-SITE AND OFF-SITE DAMAGE IS LIKELY WITHOUT TREATMENT. CONSULT WITH ANY MUNICIPAL ORDINANCES ON ANY RESTRICTIONS.

**WATER QUALITY ENHANCEMENT:**  
WATER QUALITY ENHANCEMENT: SEDIMENTS DEPOSITED AS "DUST" ARE OFTEN FINE COLLOIDAL MATERIAL WHICH IS EXTREMELY DIFFICULT TO REMOVE FROM WATER ONCE IT BECOMES SUSPENDED. USE OF THIS STANDARD WILL HELP TO CONTROL THE GENERATION OF DUST FROM CONSTRUCTION SITES AND SUBSEQUENT BLOWING AND DISPOSITION INTO LOCAL SURFACE WATER RESOURCES.

**PLANNING CRITERIA:**  
THE FOLLOWING METHODS SHOULD BE CONSIDERED FOR CONTROLLING DUST:  
MULCHES: SEE STANDARD OF STABILIZATION WITH MULCHES ONLY, pg. 5-1.  
VEGETATIVE COVER: SEE STANDARD FOR TEMPORARY VEGETATIVE COVER, pg. 7-1.  
PERMANENT VEGETATIVE COVER FOR SOIL STABILIZATION, AND PERMANENT STABILIZATION WITH SOO.  
SPRAY-ON ADHESIVES: ON MINERAL SOILS (NO EFFECTIVE ON MUCK SOILS)  
KEEP TRAFFIC OFF THESE AREAS.

