FINAL SUBDIVISION AND LAND DEVELOPMENT PLAN

VILLAGE AT EAST COCALICO

EAST COCALICO TOWNSHIP, LANCASTER COUNTY, PA

CERTIFICATES

CERTIFICATION OF ACCURACY

I HEREBY CERTIFY THAT, TO THE BEST OF MY KNOWLEDGE, THE SURVEY SHOWN AND DESCRIBED HEREON IS TRUE AND CORRECT TO THE ACCURACY REQUIRED BY THE EAST COCALICO TOWNSHIP SUBDIVISION AND LAND DEVELOPMENT ORDINANCE. THE ERROR OF CLOSURE IS NO GREATER THAN ONE FOOT IN 10,000 FEET.

_____, 20____ _____

GENERAL PLAN

I HEREBY CERTIFY THAT, TO THE BEST OF MY KNOWLEDGE, THE PLAN SHOWN AND DESCRIBED HEREON IS TRUE AND CORRECT TO THE ACCURACY REQUIRED BY THE EAST COCALICO TOWNSHIP SUBDIVISION AND LAND DEVELOPMENT ORDINANCE.

_____, 20____ _____

STORMWATER MANAGEMENT CERTIFICATION

I HEREBY CERTIFY THAT, TO THE BEST OF MY KNOWLEDGE, THE STORM MANAGEMENT FACILITIES SHOWN AND DESCRIBED HEREON ARE DESIGNED IN CONFORMANCE WITH THE EAST COCALICO TOWNSHIP STORM WATER MANAGEMENT AND EARTH DISTURBANCE ORDINANCE OF 2014.

_____, 20____ _____

CERTIFICATE FOR FINAL APPROVAL BY THE BOARD OF SUPERVISORS

AT A MEETING HELD ON _____, 20____, THE BOARD OF SUPERVISORS OF EAST COCALICO TOWNSHIP GRANTED CONDITIONAL APPROVAL OF THIS FINAL PLAN, INCLUDING THE COMPLETE SET OF PLANS AND DOCUMENTS CONTAINED IN TOWNSHIP FILE NO. _____.

THE APPLICANT COMPLETED ALL CONDITIONS OF APPROVAL ON _____, 20____. THE APPLICANT HAS INFORMED BY THE TOWNSHIP ON _____, 20____ THE "PLAN DELIVERY NOTIFICATION DATE" THAT THE PLAN HAD BEEN SIGNED ON BEHALF OF THE TOWNSHIP AND WAS AVAILABLE FOR DELIVERY TO THE APPLICANT ON THAT DATE. THIS PLAN MUST BE RECORDED WITHIN 90 DAYS OF THE PLAN DELIVERY NOTIFICATION DATE..

_____
CHAIRMAN

_____
VICE-CHAIRMAN

_____
SECRETARY

PLANNING COMMISSION REVIEW STATEMENT

AT A MEETING HELD ON _____, 20____, THE EAST COCALICO TOWNSHIP PLANNING COMMISSION REVIEWED THIS PLAN.

_____ _____
CHAIRMAN OR DESIGNEE MEMBER

_____ _____
MEMBER MEMBER

_____ _____
MEMBER MEMBER

_____ _____
MEMBER MEMBER

LANCASTER COUNTY PLANNING DEPARTMENT'S REVIEW CERTIFICATE

THIS PLAN, BEARING LCPC FILE NO. _____, REVIEWED BY STAFF OF THE LANCASTER COUNTY PLANNING DEPARTMENT ON _____, 2020, AS REQUIRED BY THE PENNSYLVANIA MUNICIPALITIES PLANNING CODE, ACT 247, OF 1968, AS AMENDED. THIS CERTIFICATE DOES NOT REPRESENT NOR GUARANTEE THAT THIS PLAN COMPLIES WITH THE VARIOUS ORDINANCES, RULES, REGULATIONS OR LAWS OF THE LOCAL MUNICIPALITY, THE COMMONWEALTH, OR THE FEDERAL GOVERNMENT.

_____ _____

CERTIFICATE OF OWNERSHIP, ACKNOWLEDGMENT OF PLAN AND OFFER OF DEDICATION (CORPORATE)

COMMONWEALTH OF PENNSYLVANIA
COUNTY OF LANCASTER

ON THIS, THE _____ DAY OF _____, 20____, BEFORE ME, THE UNDERSIGNED OFFICER, PERSONALLY APPEARED _____ BEING _____ OF _____, WHO BEING DULY SWORN ACCORDING TO LAW, DEPOSES AND SAYS THAT THE CORPORATION IS THE _____ OF THE PROPERTY SHOWN ON THIS PLAN, THAT HE IS AUTHORIZED TO EXECUTE SAID PLAN ON BEHALF OF THE CORPORATION, THAT THE PLAN IS THE ACT AND DEED OF THE CORPORATION, THAT THE CORPORATION DESIRES THE SAME TO BE RECORDED AND ON BEHALF OF THE CORPORATION FURTHER ACKNOWLEDGES, THAT ALL STREETS AND OTHER PROPERTY IDENTIFIED AS PROPOSED PUBLIC PROPERTY ARE HEREBY DEDICATED TO THE PUBLIC USE - (EXCEPTING THOSE AREAS LABELED "NOT FOR DEDICATION").

