

Title Page

Dumay Compound Civil Engineering Site Design

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Contractor Name: Parsons Global Services, Inc.
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Coversheet

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DUMAY COMPOUND

CIVIL PLANS

GENERAL NOTES

1. EXISTING UNDERGROUND UTILITIES ON THE DRAWINGS HAVE BEEN SHOWN BASED UPON THE BEST AVAILABLE INFORMATION, THE CONTRACTOR SHALL BE REQUIRED TO MARK AND CLEARLY DELINEATE LOCATIONS OF EXISTING UTILITIES WITHIN AREAS OF WORK PRIOR TO EXCAVATION TO AVOID DAMAGE. THE CONTRACTOR SHALL MAKE ALL REASONABLE EFFORTS TO LOCATE, IDENTIFY AND MARK EXISTING UTILITIES BY FIELD VERIFICATION, COORDINATION WITH UTILITY COMPANIES AND ELECTRONIC OR OTHER SUCH DETECTION TECHNOLOGY AND MEANS.
2. THE CONTRACTOR MUST HAND EXCAVATE AROUND AREAS WHERE EXISTING UNDERGROUND UTILITIES ARE EXPECTED OR SUSPECTED IN ORDER TO AVOID DAMAGES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL REPAIRS AND COSTS TO CORRECT DAMAGES RESULTING FROM FAILURE TO TAKE ALL NECESSARY PRECAUTIONS INCLUDING LOCATING, MARKING AND CAREFUL EXCAVATION. CONTRACTOR SHALL LOCATE ALL SPRINKLERS AND WATER LINES IN AREA OF WORK AND SHALL CUT AND RELOCATE SPRINKLERS AND SPRINKLER WATER LINES AS NECESSARY TO COMPLETE THE WORK. REPAIR ALL SPRINKLERS LINES DAMAGED DURING WORK. LOCATION OF SPRINKLER LINES AND HEADS WERE NOT PROVIDED TO THE ENGINEER AND THEREFORE ARE NOT SHOWN ON THE PLANS.
3. CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS PRIOR TO COMMENCING CONSTRUCTION.
4. IT IS THE OBLIGATION OF THE BIDDER OR THE CONTRACTOR TO MAKE HIS OWN INVESTIGATION AND SATISFY HIMSELF FULLY OF SUBSURFACE CONDITIONS PRIOR TO SUBMITTING HIS BID.
5. ALL EXISTING DATA OBTAINED FROM BOUNDARY / TOPOGRAPHICAL SURVEY BY COMPAQ.
6. THE METHOD OF INSTALLATION OF STRUCTURES AND PIPES IN THESE LOCATIONS MUST COMPLY WITH OSHA SAFETY STANDARDS AND PROJECT SPECIFICATIONS. THE CONTRACTOR SHALL INSPECT THESE SITES AND BE RESPONSIBLE FOR DETERMINING WHAT METHOD OF PREPARATION AND INSTALLATION WILL BE USED TO COMPLY WITH THESE REQUIREMENTS.

WATER & SEWER INSTALLATION NOTES:

1. A HORIZONTAL DISTANCE OF 10 FT. SHALL BE MAINTAINED BETWEEN WATER & SEWER MAINS. WHEN THE 10 FEET HORIZONTAL DISTANCE CRITERIA CANNOT BE MET DUE TO AN EXISTING UNDERGROUND FACILITY CONFLICT, THE SEWER SHALL BE CONSTRUCTED OF DUCTILE IRON PIPE WITH MECHANICAL JOINTS.
2. A VERTICAL DISTANCE OF AT LEAST 18 INCHES SHALL BE MAINTAINED BETWEEN ANY WATER AND SEWER MAINS. THE SEWER SHALL BE A DUCTILE IRON SINGLE 20 FEET LENGTH CENTERED ON THE CROSSING IF THE MINIMUM VERTICAL DISTANCE IS LESS THAN 18 INCHES OR THE SEWER IS INSTALLED ABOVE THE WATER MAIN (REGARDLESS OF SEPARATION).
3. IN HIGHLY CONGESTED AREAS, WHERE EITHER WATER OR SEWER FACILITIES ARE EXISTING AND THE SEPARATION REQUIREMENTS CANNOT BE MET, SPECIAL CONSIDERATION MAY BE GIVEN SUBJECT TO A COMPLETE EVALUATION OF EXISTING AND PROPOSED CONDITIONS.
4. THE MAXIMUM ALLOWABLE EXFILTRATION RATE OF GRAVITY SANITARY SEWERS CONSTRUCTED IN A PUBLIC WELLFIELD PROTECTION AREA SHALL BE FIFTY (50) GALLONS PER INCH PIPE DIAMETER PER MILE PER DAY FOR RESIDENTIAL LAND USE AND TWENTY (20) GALLONS PER INCH PIPE DIAMETER PER MILE PER DAY FOR NONRESIDENTIAL LAND USE.
5. SANITARY SEWER FORCE MAIN EXFILTRATION RATE SHALL NOT BE GREATER THAN ONE-HALF (1/2) THE ALLOWABLE LEAKAGE RATE SPECIFIED IN AWWA C600-82 AT A TEST PRESSURE OF 100 POUNDS PER SQUARE INCH.
6. THE CONTRACTOR SHALL VERIFY NATURE, DEPTH, AND CHARACTER OF EXISTING UNDERGROUND UTILITIES PRIOR TO THE START OF CONSTRUCTION.
7. ALL OTHER PUBLIC OR PRIVATE UTILITY FACILITIES SHALL BE CONSTRUCTED AT LEAST 3 FEET (HORIZONTAL SEPARATION) FROM ANY WATER AND SEWER MAIN AS MEASURED FROM THE OUTSIDE BELL OF THE WATER AND SEWER PIPE TO THE OUTSIDE OF THE UTILITY PIPE.
8. WHEN THE 3 FEET HORIZONTAL SEPARATION BETWEEN PROPOSED AND EXISTING LINE IS NOT POSSIBLE, THE CONTRACTOR SHALL HAND DIG OR EXPOSE THE WATER AND SEWER PIPES BEFORE PROCEEDING WITH POWER EQUIPMENT EXCAVATION.
9. IN NO CASE SHALL A CONTRACTOR INSTALL UTILITY PIPES, CONDUITS, CABLES, ETC., IN THE SAME TRENCH PARALLEL TO AND ABOVE EXISTING WATER AND SEWER PIPES EXCEPT WHERE THEY CROSS. ANY DEVIATION FROM NOTES 6, 7 AND 8 SHALL BE APPROVED IN WRITING BY THE RESPONSIBLE WATER AND SEWER UTILITY.



LOCATION MAP
NOT TO SCALE

PREPARED BY:



PREPARED FOR:

PARSONS

PAVING, GRADING AND DRAINAGE NOTES:

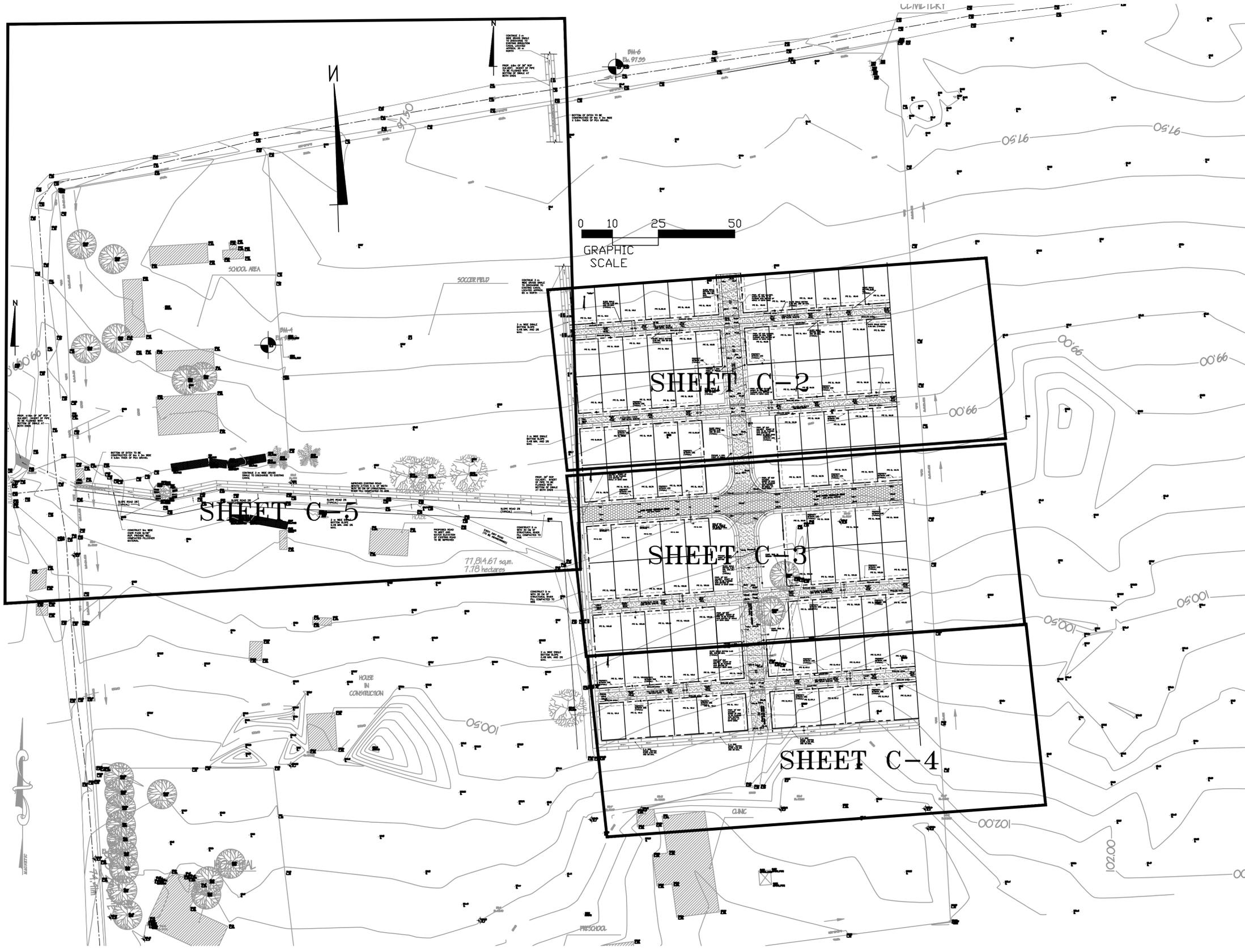
1. ALL WORK TO BE IN COMPLIANCE WITH THE REQUIREMENTS OF AND ACCEPTABLE TO THE USAID AND HAITI'S PUBLIC WORKS DEPARTMENT
2. CONTRACTOR SHALL PROVIDE HIS OWN LINE AND GRADE FROM HORIZONTAL AND VERTICAL CONTROL. CONTRACTOR SHALL ALSO PROVIDE "AS-BUILT" GRADES CERTIFIED BY A LAND SURVEYOR AS REQUIRED.
3. CONTRACTOR TO PROVIDE PROCTOR AND FIELD DENSITY TESTS ON LIMEROCK BASE AS REQUIRED IN THE SPECIFICATIONS. IN THE EVENT OF FIELD DENSITY TEST FAILURES, THE CONTRACTOR SHALL REWORK THE BASE AND/OR SUBGRADE AS REQUIRED AND PROVIDE ADDITIONAL TEST(S), AS REQUIRED, AT HIS EXPENSE.
4. ALL EXISTING ELEVATIONS WERE OBTAINED FROM TOPOGRAPHICAL SURVEY OF THE SITE.
5. ALL EXCAVATIONS SHALL COMPLY WITH OSHA'S EXCAVATION SAFETY STANDARDS AND APPLICABLE TRENCH SAFETY ACT.
6. BID PRICES SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS COMPLETE IN PLACE, TESTED AND ACCEPTED BY THE ENGINEER.
7. ALL AREAS WHERE NEW DRAINAGE IMPROVEMENTS ARE ACCOMPLISHED SHALL BE GRADED TO PROVIDE POSITIVE DRAINAGE AWAY FROM BUILDING STRUCTURE, CONTRACTOR SHALL SOD ALL SWALE AREAS UPON COMPLETION OF GRADING.

TRENCH PROTECTION

TRENCH EXCAVATION PROTECTION SHALL BE ACCOMPLISHED AS REQUIRED BY THE PROVISIONS OF PART 1926, SUBPART P. EXCAVATIONS, TRENCHING AND SHORING OF OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION STANDARDS AND INTREPRETATIONS.