**SEEDING OF STEEP SLOPES**

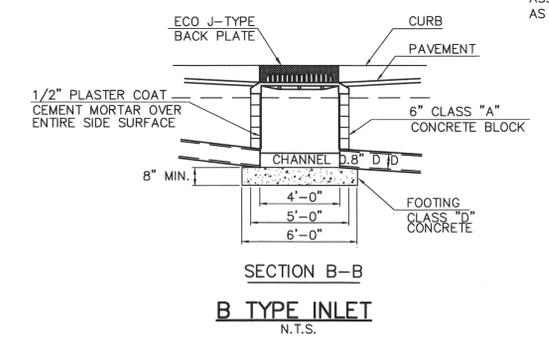
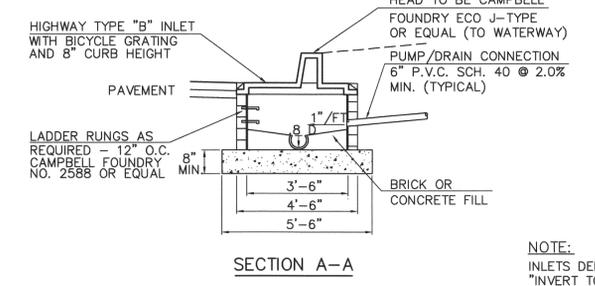
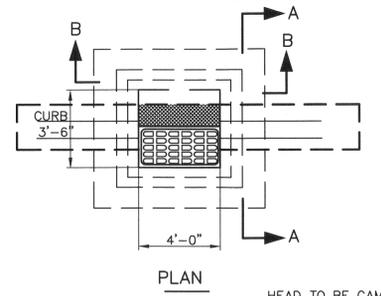
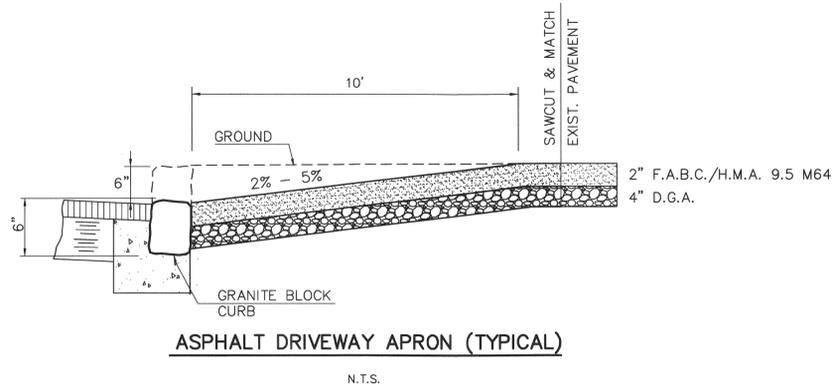
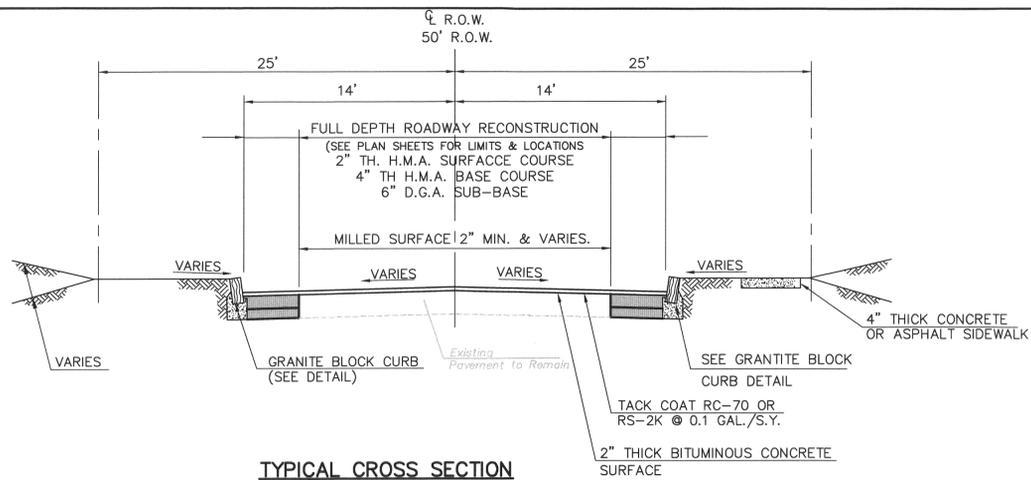
- NOTE: IMMEDIATELY UPON COMPLETION OF FINE GRADING ON THE STEEP SLOPE AREAS (3:1 SLOPES AND GREATER), THE SLOPES SHALL BE HYDROSEEDING AS FOLLOWS:
- INSPECT AREA. SURFACE SHALL BE REASONABLY UNIFORM, FREE OF ALL STONES 2 INCHES OR LARGER, ALL DEBRIS, ROOTS, CLODS, OR OTHER UNSUITABLE MATERIAL. SOIL SHALL BE ROLLED FIRM BUT NOT COMPACTED.
  - APPLY LIMESTONE AND FERTILIZER AT THE FOLLOWING RATES:
    - 3 TONS PER ACRE GROUND LIMESTONE
    - 500 LBS. PER ACRE OF A 5-10-10 FERTILIZER.
  - APPLY SEED UNIFORMLY USING SEEDING MIXTURE SPECIFIED ABOVE, AT A RATE OF 220 LBS/ACRE. USE WOOD FIBER OR PAPER FIBER MULCH AT A RATE OF 1,500 LBS PER ACRE TO SEEDING MIXTURE.  
SEEDING DATES: 4/1 - 5/31 OR 8/16 - 10/15, LEAVE NO BARE SPOTS.

**2011 ROAD IMPROVEMENT PROGRAM**  
**CONSTRUCTION DETAILS**

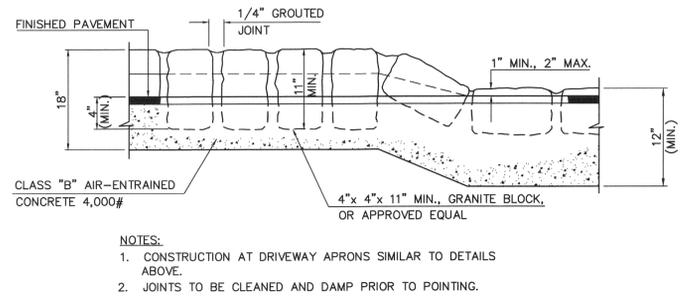
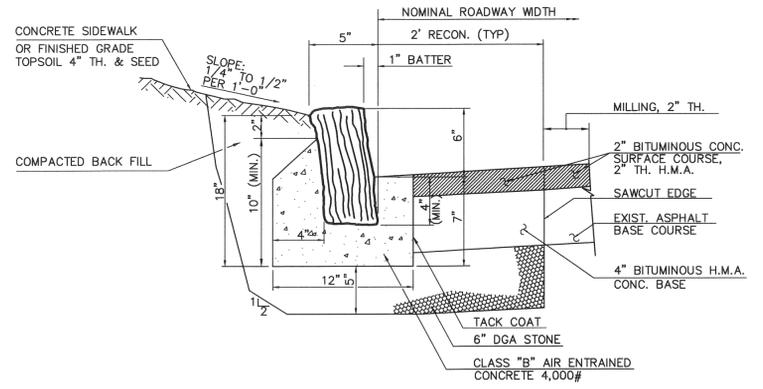
BOROUGH OF MADISON  
DEPARTMENT OF ENGINEERING  
HARTLEY DODGE MEMORIAL  
MADISON, MORRIS COUNTY, N.J. 07940  
(973) 593-3060