_____

_____

_____
NOTARY PUBLIC

NOTES

GENERAL DESIGN NOTES

1. THE PURPOSE OF THIS PLAN IS TO SUBDIVIDE THE 27± ACRE TRACT INTO 5 SINGLE FAMILY DETACHED RESIDENTIAL LOTS (LOTS 4, 5, 6, 7 & 8), 3 LOTS CONTAINING 118 TOWNHOME STYLE UNITS (LOTS 1, 2 & 3), AND 1 OPEN SPACE LOT (LOT 9). ALL LOTS ARE TO REMAIN UNDER THE SAME OWNERSHIP AS COMMON FACILITIES TO SERVE THE DEVELOPMENT INCLUDING BUT NOT LIMITED TO A CLUBHOUSE, TRASH COLLECTION, US MAIL AND STORMWATER FOR THE DEVELOPMENT.
2. SOILS INFORMATION TAKEN FROM SHEETS 11 AND 12 OF THE SOIL SURVEY OF LANCASTER COUNTY, PA, DATED MAY 1985.
3. NO STEEP SLOPES HAVE BEEN MAPPED ON THE PROJECT SITE ON MAP 6 - NATURAL FEATURES MAP, EAST COCALICO TOWNSHIP COMPREHENSIVE PLAN, DATED MARCH 1998. SLOPES GREATER THAN 15% GRADIENT HAVE BEEN MAPPED ON THE ATTACHED PLANS UTILIZING ACTUAL SURVEY INFORMATION. THE STEEP SLOPES ARE LOCATED ADJACENT TO HALEY STREET AND IN AREAS OF PRIOR EXCAVATION ALONG THE EXISTING TRACT LINE. DISTURBANCE IN THESE AREAS WILL BE MITIGATED THROUGH THE INSTALLATION OF EROSION AND SEDIMENTATION CONTROL MEASURES.
4. PER REQUIREMENTS OF CHAPTER 102 OF THE ADMINISTRATIVE CODES OF TITLE 25 (PA DEP RULES AND REGULATIONS) A COPY OF THE EROSION AND SEDIMENT POLLUTION CONTROL PLAN AND ITS ACCOMPANYING NARRATIVE MUST BE AVAILABLE ON SITE DURING CONSTRUCTION UNTIL THE SITE HAS BEEN PERMANENTLY STABILIZED.
5. EACH LOT SHALL HAVE TWO (2) OFF-STREET PARKING SPACES PER DWELLING UNIT LOCATED BEHIND THE MINIMUM BUILDING SETBACK LINE (MBSL) AS REQUIRED BY THE EAST COCALICO TOWNSHIP ZONING ORDINANCE.
6. NO WALL, FENCE, OR OTHER STRUCTURE SHALL BE ERECTED, ALTERED OR MAINTAINED, AND NO HEDGE, TREE, SHRUB OR GROWTH SHALL BE PLANTED OR MAINTAINED WHICH EXCEEDS TWO AND ONE-HALF (2-1/2') FEET THAT MAY RESULT IN A VISUAL OBSTRUCTION WITHIN THE CLEAR SIGHT TRIANGLE EASEMENTS AT STREET INTERSECTIONS AND INTERSECTIONS OF DRIVEWAYS AND STREETS.
7. ANY REVISIONS TO THIS PLAN AFTER THE DATE OF PLAN PREPARATION OR THE LATEST REVISION SHALL NOT BE THE RESPONSIBILITY OF DAVID MILLER/ASSOCIATES, INC. SUBSTITUTIONS FOR ANY MATERIAL NOTED ON THESE PLANS REQUIRES PRIOR WRITTEN APPROVAL OF DAVID MILLER/ASSOCIATES, INC. AND EAST COCALICO TOWNSHIP.
8. NO ONE SHALL SCALE FROM THESE PLANS.
9. ALL DIMENSIONS SHOWN ON THE PLANS ARE TAKEN FROM THE FACE OF CURB AND EXTERIOR FACE OF BUILDINGS UNLESS OTHERWISE NOTED ON THE PLAN.
10. A HIGHWAY OCCUPANCY PERMIT IS REQUIRED PURSUANT TO SECTION 420 OF THE ACT OF JUNE 1, 1945 (P.L. 1242, NO. 428), KNOWN AS THE "STATE HIGHWAY LAW", BEFORE A DRIVEWAY ACCESS TO A STATE HIGHWAY IS PERMITTED. ACCESS TO STATE HIGHWAY SHALL ONLY BE AS AUTHORIZED BY AN OCCUPANCY PERMIT. THE APPROVAL OF THIS PLAN SHALL NO WAY IMPLY THAT A STATE HIGHWAY PERMIT CAN BE ACQUIRED OR THAT EAST COCALICO TOWNSHIP WILL SUPPORT, ENCOURAGE, OR NOT OPPOSE THE GRANTING OF SUCH A PERMIT. IT IS POSSIBLE THAT ACCESS TO THE PROPERTY FROM A STATE HIGHWAY MIGHT NOT BE PERMITTED BY THE COMMONWEALTH, AND THE PROPERTY THEREFORE COULD NOT BE USED FOR THE PURPOSE INTENDED BY ANY PURCHASER. PURCHASERS ARE ACCORDINGLY WARNED AND SHOULD GOVERN THEMSELVES ACCORDINGLY, ACQUIRING STATE AND LOCAL HIGHWAY OCCUPANCY PERMITS BEFORE PURCHASING ANY PREMISES.
11. ALL PROPOSED STREETS ARE TO BE OFFERED FOR DEDICATION TO EAST COCALICO TOWNSHIP.
12. THE MUNICIPALITY IS NOT RESPONSIBLE FOR CONSTRUCTION, OWNERSHIP OR MAINTENANCE OF ANY FACILITY NOT DEDICATED FOR PUBLIC USE.
13. UNLESS AND UNTIL THE PROPOSED STREET, LABELED AS "HALEY STREET" ON THIS PLAN, IS TRANSFERRED TO EAST COCALICO TOWNSHIP, SUCH STREET SHALL BE MAINTAINED BY THE DEVELOPER. THE DEVELOPER ASSUMES SUCH MAINTENANCE OBLIGATIONS. ANY PORTION OF SUCH STREET AND RELATED IMPROVEMENTS THAT ARE NOT TRANSFERRED TO EAST COCALICO TOWNSHIP SHALL BE MAINTAINED BY THE DEVELOPER AND ASSUMES SUCH MAINTENANCE OBLIGATIONS.
14. STREET NAME SIGNS SHALL BE LOCATED AT ALL STREET INTERSECTIONS. DESIGN AND PLACEMENT OF SUCH SIGNS SHALL BE APPROVED BY EAST COCALICO TOWNSHIP. ALL STREET NAME SIGNS SHALL BE CONSTRUCTED AND INSTALLED BY THE DEVELOPER ACCORDING TO THE SPECIFICATIONS OF THE TOWNSHIP AND PENNDOT. STREET NAME SIGNS SHALL PROVIDE SIX INCH (6") HIGH LETTERS ON A MAXIMUM SIGN SIZE OF EIGHT INCHES BY THIRTY-SIX INCHES (8"X36"). SIGNS SHALL BE REFLECTORIZED WHITE ON A GREEN BACKGROUND. (SEE PENNDOT PUBLICATION 236M) WHERE POSSIBLE COORDINATE WITH EAST COCALICO ROADMASTER TO COMBINE ROAD SIGNS ON TOP OF STOP SIGNS.
15. MANOR DRIVE AND HALEY STREET ARE LOCAL STREETS, AND EAST KESTREL DRIVE IS A MINOR COLLECTOR STREET.
16. ALL INTERNAL STREETS ARE DESIGNED WITH A SPEED LIMIT RESTRICTION OF 25 MILES PER HOUR.
17. PER A LETTER DATED OCTOBER 24, 2003, COCALICO SCHOOL DISTRICT WILL NOT REQUIRE SCHOOL BUS SHELTERS TO BE LOCATED WITHIN THIS DEVELOPMENT.
18. TENTATIVE LOCATIONS FOR STREET LIGHTING ARE SHOWN ON SHEETS 18 AND 19. LIGHT FIXTURES AND LOCATIONS ARE SUBJECT TO PPL APPROVAL. FIXTURES SHALL BE PPL "VICTORIAN" STYLE LIGHTS.
19. A PRE-CONSTRUCTION MEETING SHALL BE SCHEDULED PRIOR TO ANY EARTH DISTURBANCE ACTIVITY AS PER NPDES PERMIT REQUIREMENTS.
20. THE ACTIVE RECREATION AREAS ARE SHOWN FOR ILLUSTRATIVE PURPOSES.
21. THE OPEN SPACE RECREATION AREAS ARE NOT PROPOSED FOR DEDICATION TO THE TOWNSHIP. THESE AREAS WILL BE MAINTAINED BY THE OWNER.
22. THE APPLICANT HAS THE RIGHT TO USE AND IMPROVE THE SERVICE ROAD EASEMENT AS SET FORTH IN A SEPARATE QUIT CLAIM DEED, RECORDED IN THE RECORDER OF DEEDS OFFICE OF LANCASTER COUNTY IN RECORD BOOK 4928, PAGE 385, REFERENCING THE SERVICE ROAD. IT IS ALSO REFERENCED IN THE SURVEY PREPARED FOR PENNDOT AS RECORDED IN COUNTY PLAN BOOK V-5-42 SHEETS 10 AND 12 FOR ROUTE 1072, SECTION B06, DISTRICT 8-0, EAST COCALICO TOWNSHIP, LANCASTER COUNTY, PA, WHICH PLAN WAS PART OF THE NOTICE OF CONDEMNATION THAT WAS FILED TO THE COURT OF COMMON PLEAS No. 133, NOVEMBER 1970 AND RECORDED IN LANCASTER COUNTY RECORDER OF DEEDS OFFICE IN DEED BOOK M-60, PAGE 1040.
23. AS-BUILT DRAWINGS WILL BE REQUIRED UPON COMPLETION OF CONSTRUCTION.
24. THE TEMPORARY GRADING EASEMENTS SHOWN ON PLAN SHEET NUMBER 4 ARE IN ACCORDANCE WITH A TEMPORARY GRADING EASEMENT AGREEMENT AND AN AGREEMENT BOTH BETWEEN QUAIL HOLLOW HOMEOWNERS ASSOCIATION, INC. AND EAST COCALICO ASSOCIATES.
25. ALL SIGNAGE TO MEET EAST COCALICO TOWNSHIP, PENNDOT PUBLICATION 236M, AND MUTCD STANDARDS. BREAKAWAY POSTS SHALL BE USED FOR ALL OF THE PROPOSED SIGNAGE. BREAKAWAY MODIFIED WOOD POSTS ARE PERMITTED.
26. ANY BASEMENTS CONSTRUCTED WITHIN THE PROXIMITY OF ANY RAIN GARDEN AND BELOW THE WATER STORAGE SHALL BE CONSTRUCTED WITH WATERPROOF MATERIALS AND CONSTRUCTION PRACTICES.
27. THE DEVELOPER SHALL PROVIDE PLANS AND COORDINATE THE SITE DESIGN WITH THE UTILITY PROVIDERS THAT WILL SERVICE THE DEVELOPMENT (ELECTRIC, PHONE, GAS, ETC.). THE PROPOSED UTILITIES SHALL BE CLEARLY IDENTIFIED RELATIVE TO HORIZONTAL AND VERTICAL DEPTH. ALL FUTURE UTILITY PLANS SHALL BE PROVIDED TO THE TOWNSHIP FOR THEIR REVIEW AND APPROVAL.
28. UPON COMPLETION OF ALL REQUIRED IMPROVEMENTS AND PRIOR TO FINAL OBSERVATION OF IMPROVEMENTS, THE DEVELOPER SHALL SUBMIT AN "AS-BUILT PLAN", ACCORDING TO THE SPECIFICATIONS OF SECTION 194-16, 194-23 AND 185-20.
29. UNDER NO CIRCUMSTANCES SHALL EAST COCALICO TOWNSHIP, THE EAST COCALICO TOWNSHIP AUTHORITY, OR ANY OFFICER OR EMPLOYEE OF EAST COCALICO TOWNSHIP OR THE EAST COCALICO TOWNSHIP AUTHORITY OR ANY CONSULTANT TO THE TOWNSHIP, OR EAST COCALICO TOWNSHIP AUTHORITY ASSUME ANY LIABILITY FOR ANY DAMAGES THAT MAY RESULT FROM DEVELOPMENT IN AN AREA OF CARBONATE GEOLOGY.
30. THE APPLICANT/ DEVELOPER SHALL BE RESPONSIBLE FOR ANY FUTURE STUDIES, RESOLUTIONS OR ORDINANCES NECESSARY TO AUTHORIZE THE INSTALLATION OF TRAFFIC CONTROL SIGNS OR PARKING RESTRICTION SIGNAGE ALONG ANY FUTURE PUBLIC DEDICATED ROADWAY, AS MAY BE REQUIRED AS PART OF THE PROJECT.
31. THE PROPERTY OWNER (OF THE TOWNHOUSE PROPERTY) SHALL GRANT ANY NECESSARY TEMPORARY EASEMENTS IN THE AREA OF THE FUTURE ROADWAY EXTENSION OF EAST KESTREL DRIVE TO FACILITATE THE FUTURE CONSTRUCTION OF THE ROADWAY CONNECTION IN ACCORDANCE WITH APPLICABLE TOWNSHIP STANDARDS.
32. IT IS THE INTENT OF THE DEVELOPER THAT THE PROPERTY AND ITS IMPROVEMENTS (EXCLUDING FEATURES WITHIN ROAD RIGHT-OF-WAY ULTIMATELY DEDICATED TO AND ACCEPTED BY THE TOWNSHIP) WILL REMAIN IN SINGLE OWNERSHIP WITH COMMON FACILITIES. IF IN THE FUTURE THE OWNER DESIRES TO IMPOSE A CONDOMINIUM OR PLANNED COMMUNITY ORGANIZATION ON THE PROPERTY, ORGANIZATIONAL DOCUMENTS AND PLANS WILL BE REQUIRED TO BE SUBMITTED TO THE TOWNSHIP FOR REVIEW AND ANY REQUIRED APPROVALS.