INDEX OF SHEETS

- C-1 KEY SHEET
- C-2 TO C-5 PAVING, GRADING AND DRAINAGE PLANS
- C-6 UTILITIES PLAN
- C-7 CIVIL DETAILS



REVISIONS		
DATE	BY	DESCRIPTION

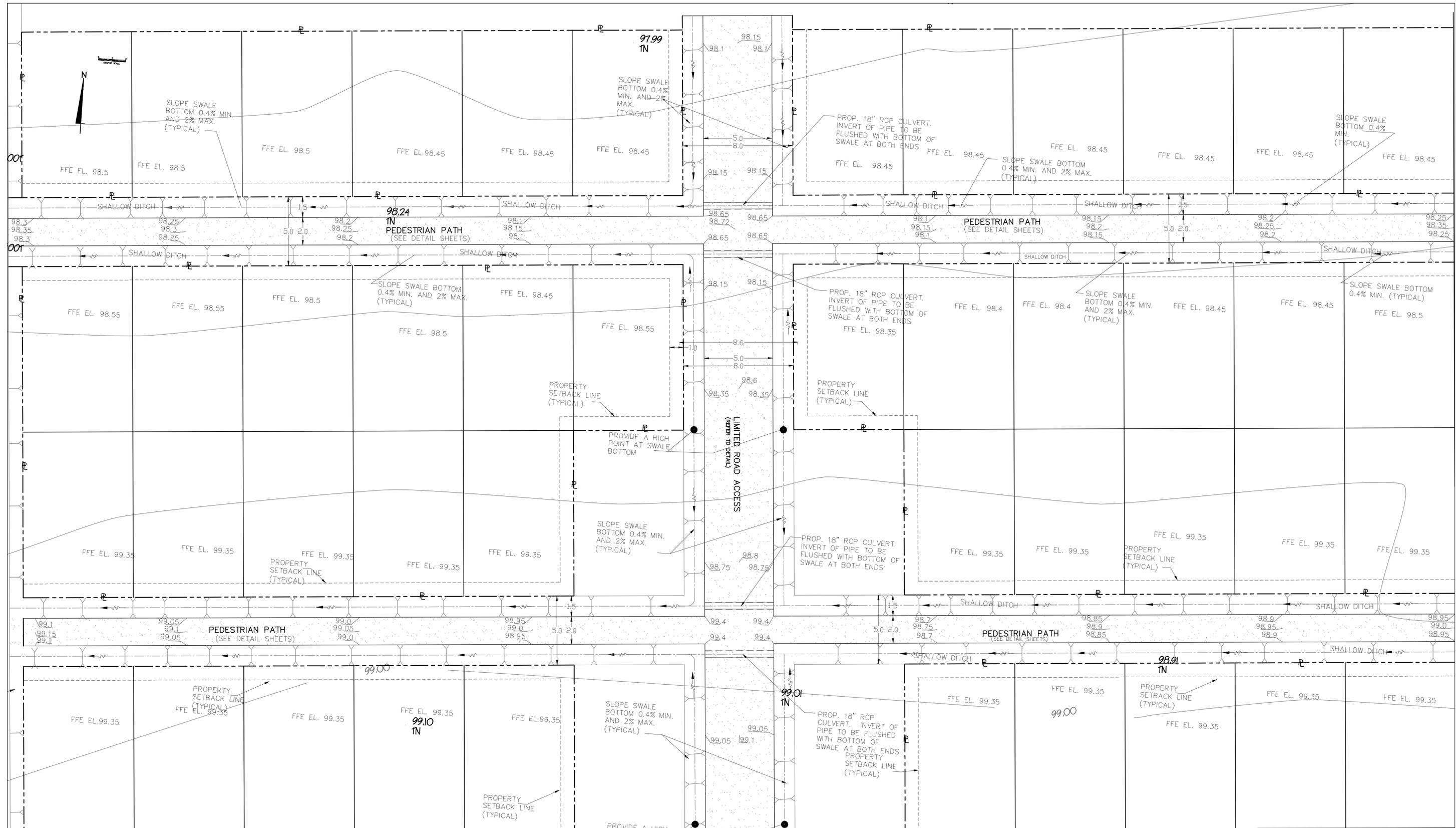
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 DESIGN BY: X.X.X.
 DRAWN BY: E.P.A.



BY: _____
 EMILE P. AMEDEE
 PROFESSIONAL ENGINEER
 57955 STATE OF FL.