**ROBERT A. VOGEL, P.E.**  
PROFESSIONAL ENGINEER N.J. LIC. NO. 34463

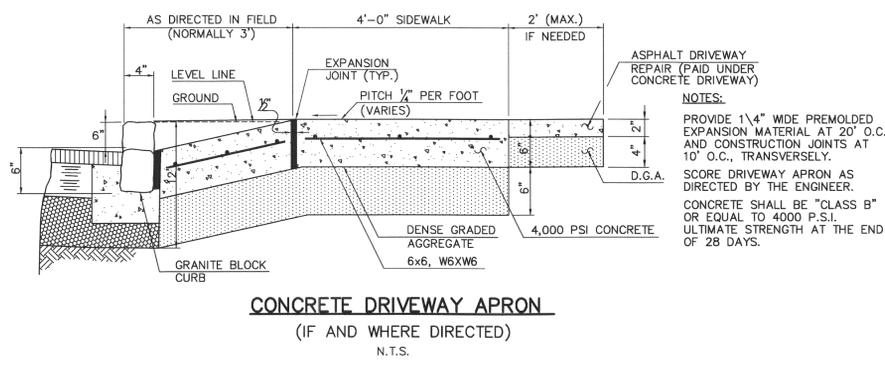
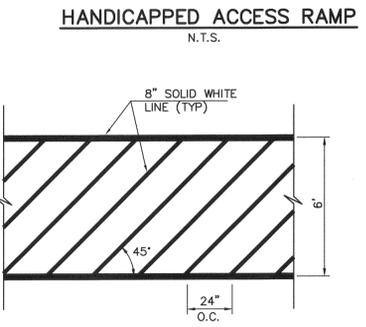
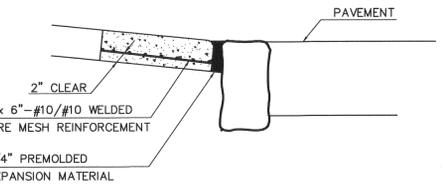
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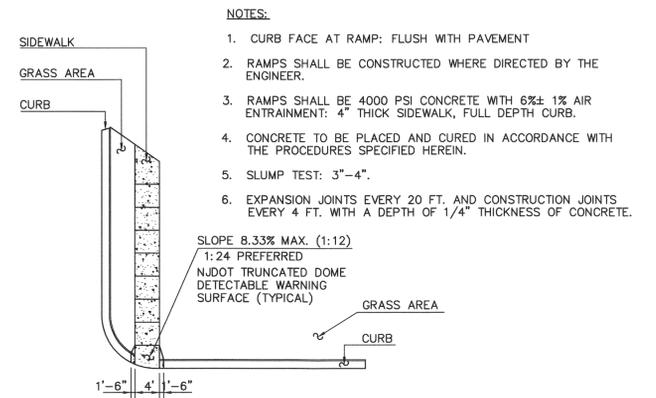
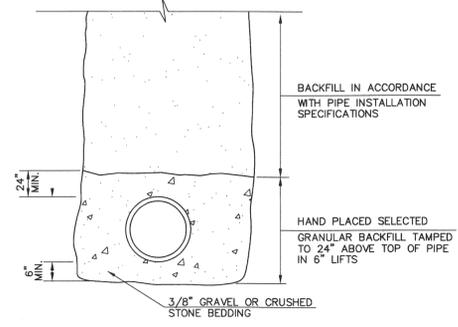
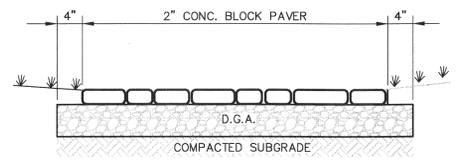
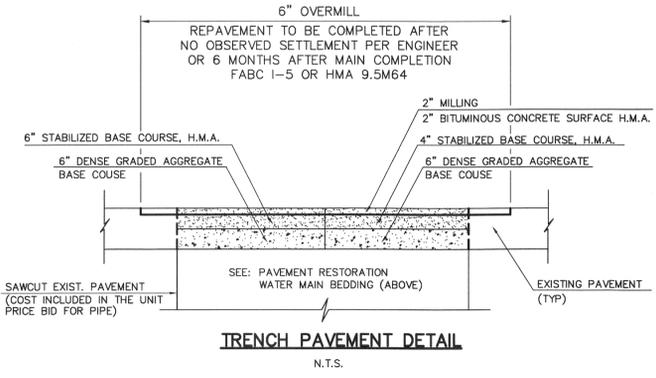
NOTE:  
INLETS DENOTED AS "INVERT TO BE SET IN FIELD" ASSUMES A 4 FOOT DEPTH AS TYPICAL