SURVEY NOTES

1. BOUNDARY AND TOPOGRAPHIC SURVEY PREPARED BY HUCK SURVEYING, INC., 2209 QUARRY DRIVE, SUITE C-36, WEST LAWN, PA 19609. TOPOGRAPHY WAS COLLECTED BY FIELD SURVEY IN APRIL 2003 USING DEEDS AND PLANS OF RECORD SHOWN HEREON, SURVEY PLANS PREPARED BY WEBER SURVEYORS, DWG. #XL-92 AND #L-633A AND PORTIONS OF SEWER DESIGN DRAWINGS OF THE EAST COCALICO TOWNSHIP AUTHORITY, AND USES A CONTOUR INTERVAL OF ONE (1') FOOT. BENCHMARK FOR THE TOPOGRAPHY SHOWN IS CONCRETE MONUMENT FOUND AT THE CORNER OF QUAIL HOLLOW SECTION 3 ON THE EASTERLY RIGHT-OF-WAY LINE OF MUDDY CREEK ROAD. ELEVATION 458.77. (DATUM BASED ON EAST COCALICO TOWNSHIP AUTHORITY DATUM)
2. PERMANENT MONUMENTS & MARKERS SHALL BE ACCURATELY PLACED AS SHOWN ON THE PLAN. MONUMENTS SHALL BE CONCRETE WITH A FLAT TOP HAVING A MINIMUM WIDTH OR DIAMETER OF FOUR (4") INCHES AND A MINIMUM LENGTH OF 30". CAST IN-PLACE OR PRECAST CONCRETE MONUMENTS SHALL BE MARKED WITH A CENTER PUNCH MARK IN A 3/4" COPPER OR BRASS DOWEL. METALLIC MARKERS SHALL CONSIST OF COPPER WELD BARS AT LEAST 30" IN LENGTH AND NOT LESS THAN 3/4" IN DIAMETER. DRILL HOLES AT LOT LINE EXTENSIONS SHALL BE PLACED IN CONCRETE CURB FOR LOTS NO. 4 THROUGH NO. 8.
3. PERMANENT MARKERS AND MONUMENTS SHALL BE SET FOLLOWING APPROVAL OF THE PLAN AND COMPLETION OF FINAL LOT GRADING. SEE PLAN SHEETS 4 AND 5.
4. DAVID MILLER/ ASSOCIATES, INC. HAS UPDATED ALL ADJOINERS FOR THE FINAL PLAN SET PER CURRENT COUNTY RECORDS.

CONTRACTOR NOTES

1. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND ELEVATIONS ON SITE PRIOR TO THE START OF CONSTRUCTION.
2. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. DAMAGE TO ANY UTILITY SHALL BE REPAIRED TO THE SATISFACTION OF THE OWNER OF THE UTILITY COMPANY OR AUTHORITY, AT THE CONTRACTOR'S EXPENSE.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ANY PERMITS FROM THE MUNICIPALITY RELATIVE TO CONSTRUCTION PROPOSED ON THIS PLAN.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TRAFFIC CONTROL, TRENCH BARRICADING, COVERING, SHEETING AND SHORING, AS THE NEED ARISES.
5. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT THE GRADING PLAN IS IMPLEMENTED CORRECTLY, AND THAT PROPER DRAINAGE IS PROVIDED DURING CONSTRUCTION.
6. THESE PLANS, PREPARED BY DAVID MILLER/ASSOCIATES, INC., DO NOT EXTEND TO OR INCLUDE SYSTEMS PERTAINING TO THE SAFETY OF THE CONSTRUCTION CONTRACTOR, OF ITS EMPLOYEES, AGENTS OR REPRESENTATIVES IN THE PERFORMANCE OF THE WORK. THE SEAL OF DAVID MILLER/ASSOCIATES, INC. REGISTERED PROFESSIONALS HEREON DOES NOT EXTEND TO ANY SUCH SAFETY SYSTEMS THAT MAY NOW OR HEREAFTER BE INCORPORATED INTO THESE PLANS. THE CONSTRUCTION CONTRACTOR SHALL PREPARE OR OBTAIN THE APPROPRIATE SAFETY SYSTEMS WHICH MAY BE REQUIRED BY U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) AND/OR LOCAL REGULATIONS.
7. CONTRACTOR SHALL SURVEY AND NOTE STATION AND INVERT INFORMATION FOR ALL CONNECTIONS, VALVES, AND HYDRANTS FOR INCLUSION ON AS-BUILT.

STORMWATER MANAGEMENT NOTES

1. ALL STORMWATER FACILITIES NOT WITHIN THE PUBLIC STREET RIGHT-OF-WAY SHALL BE PROVIDED WITH AN EASEMENT AS SHOWN ON THE PLANS.
2. STORMWATER FACILITIES SHALL BE OWNED BY THE OWNER OF THE LOT ON WHICH THEY ARE LOCATED.
3. STORMWATER FACILITIES NOT WITHIN THE PUBLIC STREET RIGHT-OF-WAY SHALL BE MAINTAINED BY THE VILLAGE AT EAST COCALICO OWNER IN ACCORDANCE WITH THE MAINTENANCE SPECIFICATIONS PROVIDED ON PLAN SHEET NO. 8.
4. NOTHING SHALL BE PLACED, PLANTED, SET OR PUT WITHIN THE AREA OF AN EASEMENT THAT WOULD ADVERSELY AFFECT THE FUNCTION OF THE EASEMENT. EAST COCALICO TOWNSHIP SHALL HAVE THE RIGHT TO:
   A. ACCESS THE SITE TO INSPECT STORMWATER FACILITIES AT ANY TIME.
   B. REQUIRE THAT THE LAND OWNER TAKE CORRECTIVE MEASURES AND ASSIGN THE LAND OWNER REASONABLE TIME PERIODS FOR ANY NECESSARY ACTION.
   C. AUTHORIZE MAINTENANCE TO BE DONE AND LIEN ALL COSTS OF ALL WORK AGAINST THE PROPERTIES OF THE PRIVATE ENTITY RESPONSIBLE FOR MAINTENANCE.
5. ALL STORMWATER FACILITIES SHALL BE INSTALLED IN ACCORDANCE WITH PENN DOT PUBLICATION 408 SPECIFICATIONS, LATEST EDITION, AND AS SHOWN ON THESE DRAWINGS. ALL INLETS SHALL HAVE FLOW LINES INSTALLED AND INLET GRATES SHALL BE DEPRESSED ONE (1") INCH BELOW THE GRADE OF THE GUTTER. TYPE 'C' INLET TOPS SHALL BE PROVIDED WITH 8" THROAT.
6. STORMWATER MANAGEMENT FACILITIES WERE DESIGNED BASED ON AN IMPERVIOUS COVERAGE OF 2.07 AC. FOR LOT 1, 2.58 AC. FOR LOT 2, AND 2.12 AC. FOR LOT 3; INCLUDING THE HOUSE, SIDEWALK, AND ASSOCIATED DECK/PATIO, AND 4,000 S.F. FOR SINGLE FAMILY LOTS, INCLUDING THE HOUSE, DRIVEWAY, AND ANY FUTURE ADDITIONS. ADDITIONAL STORMWATER MANAGEMENT APPROVALS MAY BE REQUIRED BY EAST COCALICO TOWNSHIP IF THESE COVERAGES ARE EXCEEDED.
7. POINTS OF DISCHARGE FROM ANY SUMP PUMPS SHALL BE TO THE REAR OF THE BUILDING.
8. ANY BASEMENTS CONSTRUCTED WITHIN THE PROXIMITY OF ANY RAIN GARDEN AND BELOW THE WATER STORAGE ELEVATION SHALL BE CONCTRUCTED WITH WATERPROOF MATERIALS AND CONSTRUCTION PRACTICES.
9. ALL ROOF DRAIN SPOUTS SHALL DISCHARGE TO LAWN AREAS WHERE POSSIBLE AND HONOR THE FLOW PATTERNS AND DRAINAGE DIVIDES SHOWN ON THESE PLANS. ALL PIPED ROOF DRAINS SHALL DISCHARGE AT LEAST 10' FROM NEARBY DOWNSTREAM IMPERVIOUS AREAS SUCH AS STREETS, DRIVEWAYS OR SIDEWALKS.

ACT NO. 287 / 50

DAVID MILLER/ASSOCIATES, INC. HEREBY STATES THAT, PURSUANT TO THE PROVISIONS OF ACT NO. 287 OF DECEMBER 10, 1974, AS AMENDED BY ACT 50 OF 2017 OF THE PENNSYLVANIA LEGISLATURE, IT HAS PERFORMED THE FOLLOWING IN PREPARING THESE DRAWINGS REQUIRING EXCAVATION OR DEMOLITION WORK AT SITES WITHIN THE POLITICAL SUBDIVISION(S) SHOWN ON THE DRAWINGS:

1. PURSUANT TO SECTION 4, CLAUSE (2) OF SAID ACT, DAVID MILLER/ASSOCIATES, INC. REQUESTED FROM A ONE-CALL SYSTEM THE LINE AND FACILITY INFORMATION PRESCRIBED BY SECTION 2, CLAUSE (4) OF SAID ACT.
2. PURSUANT TO SECTION 4, CLAUSE (3) OF SAID ACT, DAVID MILLER/ASSOCIATES, INC. HAS SHOWN UPON THESE DRAWINGS, THE POSITION AND TYPE OF EACH LINE, AS DERIVED PURSUANT TO THE REQUEST MADE AS REQUIRED BY CLAUSE (2) OF SECTION 4 OF SAID ACT AND THE USER'S NAMES, DESIGNATED OFFICE ADDRESSES AND TELEPHONE NUMBERS, AS SHOWN ON THE LIST DESCRIBED IN SECTION 3.
3. PURSUANT TO SECTION 4, CLAUSE (4) OF SAID ACT, DAVID MILLER/ASSOCIATES, INC. HAS MADE "A REASONABLE EFFORT TO PREPARE THE CONSTRUCTION DRAWINGS TO AVOID DAMAGE TO AND MINIMIZE INTERFERENCE WITH A USER'S FACILITIES IN THE CONSTRUCTION AREA".

AND DAVID MILLER/ASSOCIATES, INC. DOES NOT MAKE ANY REPRESENTATION, WARRANTY, ASSURANCE OR GUARANTY THAT THE INFORMATION RECEIVED PURSUANT TO SAID REQUEST AND AS REFLECTED ON THESE DRAWINGS IS CORRECT OR ACCURATE, BUT DMA IS REFLECTING SAID INFORMATION ON THESE DRAWINGS ONLY DUE TO THE REQUIREMENTS OF SAID ACT 287 OF DECEMBER 10, 1974, AS AMENDED BY ACT 50 OF 2017.

DATE: 9/23/21 SERIAL NO.: 20212661958 BY: DAVID MILLER/ ASSOCIATES, INC.