DUMAY COMPOUND
 KEY SHEET FOR
 PAVING, GRADING AND DRAINAGE PLAN

SHEET
 C-1



REVISIONS		
DATE	BY	DESCRIPTION

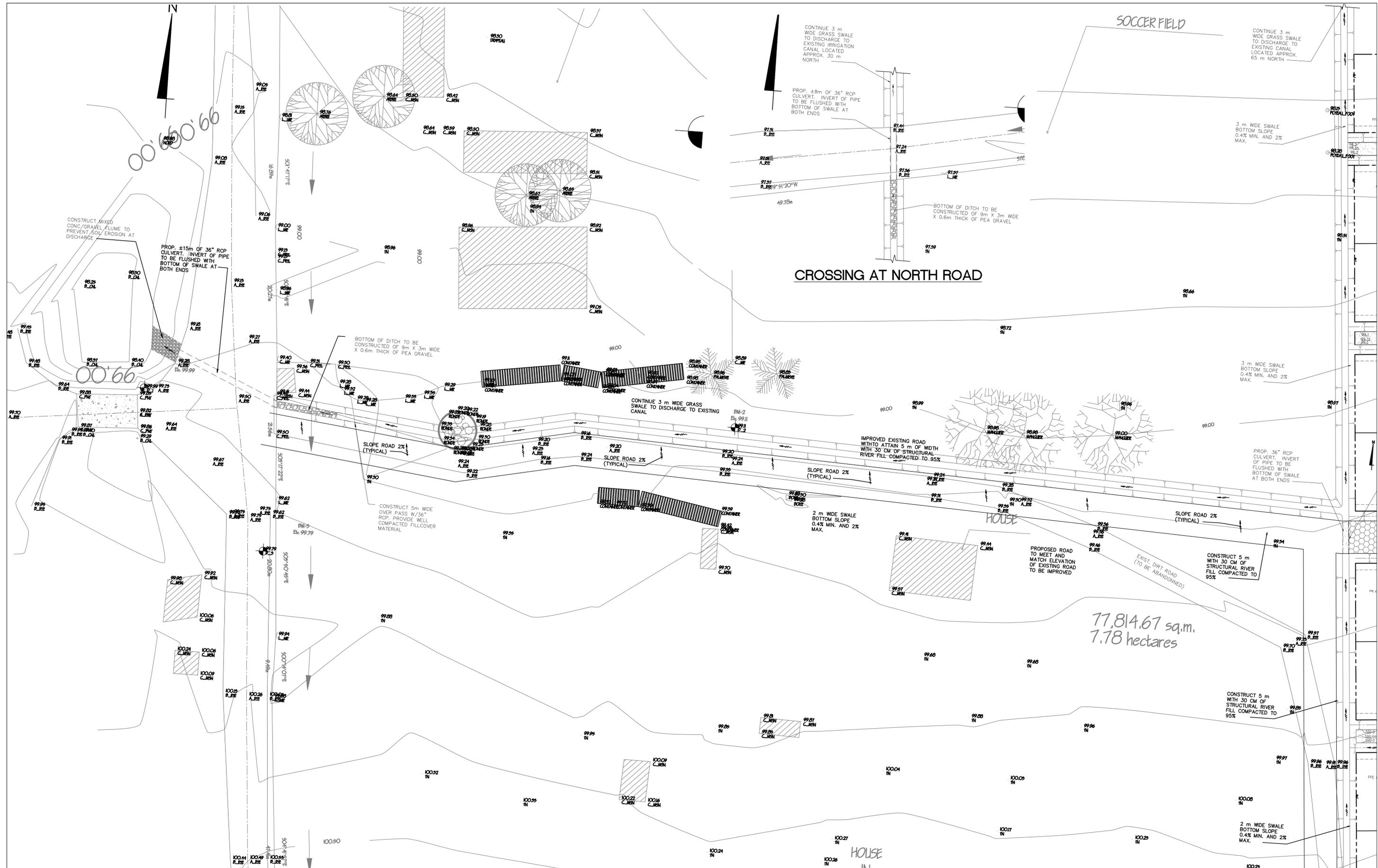
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 DRAWN BY: E.P.A.



BY: EMILE P. AMEDEE
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DUMAY COMPOUND
 PAVING, GRADING AND DRAINAGE PLAN