NOTES:  
1. CONSTRUCTION AT DRIVEWAY APRONS SIMILAR TO DETAILS ABOVE.  
2. JOINTS TO BE CLEANED AND DAMP PRIOR TO POINTING.



NOTES:  
PROVIDE 1/4" WIDE PREFORMED EXPANSION MATERIAL AT 20' O.C. AND CONSTRUCTION JOINTS AT 10' O.C., TRANSVERSELY.  
SCORE DRIVEWAY APRON AS DIRECTED BY THE ENGINEER. CONCRETE SHALL BE "CLASS B" OR EQUAL TO 4000 P.S.I. ULTIMATE STRENGTH AT THE END OF 28 DAYS.



- NOTES:
- CURB FACE AT RAMP: FLUSH WITH PAVEMENT
  - RAMPS SHALL BE CONSTRUCTED WHERE DIRECTED BY THE ENGINEER.
  - RAMPS SHALL BE 4000 PSI CONCRETE WITH 6% ± 1% AIR ENTRAINMENT: 4" THICK SIDEWALK, FULL DEPTH CURB.
  - CONCRETE TO BE PLACED AND CURED IN ACCORDANCE WITH THE PROCEDURES SPECIFIED HEREIN.
  - SLUMP TEST: 3"-4".
  - EXPANSION JOINTS EVERY 20 FT. AND CONSTRUCTION JOINTS EVERY 4 FT. WITH A DEPTH OF 1/4" THICKNESS OF CONCRETE.

GENERAL NOTES:

- ANY CONCRETE PLACED BETWEEN NOVEMBER 15 AND APRIL 1 MUST CONFORM TO ARTICLES 501.17 AND 501.17 OF THE N.J.D.O.T. STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, 1989 EDITION, USING 2% CALCIUM CHLORIDE, HOT WATER, COVERED W/SALT HAY.
- WHERE SIDEWALK CROSSES A DRIVEWAY, THE MINIMUM THICKNESS SHALL BE 6 INCHES AND REINFORCED WITH 6"x 6", #5 WIRE MESH.
- SLUMP TEST: 3"- 4".
- EXPANSION JOINTS EVERY 20', CONSTRUCTION JOINTS EVERY 4' AT A DEPTH OF 1/4" THICKNESS OF CONCRETE.

**2011 ROAD IMPROVEMENT PROGRAM CONSTRUCTION DETAILS**  
BOROUGH OF MADISON  
DEPARTMENT OF ENGINEERING  
HARTLEY DODGE MEMORIAL  
MADISON, MORRIS COUNTY, N.J. 07940  
(973) 593-3060

NO.	REVISIONS	DATE	BY	CHK.	APPR.

DATE: \_\_\_\_\_  
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