UTILITY LIST

MET ED FIRSTENERGY
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PHACHEM@FIRSTENERGYCORP.COM

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100 HILL ROAD
DENVER, PA 17517
TONY LUONGO
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EAST COCALICO TOWNSHIP AUTHORITY
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KENNETH SPITLER
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PENCOR SERVICES BLUE RIDGE COMMUNICATIONS
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BOILING SPRINGS, PA 17007
SHANE MENTZER
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PPL ELECTRIC UTILITIES CORPORATION
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NORTHUMBERLAND, PA 17857
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WEST COCALICO TOWNSHIP AUTHORITY
P.O. BOX 244
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CAROLYN HILDEBRAND
wcauthority@gmail.com

WINDSTREAM
1450 CENTER POINT ROAD
HUNANTHA, IA 52233
LOCATE DESK PERSONNEL
locate.desk@windstream.com

PENNSYLVANIA ONE CALL SYSTEM, INC.
STOP. CALL BEFORE YOU DIG!

NEW MODIFICATION REQUESTS

THE FOLLOWING MODIFICATIONS HAVE BEEN REQUESTED AS PART OF THE FINAL PLAN SUBMISSION:
SECTION - 194-33.E.(1) - CURB CONSTRUCTION DEPTH

PHASING SCHEDULE

THE APPLICANT INTENDS TO CONSTRUCT THE IMPROVEMENTS ASSOCIATED WITH THIS SUBDIVISION IN ONE PHASE.

SITE DATA

LAND USE	SINGLE FAMILY DETACHED AND TOWNHOUSE
TOTAL SITE AREA	27.0648 ACRES
TOTAL NET AREA	23.1233 ACRES (EXCLUDING STREET RIGHTS OF WAY)
TOTAL NUMBER OF LOTS	9 LOTS 5 SINGLE FAMILY DETACHED LOTS (LOTS 4-8) 118 TOWNHOUSES (LOTS 1-3) 1 OPEN SPACE LOT (LOT 9)
TOTAL NUMBER OF UNITS	123 (5 SINGLE FAMILY DETACHED DWELLINGS AND 118 TOWNHOUSES)
LINEAR FEET OF NEW STREET	3,825 L.F.
REQUIRED RECREATION AREA	2,000 S.F. PER DWELLING UNIT = 2,000 x 123 = 246,000 S.F.
PROPOSED OPEN SPACE AND RECREATION EASEMENT AREA WITHIN LOT 2	85,658 S.F.
PROPOSED OPEN SPACE AND RECREATION EASEMENT AREA WITHIN LOT 3	353,176 S.F.
PROPOSED OPEN SPACE AND RECREATION EASEMENT AREA WITHIN LOT 9	100,949 S.F. THE PROPOSED OPEN SPACE AND RECREATION EASEMENT IS NOT PROPOSED FOR DEDICATION TO THE TOWNSHIP.

ZONING DATA

ZONING DISTRICT	R-3: HIGH DENSITY RESIDENTIAL	R-3: HIGH DENSITY RESIDENTIAL
USE	TOWNHOUSE	SINGLE FAMILY DETACHED
MIN. LOT SIZE	60,000 S.F. *	11,000 S.F.
MIN. LOT WIDTH (@ MBSL)	200'	90'
MIN. LOT DEPTH	200'	110'
FRONT YARD	30' (LOCAL STREETS)	30'
MINOR COLLECTOR SETBACK	60' TO CENTERLINE 30' TO RIGHT-OF-WAY (EAST KESTREL DRIVE)	
REAR YARD	20' 50' (FROM TRACT PROPERTY LINE)	30'
SIDE YARD TOTAL ONE SIDE	50' 25'	30' 15'
MAX. LOT COVERAGE	30%	30%
MAX. BLDG. HEIGHT	35'	35'
REQUIRED PARKING	2 SPACES PER DWELLING UNIT LOCATED BEHIND THE BUILDING SETBACK LINE SEE PLAN SHEET 19 FOR PARKING SUMMARY.	

* PROVIDING THERE SHALL BE NOT LESS THAN 4,300 S.F. FOR EACH TOWNHOUSE UNIT IN EACH PARCEL CONTAINING A TOWNHOUSE DEVELOPMENT.
LOT 1 - 36 TOWNHOUSES x 4,300 S.F. = 154,800 S.F. REQUIRED
LOT 1 AREA = 161,903 S.F.
LOT 2 - 45 TOWNHOUSES x 4,300 S.F. = 193,500 S.F. REQUIRED
LOT 2 AREA = 241,164 S.F.
LOT 3 - 37 TOWNHOUSES x 4,300 S.F. = 159,100 S.F. REQUIRED
LOT 3 AREA = 465,749 S.F.

PROVIDED LOT COVERAGE CALCULATIONS (PER ZO ORDINANCE 1413)

LOT NO. 1	21,920 S.F. (14.16%)
LOT NO. 2	27,968 S.F. (11.60%)
LOT NO. 3	21,920 S.F. (4.71%)
LOT NO. 4	1,500 S.F. (12.59%)
LOT NO. 5	1,500 S.F. (13.02%)
LOT NO. 6	1,500 S.F. (13.02%)
LOT NO. 7	1,500 S.F. (13.02%)
LOT NO. 8	1,500 S.F. (12.98%)
LOT NO. 9	NO COVERAGE

TOWNHOUSE REQUIREMENTS

1. THE DEVELOPMENT SHALL BE SERVED BY PUBLIC OR COMMUNITY SEWAGE DISPOSAL AND WATER SUPPLY FACILITIES.
2. A SYSTEM FOR PEDESTRIAN CIRCULATION WITHIN THE TRACT SHALL BE PROVIDED. THIS SYSTEM SHALL CONSIST OF A SERIES OF PAVED WALKWAYS FOUR (4) FEET IN WIDTH AND SHALL PROVIDE ACCESS TO COMMUNITY FACILITIES AND RECREATION AREAS.
3. WHEN A TOWNHOUSE IS LOCATED AT AN END OF A CONTINUOUS GROUPING OF TOWNHOUSES, THE TOWNHOUSE SHALL HAVE A MINIMUM SIDE YARD OF TWENTY-FIVE (25) FEET.
4. THE NUMBER OF TOWNHOUSE UNITS WITHIN A CONTINUOUS GROUPING SHALL NOT EXCEED EIGHT (8).
5. NO TOWNHOUSE WITHIN A CONTINUOUS ROW OF TOWNHOUSES SHALL BE CLOSER THAN FIFTY (50) FEET TO A DWELLING UNIT NOT IN THAT ROW OF TOWNHOUSES.
6. WITHIN ANY CONTINUOUS GROUP OF TOWNHOUSES THERE SHALL BE AT LEAST THREE (3) DIFFERENT ARCHITECTURAL PLANS HAVING DIFFERENT DESIGNS, BUILDING MATERIALS, AND EXTERIOR ELEVATIONS. IN ADDITION, NO MORE THAN TWO (2) CONTINUOUS TOWNHOUSES SHALL HAVE THE SAME FRONT SETBACK AND THE VARIATIONS IN FRONT SETBACK SHALL BE AT LEAST TWO (2) FEET.
7. NO TOWNHOUSE SHALL BE LOCATED WITHIN THIRTY (30) FEET OF ANY PUBLIC STREET RIGHT-OF-WAY LINE, NOR WITHIN TWENTY-FIVE (25) FEET OF A PRIVATE STREET.
8. PARKING SHALL BE PROVIDED ON THE LOT OF THE TOWNHOUSE OR IN A JOINT PARKING FACILITY FOR A GROUP OF TOWNHOUSES WITH SUCH DEED RESTRICTIONS AS ARE NECESS

NOTES

FLOODPLAINS / WETLANDS

1. ALL CONSTRUCTION IN AREAS ADJACENT TO FLOODPLAINS SHALL CONFORM TO SECTION 912 OF THE EAST COCALICO TOWNSHIP ZONING ORDINANCE.
2. THE 100-YEAR FLOODPLAINS OF THE NATURAL DRAINAGE WAYS HAVE BEEN DETERMINED PER THE EAST COCALICO TOWNSHIP SUBDIVISION AND LAND DEVELOPMENT ORDINANCE BY DAVID MILLER/ ASSOCIATES, INC. METHODS OF FLOODPLAIN DELINEATION HAVE BEEN DESCRIBED IN THE STORMWATER MANAGEMENT REPORT. FLOODPLAIN AREAS SHALL BE KEPT FREE OF STRUCTURES, FILL AND OTHER ENCROACHMENTS, UNLESS APPROPRIATE APPROVALS HAVE BEEN OBTAINED.
3. LOWEST FLOOR ELEVATIONS (INCLUDING BASEMENTS) FOR ALL STRUCTURES ADJACENT TO THE FLOODPLAIN SHALL BE A MINIMUM OF ONE (1') FOOT ABOVE THE 100-YEAR FLOODPLAIN ELEVATION. DWELLINGS 114-136 SHALL NOT HAVE BASEMENTS.
4. WETLANDS SHOWN ON THE PLAN ARE PER THE WETLANDS DELINEATION REPORT PREPARED BY DAVID MILLER/ASSOCIATES, DATED JUNE 30, 2003.
5. NO GRADING, EXCAVATION OR FILL, EXCEPT AS SHOWN IN THIS PLAN AND PERMITTED BY PA DEPARTMENT OF ENVIRONMENTAL PROTECTION AND THE US ARMY CORPS OF ENGINEERS, SHALL TAKE PLACE IN THE AREAS DESIGNATED AS WETLANDS.
6. LAND WITHIN FLOODPLAIN EASEMENTS SHALL BE MAINTAINED BY THE VILLAGE AT EAST COCALICO HOMEOWNERS ASSOCIATION.

UTILITY NOTES:

1. EXISTING UNDERGROUND UTILITIES HAVE BEEN SHOWN IN ACCORDANCE WITH THE BEST AVAILABLE INFORMATION. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO VERIFY THEIR LOCATION.
2. ALL PROPOSED UTILITIES WILL BE INSTALLED UNDERGROUND (ELECTRIC, PHONE, CABLE, ETC.).