SHEET
 C-2



77,814.67 sq.m.
7.78 hectares

REVISIONS		
DATE	BY	DESCRIPTION

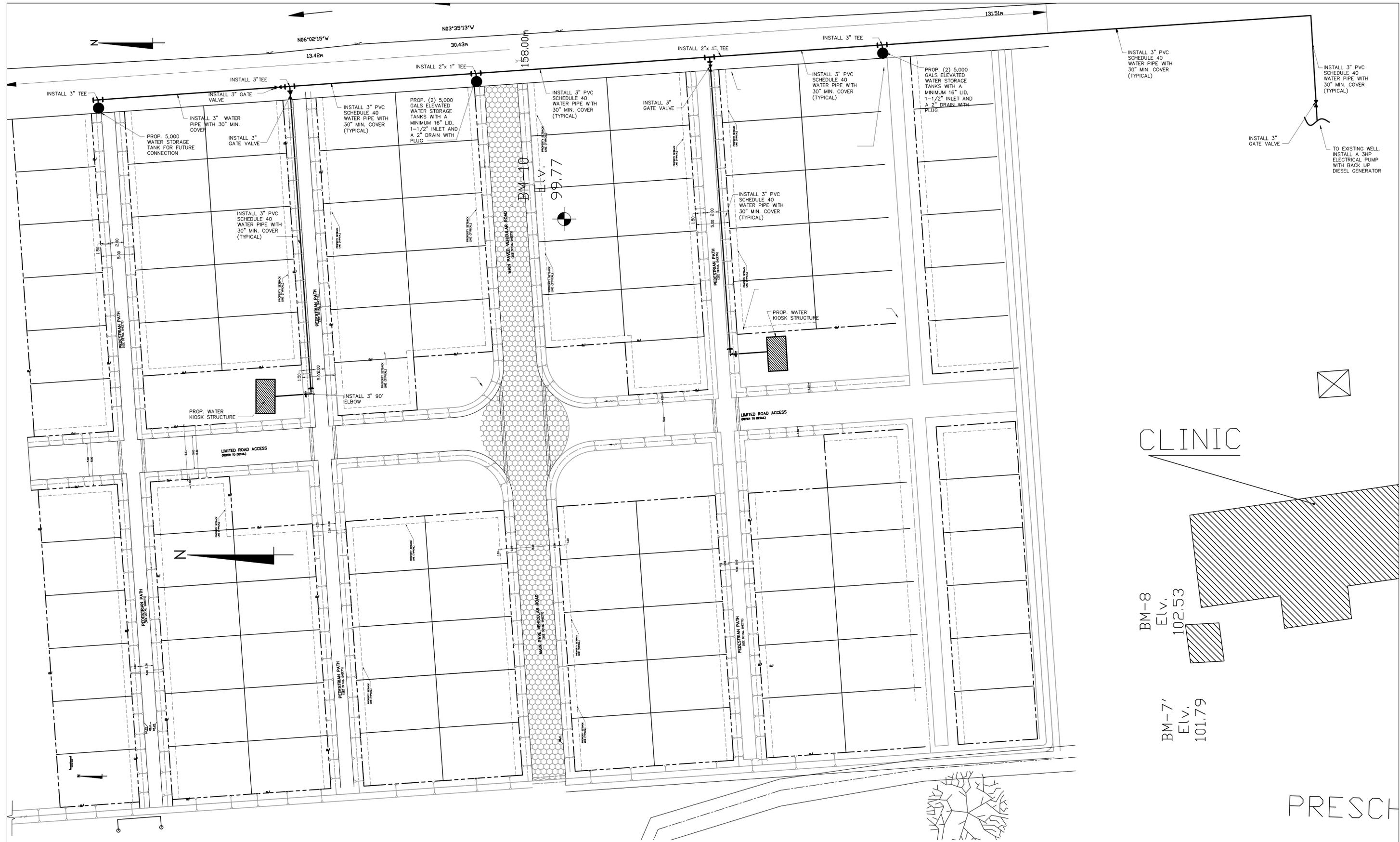
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 DESIGN BY: X.X.X.
 DRAWN BY: E.P.A.



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DUMAY COMPOUND
 PAVING, GRADING AND DRAINAGE PLAN

SHEET
 C-5



CLINIC

BM-8
Elev. 102.53

BM-7'
Elev. 101.79

PRESCH

REVISIONS		
DATE	BY	DESCRIPTION

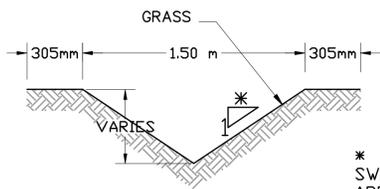
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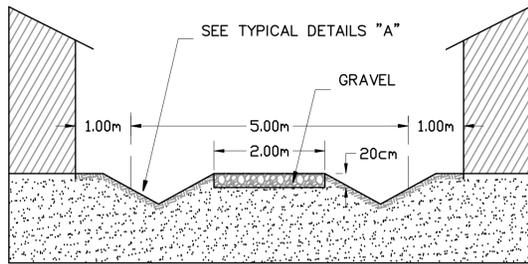
DUMAY COMPOUND
 UTILITIES PLAN