EASEMENT NOTES:

1. SIGHT DISTANCE EASEMENT. AN EASEMENT TO REMOVE, INITIALLY AND IN THE FUTURE, ANY STRUCTURE, VEGETATION OR OTHER IMPROVEMENT THAT MAY INTERFERE WITH OR OBSTRUCT THE FREE AND UNOBSTRUCTED VIEW DOWN AND ACROSS THE LANDS BY ANY PERSON OR PERSONS TRAVELING UPON THE HIGHWAY OR HIGHWAYS. THE PROPERTY OWNER SHALL NOT USE THE LAND SUBJECT TO THE EASEMENT FOR ANY PURPOSE OR IN ANY MANNER WHICH MAY INTERFERE WITH OR OBSTRUCT THE VIEW DOWN AND ACROSS THE LANDS; HOWEVER, THE EASEMENT SHALL NOT OTHERWISE PREVENT THE OWNER FROM MAKING ANY LEGAL USE OF THE LANDS WHICH ARE NOT DETRIMENTAL TO THE NECESSARY FREE AND UNOBSTRUCTED VIEW.
2. DRAINAGE EASEMENT. AN EASEMENT FOR THE CONSTRUCTION, INSPECTION, MAINTENANCE, REPAIR, RECONSTRUCTION AND ALTERATION OF DRAINAGE FACILITIES. THE EASEMENT SHALL NOT PREVENT THE PROPERTY OWNER FROM MAKING ANY LEGAL USE OF THE AREA WHICH IS NOT DETRIMENTAL TO THE NECESSARY FLOW OF WATER. HOWEVER, NO STRUCTURE OF ANY KIND MAY BE ERECTED IN THE AREA, NOR MAY ANY PIPE OR DITCH BE CONNECTED TO THE TOWNSHIP'S PIPE OR DITCH WITHOUT ADVANCED WRITTEN APPROVAL BY EAST COCALICO TOWNSHIP.
3. UTILITY EASEMENT. AN EASEMENT FOR THE CONSTRUCTION, INSPECTION, MAINTENANCE, REPAIR, RECONSTRUCTION AND ALTERATION OF UNDERGROUND AND ABOVE GROUND UTILITIES. THE EASEMENT SHALL NOT PREVENT THE PROPERTY OWNER FROM MAKING ANY LEGAL USE OF THE AREA WHICH IS NOT DETRIMENTAL TO THE USE OF THE UTILITIES.

WATER SUPPLY:

1. THE PROPOSED DEVELOPMENT OF VILLAGE AT EAST COCALICO WILL BE SERVED BY PUBLIC WATER PROVIDED BY THE EAST COCALICO TOWNSHIP AUTHORITY.
2. CONSTRUCTION OF ALL WATER FACILITIES WILL BE COMPLETED IN ACCORDANCE WITH THE EAST COCALICO TOWNSHIP AUTHORITY SPECIFICATIONS.
3. A MINIMUM HORIZONTAL SEPARATION OF TEN FEET SHALL BE PROVIDED BETWEEN WATER MAINS AND OTHER UTILITIES. IN CASES OF UTILITY CROSSINGS AND AREAS WHERE THE TEN FOOT HORIZONTAL SEPARATION IS NOT PRACTICAL, A MINIMUM VERTICAL SEPARATION OF 18 INCHES SHALL BE PROVIDED.

SANITARY SEWER NOTES:

1. THE PROPOSED DEVELOPMENT OF VILLAGE AT EAST COCALICO WILL BE SERVED BY PUBLIC SEWER PROVIDED BY THE EAST COCALICO TOWNSHIP AUTHORITY.
2. ALL SANITARY SEWER CONSTRUCTION SHALL BE IN ACCORDANCE WITH EAST COCALICO TOWNSHIP AUTHORITY SPECIFICATIONS, AND SHALL BE DEDICATED TO THE EAST COCALICO TOWNSHIP AUTHORITY.
3. A MINIMUM HORIZONTAL SEPARATION OF TEN FEET SHALL BE PROVIDED BETWEEN SANITARY SEWER MAINS AND OTHER UTILITIES. IN CASES OF UTILITY CROSSINGS AND AREAS WHERE THE TEN FEET OF HORIZONTAL SEPARATION IS NOT PRACTICAL, A MINIMUM VERTICAL SEPARATION OF 18 INCHES SHALL BE PROVIDED.

MODIFICATIONS

ON WEDNESDAY, SEPTEMBER 7, 2011, THE EAST COCALICO TOWNSHIP BOARD OF SUPERVISORS MADE THE FOLLOWING MOTIONS APPROVING THE FOLLOWING WAIVERS/MODIFICATIONS:

§5.2131 AND §5.942 AND RELATED SECTIONS OF THE SUBDIVISION AND LAND DEVELOPMENT ORDINANCE TO AUTHORIZE THE USE OF A 28' WIDE UNCURBED ROADWAY CROSS-SECTION AND 50' WIDE ROAD RIGHT-OF-WAY FOR HALEY STREET, CONDITIONED UPON THE APPLICANT AGREEING TO UTILIZE THE CURRENT ADOPTED TOWNSHIP PAVEMENT STANDARDS, INCLUDING BASE DRAIN AND SOIL TESTING PROCEDURES, AND THE EXTENT AND LOCATION OF ALL GUIDERAIL BEING SATISFACTORY TO THE TOWNSHIP ENGINEERS.

§5.2131 AND §5.942 AND RELATED SECTIONS OF THE SUBDIVISION AND LAND DEVELOPMENT ORDINANCE TO AUTHORIZE THE USE OF A 34' WIDE CURBED ROADWAY CROSS-SECTION AND 54' WIDE ROAD RIGHT-OF-WAY FOR EAST KESTREL DRIVE, CONDITIONED UPON THE APPLICANT AGREEING TO UTILIZE THE CURRENT ADOPTED TOWNSHIP PAVEMENT STANDARDS, INCLUDING BASE DRAIN AND SOIL TESTING PROCEDURES, AND THE APPLICANT MAXIMIZING THE AVAILABLE ON-STREET PARKING AND MINIMIZING POTENTIAL CONFLICTS WITH DRIVEWAYS TO THE SATISFACTION OF THE TOWNSHIP ENGINEERS.

§5.2131 AND §5.942 AND RELATED SECTIONS OF THE SUBDIVISION AND LAND DEVELOPMENT ORDINANCE TO AUTHORIZE THE USE OF A 32' WIDE CURBED ROADWAY CROSS-SECTION AND 50' WIDE ROAD RIGHT-OF-WAY FOR MANOR DRIVE, CONDITIONED UPON THE APPLICANT AGREEING TO UTILIZE THE CURRENT ADOPTED TOWNSHIP PAVEMENT STANDARDS, INCLUDING BASE DRAIN AND SOIL TESTING PROCEDURES, AND THE APPLICANT MAXIMIZING THE AVAILABLE ON-STREET PARKING AND MINIMIZING POTENTIAL CONFLICTS WITH DRIVEWAYS TO THE SATISFACTION OF THE TOWNSHIP ENGINEERS.

§5.2184 OF THE SUBDIVISION AND LAND DEVELOPMENT ORDINANCE TO AUTHORIZE THE USE OF ROADWAY SLOPES EXCEEDING 5% WITHIN 50' OF THE RIGHT-OF-WAY FOR HALEY STREET, CONDITIONED UPON A MINIMUM LEVELING AREA OF 5% EXTENDING BEYOND THE EDGE OF THE CARTWAY FOR A MINIMUM OF 20' AND THE REMAINING VERTICAL PROFILE OF THE ROADWAY BEING SATISFACTORY TO THE TOWNSHIP ENGINEERS, NOT TO EXCEED 8%.

§5.2101 AND §5.2171 OF THE SUBDIVISION AND LAND DEVELOPMENT ORDINANCE, CONDITIONED UPON ALL PROPOSED ROADWAY SAG VERTICAL CURVES BEING DESIGNED IN ACCORDANCE WITH THE MINIMUM STANDARDS OUTLINED IN THE CURRENT AASHTO (AMERICAN ASSOCIATION OF STATE AND HIGHWAY TRANSPORTATION OFFICIALS) GREEN BOOK.

§5.5110 OF THE SUBDIVISION AND LAND DEVELOPMENT ORDINANCE TO AUTHORIZE THE USE OF SLOPES TO 2:1 WITHIN THE PROPOSED RIGHT-OF-WAY OF HALEY STREET BETWEEN THE INTERSECTION WITH SOUTH MUDDY CREEK ROAD AND STATION 7+50, CONDITIONED UPON FLATTER SLOPES BEING PROVIDED WHERE POSSIBLE AND GUIDERAIL BEING PROVIDED AS DETERMINED TO BE NECESSARY BY THE TOWNSHIP ENGINEERS.

§5.8923(B) OF THE SUBDIVISION AND LAND DEVELOPMENT ORDINANCE TO RELIEVE THE APPLICANT FROM INSTALLING STREET TREES ALONG HALEY STREET.

§5.2108, §5.2201, AND §5.2202 OF THE SUBDIVISION AND LAND DEVELOPMENT ORDINANCE TO AUTHORIZE THE CARTWAY FOR EAST KESTREL DRIVE TO TERMINATE 5' PRIOR TO THE TRACT BOUNDARY AND WITHOUT A TEMPORARY CUL-DE-SAC, CONDITIONED UPON ADEQUATE BARRIERS AND /OR WARNING SIGNAGE BEING PROVIDED TO THE SATISFACTION OF THE TOWNSHIP ENGINEERS.

§5.2151 OF THE SUBDIVISION AND LAND DEVELOPMENT ORDINANCE TO AUTHORIZE MINIMUM CENTERLINE GRADE OF 0% FOR THE SECTIONS OF PROPOSED HALEY STREET WITHOUT CURBING AS LONG AS A CROWNED CROSS-SECTION WITH MINIMUM OF 2% CROSS-SLOPE IS MAINTAINED AND DRAINAGE DIRECTED AWAY FROM THE SHOULDERS TO THE SATISFACTION OF THE TOWNSHIP ENGINEERS.

§185.24.(B)(8) OF THE STORMWATER MANAGEMENT ORDINANCE AS IT RELATES TO THE NEED FOR PROTECTIVE GRATES ON THE HEADWALLS AND END-SECTIONS RELATED TO WATERCOURSES 1 AND 4 WHICH FLOW UNDER HALEY STREET.

§5.5103 OF THE SUBDIVISION AND LAND DEVELOPMENT ORDINANCE AS IT RELATES TO THE DEPTH AND WIDTH RATIO OF THE LOTS AS IS DEPICTED ON THE PLANS.

§5.2184 OF THE SUBDIVISION AND LAND DEVELOPMENT ORDINANCE ALLOWING A 50' TANGENT OF HALEY STREET AND EAST KESTREL DRIVE.

MODIFICATIONS OF THE FOLLOWING SECTIONS OF THE EAST COCALICO TOWNSHIP SUBDIVISION AND LAND DEVELOPMENT ORDINANCE WERE APPROVED BY THE SUPERVISORS AT THEIR SEPTEMBER 5, 2012 MEETING:

SECTION 5.991 – FEE IN-LIEU-OF TRAFFIC IMPACT STUDY UPDATE

MODIFICATIONS OF THE FOLLOWING SECTIONS OF THE EAST COCALICO TOWNSHIP STORMWATER MANAGEMENT ORDINANCE WERE APPROVED BY THE SUPERVISORS AT THEIR SEPTEMBER 5, 2012 MEETING:

SECTION 185-24.A(1) – MAXIMUM DEPTH OF FLOW OF TWO INCHES ALONG SLANT OR VERTICAL CURB

SECTION 185-24.A(2) – DEPTH OF FLOW ACROSS STREET AND ACCESS DRIVE INTERSECTION SHALL BE A MAXIMUM OF ONE INCH

SECTION 185-27.F(1) – DETENTION VOLUMES SHALL DEWATER IN LESS THAN 24 HOURS

SIGHT DISTANCE CHART - STREET INTERSECTIONS

STREET NAME	AVAILABLE SIGHT DISTANCE LEFT	AVAILABLE SIGHT DISTANCE RIGHT	REQUIRED SIGHT DISTANCE LEFT	REQUIRED SIGHT DISTANCE RIGHT
WESTERN INTERSECTION OF MANOR DRIVE VIEWING EAST KESTREL DRIVE (25 MPH)	±320'	±330'	143' @ 3.6%	153' @ -3.6%
HALEY STREET WITH EAST KESTREL DRIVE (25 MPH)	±500'	±265'	150' @ -1.3%	145' @ 1.3%
EASTERN INTERSECTION OF MANOR DRIVE VIEWING EAST KESTREL DRIVE (25 MPH)	±315' (SOUTH)	±181' (NORTH) (END OF ROAD)	151' @ -2.4%	151' @ -2.2%
* HALEY STREET WITH SOUTH MUDDY CREEK ROAD (40 MPH)	500'+	500'+	331' @ -2.5%	304' @ 2.0%

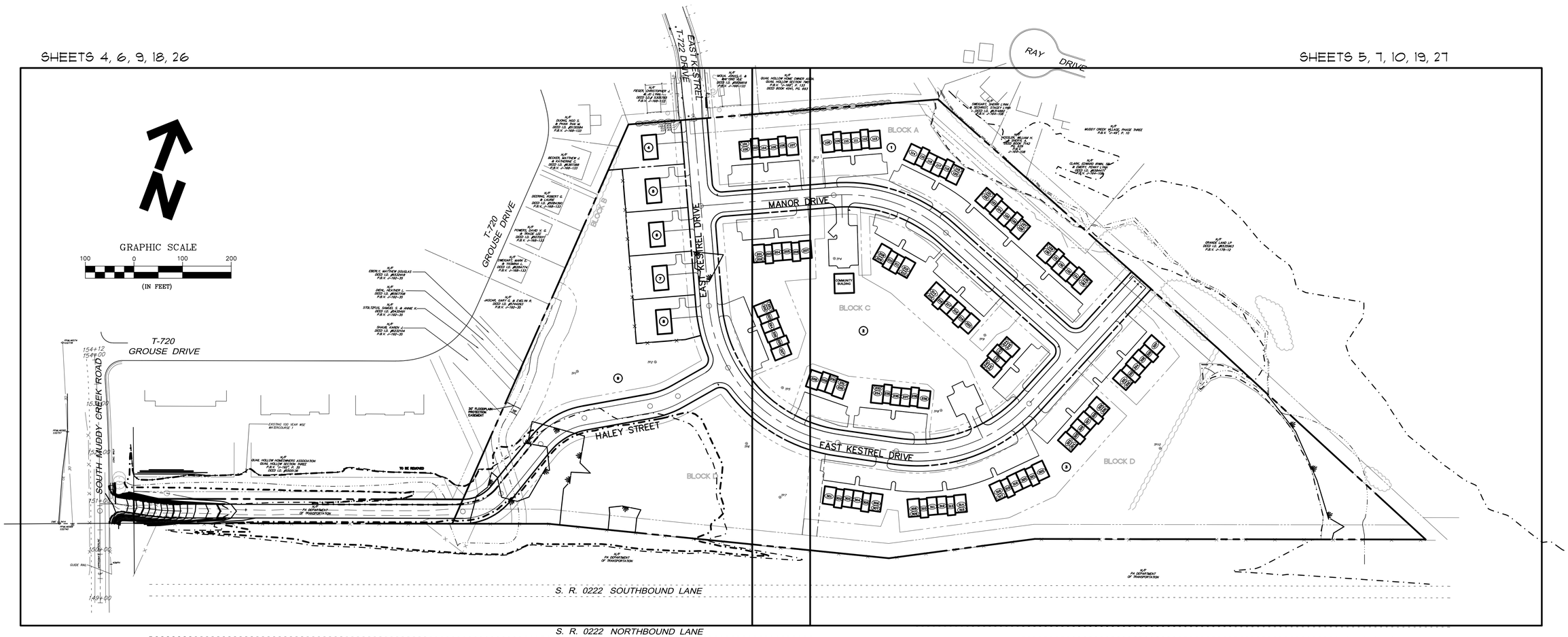
* SEE H.O.P. PLANS BY TPD. INFORMATION SHOWN PER PRELIMINARY PLAN.

LEGEND

EXISTING		PROPOSED
	RIGHT-OF-WAY	
	TRACT BOUNDARY	
	CURB	
	EDGE OF PAVEMENT	
	CENTERLINE	
	LOT LINE	
	EASEMENT LINE	
	100 YEAR FLOODPLAIN	
	WETLAND BOUNDARY	
	LOT NUMBER	

SHEETS 4, 6, 9, 18, 26

SHEETS 5, 7, 10, 19, 27



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REVISIONS
1 DMC 7/12/21 PER LCCD JEW/K LETTER DATED 8/29/21
2 TCV 11/19/21 PER LCCD JEW/K LETTER DATED 11/15/21
3 TCV 1/14/22 PER BECKER ENG. REVIEW LETTER DATED 12/22/21
4 TCV 3/14/23 PER LCCD JEW/K LETTER DATED 2/27/23
5 TCV 4/21/23 PER BECKER ENG. REVIEW LETTER DATED 4/17/23
6 TCV 2/20/24 PER LCCD JEW/K LETTER DATED 1/26/24
LETTER DATED 7/28/23 (WAIVER TO BE 2032)
PER PTF LETTER DATED 2/15/24 (WAIVER TO BE 2032)
FOR CONNECTION TO SOUTH MUDDY CREEK ROAD

SEAL

CLIENT / OWNER / APPLICANT
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INDEX PLAN/ PLAN NOTES

VILLAGE AT EAST COCALICO

EAST COCALICO TOWNSHIP, LANCASTER COUNTY, PENNSYLVANIA

PRINCIPAL: J. BOYER	PROJECT MANAGER: T. VAUGHN
DRAWN BY: M. WAPLES	CHECKED BY: J. BOYER
JOB NO.: 02-172.2	DRAWING NO.: 02-172.27
FILE NO.: 0217227NOTES	
DATE: 5/14/21	SCALE: AS SHOWN
SHEET NO.: 2 OF 34	

STEEP SLOPE KEY

- 15%–25% SLOPE
- 25% OR GREATER SLOPE

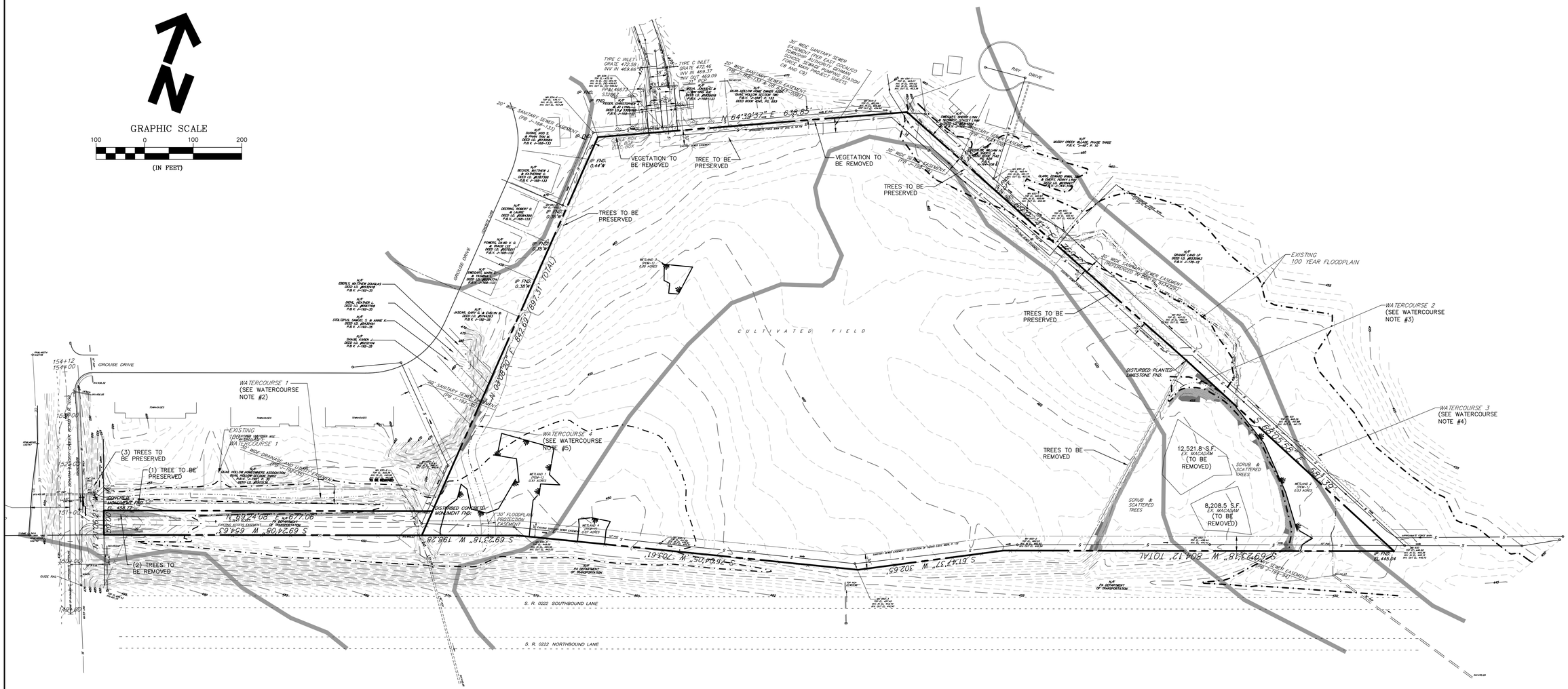
GRAPHIC SCALE

100 0 100 200

(IN FEET)