SHEET
 C-6

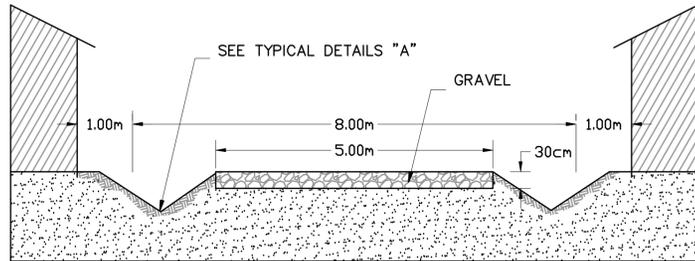


* SIDE SLOPE 6:1 MAXIMUM AT SHALLOW SWALE AREA AND 3:1 MAX IN OTHER SWALE AREAS

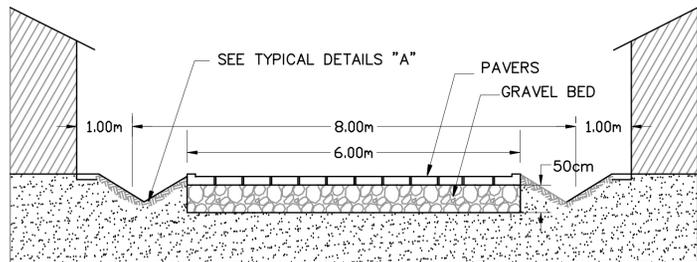
TYPICAL DETAIL "A"
GRASS DITCH
NOT TO SCALE



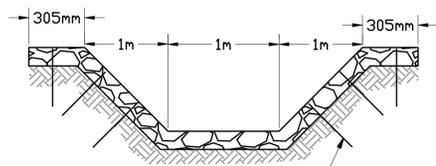
5 m PEDESTRIAN PATH – CROSS SECTION



8 m LIMITED ACCESS ROAD – CROSS SECTION

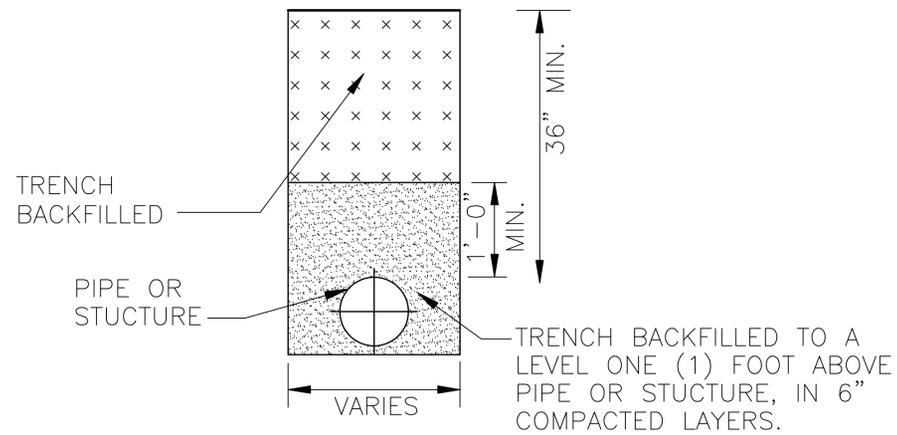


10 m PAVED VEHICULAR ROAD – CROSS SECTION

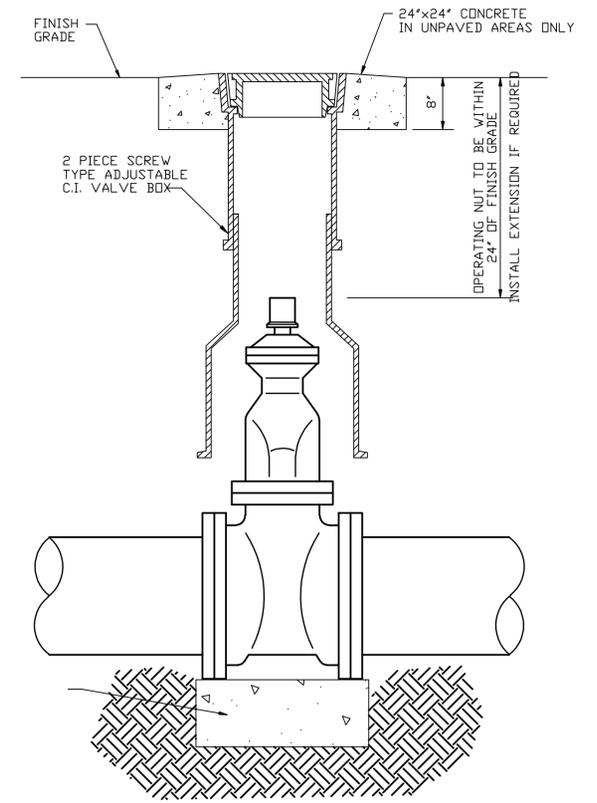


DITCH SIDES TO BE STAKED TO SLOPE USING #4 BAR TO PREVENT SLIPPING (EVERY 1.5m LONGITUDINALLY)(TYP.)