SOILS

			LIMITATIONS FOR			FEATURES AFFECTING	
SYMBOL	SOILS NAME	SLOPE	POND RESERVOIR AREA	EMBANKMENTS, DIKES, AND LEVEES	DRAINAGE	TERRACES AND DIVERSIONS	GRASSED WATERWAYS
RoB	READINGTON SILT LOAM	3% TO 10% SLOPES	MODERATE: SEEPAGE, DEPTH TO ROCK, SLOPE	SEVERE: PIPING.	SLOPE	ERODES EASILY, WETNESS, ROOTING DEPTH	ERODES EASILY , ROOTING DEPTH
BuB	BUCKS SILT LOAM	3% TO 8% SLOPES	MODERATE: SEEPAGE, DEPTH TO ROCK, SLOPE	SEVERE: PIPING.	DEEP TO WATER	ERODES EASILY	ERODES EASILY



NOTES:

SOILS

1. SOILS BOUNDARIES TAKEN FROM SHEETS 11 & 12 OF THE SOIL SURVEY OF LANCASTER COUNTY PA DATED MAY 1985.
2. SOIL ENGINEERING CHARACTERISTICS FOR EMBANKMENTS, DRAINAGE, TERRACES, DIVERSIONS AND GRASSED WATERWAYS LISTED IN THE SOIL CHART ON THIS SHEET REPRESENT A SUMMARY OF ANALYSIS PERFORMED BY THE AUTHORS OF THE SOIL SURVEY. THE FOLLOWING CONDITIONS WERE EVALUATED FOR THEIR ACCEPTABILITY FOR STORM WATER ENGINEERING: SEEPAGE, ORGANIC CONTENT, CONTENT OF STONES, BOULDERS, SALTS OR SODIUM, DEPTH OF SUITABLE CONSTRUCTION SOILS (GREATER THAN 5 FEET OF SOIL IS DESIRABLE), WATER CONTENT OF SOIL, DEPTH TO BEDROCK OR HARDPAN, PERMEABILITY, DEPTH TO HIGH WATER TABLE, PONDING, SLOPE, SUSCEPTIBILITY TO FLOODING OR SUBSIDENCE, AND EMBANKMENT STABILITY.
3. LIMITATION CLASSIFICATIONS ARE AS FOLLOWS:
   - A. SLIGHT – SOIL PROPERTIES AND SITE FEATURES ARE GENERALLY FAVORABLE FOR THE INDICATED USE AND LIMITATIONS ARE MINOR AND EASILY OVERCOME.
   - B. MODERATE – SOIL PROPERTIES OR SITE FEATURES ARE NOT FAVORABLE FOR THE INDICATED USE AND SPECIAL PLANNING, DESIGN OR MAINTENANCE IS NEEDED TO OVERCOME OR MINIMIZE THE LIMITATIONS.
   - C. SEVERE – SOIL PROPERTIES OR SITE FEATURES ARE SO UNFAVORABLE OR SO DIFFICULT TO OVERCOME THAT SPECIAL DESIGN, SIGNIFICANT INCREASE IN CONSTRUCTION COSTS AND POSSIBLY INCREASED MAINTENANCE ARE REQUIRED.

WETLANDS

1. THE WETLANDS DELINEATION WAS PREPARED BY DAVID MILLER/ ASSOCIATES INC., 1076 CENTERVILLE ROAD, LANCASTER PA 17601 ON JUNE 30, 2003, REVISED ON JUNE 10, 2011, AND REVISED ON JANUARY 19, 2018.
2. AN ON–SITE JURISDICTIONAL DETERMINATION WAS COMPLETED BY THE US ARMY CORPS OF ENGINEERS APRIL 10, 2018.
3. NO GRADING OR FILLING SHALL OCCUR WITHIN ANY OF THE AREAS MARKED AS JURISDICTIONAL WETLANDS WITHOUT PERMITS FROM THE APPROPRIATE AGENCIES.
4. DAVID MILLER/ ASSOCIATES INC. IDENTIFIED 4 WETLAND AREAS ON THE VILLAGE AT EAST COCALICO SITE, TOTALING APPROXIMATELY 1.16 ACRES.
5. THE WETLANDS IDENTIFIED WERE CLASSIFIED AS PALUSTRINE EMERGENT, PERSISTENT (PEM–1).

ARCHAEOLOGICAL OR HISTORICAL RESOURCES

1. THE PENNSYLVANIA HISTORICAL AND MUSEUM COMMISSION, BUREAU FOR HISTORICAL PRESERVATION, DETERMINED THIS PROJECT IS UNLIKELY TO AFFECT ARCHAEOLOGICAL OR HISTORICAL RESOURCES BY LETTER DATED OCTOBER 10, 2003.

WATERCOURSES AND ONE–HUNDRED YEAR FLOODPLAINS

1. DAVID MILLER/ ASSOCIATES INC. IDENTIFIED FOUR WATERCOURSES.
2. WATERCOURSE 1 FLOWS FROM SOUTH MUDDY CREEK ROAD, NORTH OF, AND PARALLEL TO, THE ACCESS EASEMENT, UNDER THE ACCESS EASEMENT, THROUGH A 36" CMP, TO A 42" CMP UNDER S.R. 222. THE ONE–HUNDRED YEAR WATER SURFACE ELEVATION HAS BEEN CALCULATED. A 100–YEAR FLOODPLAIN HAS BEEN ADDED TO PROTECT WATERCOURSE 1.
3. WATERCOURSE 2 IS A SHORT, INTERMITTENT TRIBUTARY TO WATERCOURSE 3. THE ONE–HUNDRED YEAR WATER SURFACE ELEVATION HAS BEEN CALCULATED. A 100–YEAR FLOODPLAIN HAS BEEN ADDED TO PROTECT WATERCOURSE 2.
4. WATERCOURSE 3 IS AN INTERMITTENT TRIBUTARY TO THE LITTLE MUDDY CREEK THAT FLOWS GENERALLY PARALLEL TO THE NORTHEAST PROPERTY LINE TO A 36" RCP UNDER S.R. 222. THE ONE–HUNDRED YEAR WATER SURFACE ELEVATION HAS BEEN CALCULATED. A 100–YEAR FLOODPLAIN HAS BEEN ADDED TO PROTECT WATERCOURSE 3.
5. WATERCOURSE 4 IS AN INTERMITTENT TRIBUTARY TO WATERCOURSE 1 THAT FLOWS SOUTH ALONG THE WESTERN PROPERTY LINE. THE STREAM APPEARS TO HAVE BEEN RELOCATED FROM THE ADJACENT PROPERTY AS A RESULT OF THE PLACEMENT OF FILL. WATERCOURSE 4 HAS NO DEFINED BED AND BANKS AND NO DEFINED CHANNEL. A 30' FLOODPLAIN PROTECTION EASEMENT HAS BEEN ADDED TO PROTECT WATERCOURSE 4 IN ITS PROPOSED LOCATION.

SLOPES

1. THE VILLAGE AT EAST COCALICO SITE HAS A VARIETY OF SLOPES.
2. PER SECTION 4.2563 OF THE EAST COCALICO TOWNSHIP SUBDIVISION AND LAND DEVELOPMENT ORDINANCE, AREAS OF 15% TO 25% AND AREAS OVER 25% HAVE BEEN MAPPED.
3. EXTRA PRECAUTIONS TO STABILIZE THE SITE WILL BE TAKEN WHEN MODIFYING AREAS WITH SLOPES EXCEEDING 15%.

WOODED AREAS

1. THE GENERAL USE OF THE VILLAGE AT EAST COCALICO TRACT IS AGRICULTURE. THE MAJORITY OF THE TRACT CONSISTS OF CORN AND SOYBEAN FIELDS.
2. THE TRACT HAS VERY LITTLE TREE MASSING. TREE ROWS EXIST ON THE WESTERN AND NORTHEASTERN BOUNDARY OF THE TRACT. THE MAJORITY OF THESE TWO TREE ROWS WILL REMAIN INTACT, WITH THE EXCEPTION OF VEGETATION THAT WILL HAVE TO BE REMOVED IN THE FUTURE TO EXTEND EAST KESTREL DRIVE TO THE NORTHEASTERN PROPERTY LINE. A SMALL TREE LINE RUNNING FROM THE SOUTHERN PROPERTY LINE TO THE NORTHEASTERN LINE WILL BE REMOVED.

IMPACT ASSESSMENT REPORT

1. AN IMPACT ASSESSMENT REPORT, DATED JULY 25, 2003, WHICH INCLUDED A UTILITIES IMPACT STUDY, A RECREATION IMPACT STUDY AND A FISCAL IMPACT STUDY COMPONENT, WAS SUBMITTED BY THE APPLICANT TO THE TOWNSHIP.