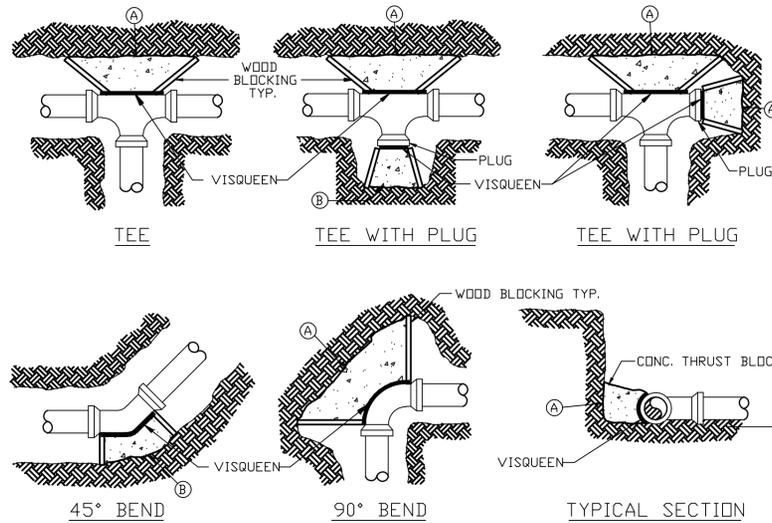
DISCHARGING POINT
MIXED ROCK AND CONCRETE DITCH AT CANAL DISCHARGE
NOT TO SCALE



PIPE TRENCH DETAIL
N.T.S.



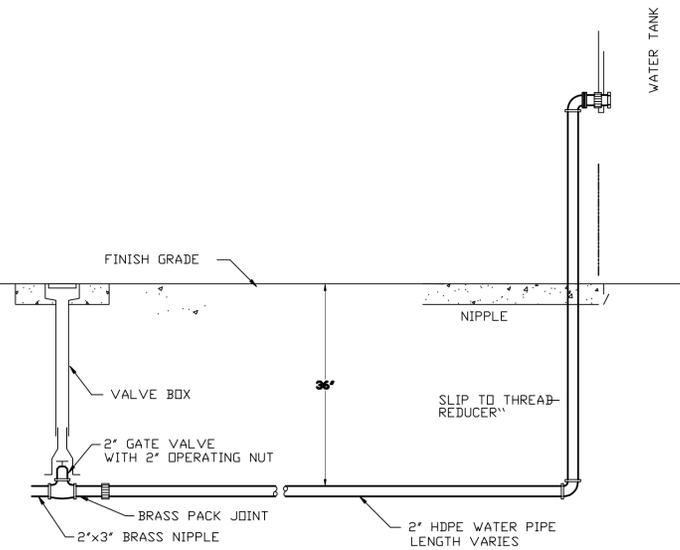
TYPICAL GATE VALVE AND VALVE BOX



MINIMUM CONCRETE THRUST BLOCKING BEARING ON UNDISTURBED MATERIAL (SQ. FT.)		PIPE SIZE			
MARK		4" OR 6"	8"	10"	12"
A					
B					

NOTES:

1. THE AREAS IN THE TABLE ARE BASED ON _____ POUNDS PER SQUARE FOOT SOIL BEARING AGAINST THE UNDISTURBED TRENCH WALL AND ARE TO REPRESENT THE MINIMUM VERTICAL PROJECTED AREA AT THE THRUST BLOCK IN A PLANE PERPENDICULAR TO THE LINE BISECTING THE INCLUDING ANGLE OF THE FITTING.
2. POUR THRUST BLOCKS AGAINST UNDISTURBED MATERIAL. WHERE TRENCH WALL HAS BEEN DISTURBED, EVACUATE LOOSE MATERIAL AND EXTEND THRUST BLOCK TO UNDISTURBED MATERIAL.
3. ON BENDS AND TEES, EXTEND THRUST BLOCKS FULL LENGTH OF FITTING.
4. DO NOT COVER COUPLING OR JOINTS WITH CONCRETE.
5. CONCRETE TO BE 2500 P.S.I. MINIMUM 28 DAY STRENGTH.
6. TABLE TO BE COMPLETED BY DESIGNING ENGINEER.



TYPICAL WATER LINE RUN

TYPICAL 5,000 GAL WATER STORAGE TANK

REVISIONS

DATE	BY	DESCRIPTION

DATE: 00/00/00
SCALE: AS NOTED
DESIGN BY: X.X.X.
DRAWN BY: E.P.A.



BY: EMILE P. AMEDEE
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DUMAY COMPOUND
CIVIL DETAILS

SHEET
C-7