ENDANGERED SPECIES

1. ACCORDING TO THE PENNSYLVANIA NATURAL DIVERSITY INVENTORY SEARCH DATED 10/14/2010, A POTENTIAL CONFLICT WITH A SPECIES OF SPECIAL CONCERN EXISTS ON THE SITE.
2. THE ARMY CORPS OF ENGINEERS DETERMINED THAT WETLAND 2 WAS POTENTIAL BOG TURTLE HABITAT DURING A PHASE I BOG TURTLE HABITAT EVALUATION ON THE SITE ON JUNE 27, 2003.
3. A PHASE II BOG TURTLE SURVEY REPORT, DATED OCTOBER, 2004 WAS PREPARED BY SKELLY AND LOY, INC. THE REPORT INDICATED THAT NO BOG TURTLES WERE FOUND ON THE SITE.
4. ON DECEMBER 10, 2004, THE PENNSYLVANIA FISH AND BOAT COMMISSION DETERMINED THE PROPOSED PROJECT SHOULD NOT RESULT IN ADVERSE IMPACTS TO THE BOG TURTLE OR ANY OTHER RARE OR PROTECTED SPECIES. A NEW PNDI SEARCH WAS CONDUCTED ON 10/14/2010 AND NO KNOWN IMPACTS PER THE PENNSYLVANIA FISH AND BOAT COMMISSION.
5. ON JANUARY 7, 2005, THE U.S. DEPT. OF THE INTERIOR, FISH AND WILDLIFE SERVICE DETERMINED CONSTRUCTION OF THIS PROJECT WILL NOT AFFECT ANY FEDERALLY LISTED OR PROPOSED SPECIES OR THEIR HABITAT. THIS WAS REVERIFIED BY THE U.S. FISH AND WILDLIFE SERVICES ON 7/6/2011.
6. ON MARCH 24, 2021, THE U.S. FISH AND WILDLIFE SERVICE REVERIFIED THAT THIS PROJECT WILL NOT AFFECT ANY FEDERALLY LISTED SPECIES.

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PER BECKER INC. REVIEW LETTER DATED 12/20/21
4 TCV 2/14/23 PER BECKER INC. REVIEW LETTER DATED 2/14/23
PER BECKER INC. REVIEW LETTER DATED 4/17/23
5 TCV 4/21/23 PER LCCD JESCH LETTER DATED 4/21/23 & PA DEP LETTER DATED 3/28/23
LETTER DATED 3/28/23 (WQAN) TO BE 2932-PM-WSM0034
6 TCV 2/20/24 PER LCCD JESCH LETTER DATED 2/20/24 & PA DEP LETTER DATED 2/16/24
FOR CONNECTION TO SOUTH MUDDY CREEK ROAD

SEAL

CLIENT / OWNER / APPLICANT
EAST COCALICO ASSOCIATES
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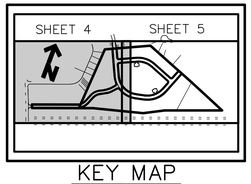
NATURAL FEATURES- CONSERVATION PLAN

VILLAGE AT EAST COCALICO

EAST COCALICO TOWNSHIP, LANCASTER COUNTY, PENNSYLVANIA

PRINCIPAL J. BOYER	PROJECT MANAGER T. VAUGHN
DRAWN BY M. WAPLES	CHECKED BY J. BOYER
JOB NO. 02-172.2	DRAWING NO. 02-172.27
FILE NO. 0217227NATURAL	
DATE 5/14/21	SCALE 1"=100'
SHEET NO. 3 OF 34	



KEY MAP
SCALE: 1" = 1000'

CURVE TABLE						
CURVE	RADIUS	LENGTH	TANGENT	DELTA	BEARING	DISTANCE
C1	310.00	417.43	247.25	77°09'02"	S63°54'54"E	386.60
C2	310.00	134.32	68.23	24°49'30"	S37°45'08"E	133.27
C3	310.00	283.11	152.29	52°19'33"	S76°19'39"E	273.37
C4	310.00	302.37	164.43	55°53'10"	N49°34'00"E	290.53
C5	310.00	250.48	132.53	46°17'41"	N87°48'28"E	243.72
C6	19.00	29.62	18.78	89°19'54"	N66°17'22"E	26.71
C7	335.00	270.68	143.22	46°17'41"	N87°48'28"E	263.38
C8	19.00	29.85	19.00	90°00'00"	S70°20'23"E	26.87
C9	19.00	29.85	19.00	90°00'00"	N19°39'37"E	26.87
C10	285.00	230.28	121.84	46°17'41"	N87°48'28"E	224.07
C11	19.00	30.07	19.22	90°40'06"	N23°42'38"W	27.03
C12	283.00	276.04	150.11	55°53'10"	N49°34'00"E	265.22
C13	283.00	381.07	225.72	77°09'02"	N63°54'54"W	352.93
C14	19.00	27.49	16.78	82°54'01"	S01°36'53"E	25.15
C15	75.00	67.04	35.95	51°12'55"	N43°47'11"E	64.83
C16	125.00	111.73	59.91	51°12'55"	N43°47'41"E	108.05
C17	19.00	27.49	16.78	82°54'01"	N81°17'08"E	25.15
C18	337.00	266.01	140.37	45°13'34"	S79°52'38"E	259.16
C19	337.00	328.71	178.76	55°53'10"	N49°34'00"E	315.83
C20	337.00	104.26	52.55	17°43'31"	S34°12'08"E	103.84
C21	337.00	59.56	29.86	10°07'32"	S30°24'09"E	59.48
C22	337.00	44.70	22.38	7°35'58"	S39°15'55"E	44.67
C23	182.00	145.42	76.84	45°46'52"	N43°00'05"E	141.59
C24	100.00	89.39	47.93	51°12'55"	N43°47'41"E	86.44
C25	150.00	106.96	55.86	40°51'11"	N38°36'49"E	104.70
C26	182.00	61.00	30.79	19°12'17"	N49°26'16"E	60.72
C27	157.00	52.62	26.56	19°12'17"	S49°26'16"W	52.38
C28	175.00	124.78	65.17	40°51'11"	S38°36'49"W	122.15
C29	125.00	89.13	46.55	40°51'11"	S38°36'49"W	87.25
C30	207.00	69.38	35.02	19°12'17"	N49°26'16"E	69.06

LEGEND

EXISTING		PROPOSED
	RIGHT-OF-WAY	
	TRACT BOUNDARY	
	CURB	
	EDGE OF PAVEMENT	
	CENTERLINE	
	LOT LINE	
	EASEMENT LINE	
	OPEN SPACE & RECREATION EASEMENT LINE	
	SETBACK LINE	
	100 YEAR FLOODPLAIN	
	WETLAND BOUNDARY	
	LOT NUMBER	10
	TOWNHOUSE UNIT NUMBER	108
	SIGN	
	CORNER MARKER	
	CONCRETE MONUMENT	
	DECIDUOUS TREES	
	EVERGREEN TREES	
	UTILITY POLE	
OE OE	OVERHEAD ELECTRIC/ OVERHEAD TELEPHONE	
UE UE	UNDERGROUND ELECTRIC UNDERGROUND TELEPHONE	
	STORM LINE/INLET	
	ENDWALL	
S	SEWER LINE/MANHOLE	
S 67M	FORCE MAIN	
W	WATERLINE/FIRE HYDRANT/VALVE	
	GUIDERAIL	
	SIDEWALK	
	FENCE	

NOTE:
1. DEPRESSED CURB INTENDED ONLY FOR SANITARY SEWER EASEMENT ACCESS.

GRAPHIC SCALE
50 0 50 100
(IN FEET)

GROUSE DRIVE
SOUTH MUDDY CREEK ROAD, S.R. 1059
POSTED SPEED LIMIT - 40 MPH
SPEED LIMIT 40
S. R. 0222 SOUTHBOUND LANE
BLOCK B
BLOCK D
KESTREL EAST DRIVE
MANOR DRIVE (25 M.P.H.)
HALEY STREET (25 M.P.H.)
PROPOSED RIGHT-OF-WAY
50' R.O.W.
28' CARTWAY
MINIMUM BUILDING SETBACK LINE
PARKING SETBACK LINE
FRONT YARD SETBACK LINE
ELECTRIC & COMMUNICATIONS EASEMENT
DRAINAGE, OPEN SPACE AND RECREATION EASEMENT
SANITARY SEWER EASEMENT
WATERLINE EASEMENT TO BE ACQUIRED FROM QUAIL HOLLOW
TEMPORARY GRADING EASEMENT TRACT NO. 2
50' MIN. GRADING SETBACK FROM WATERCOURSE
WETLAND DISTURBANCE 0.0868 AC.
WETLAND DISTURBANCE 0.0973 AC.
WETLAND DISTURBANCE 0.0536 AC.
100 YR. FLOODPLAIN PROTECTION EASEMENT
EXISTING SANITARY SEWER EASEMENT
CARTWAY
TOWNHOUSES
GUIDE RAIL
GUIDERAIL SHALL BE TYPE 2-WCO WEAK POST GUIDERAIL TO BE INSTALLED PER PA DOT RC-53M, DATED NOVEMBER 30, 2021
TYPE 2 WEAK POST END TREATMENT WITH TYPE A CONCRETE ANCHOR (TYP.)
FOR CONTINUATION SEE SHEET 5

N/F EBERLY, MATTHEW DOUGLAS DEED I.D. #6532418 P.B.V. J-192-35
N/F DIEHL, HEATHER L. DEED I.D. #6567708 P.B.V. J-192-35
N/F STOLTZFUS, SAMUEL S. & ANNIE K. DEED I.D. #5435491 P.B.V. J-192-35
N/F SHAUB, KAREN J. DEED I.D. #6232104 P.B.V. J-192-35
N/F JASCAR, GARY G. & EVELYN R. DEED I.D. #5744293 P.B.V. J-192-35
N/F DUONG, NGO S. & PHAN THAI M. DEED I.D. #5130584 P.B.V. J-168-133
N/F FIEGER, CHRISTOPHER J. & JO LYNN DEED I.D.# 5305268 P.B.V. J-168-133
N/F "MQUA, JONAS" & MATONG WE DEED I.D. #5899818 P.B.V. J-168-133
N/F BECKER, MATTHEW J. & KATHERINE C. DEED I.D. #6367388 P.B.V. J-168-133
N/F DEERING, ROBERT G. & LAURIE DEED I.D. #5084390 P.B.V. J-168-133
N/F POWERS, DAVID V. G. & TRACIE LEE DEED I.D. #5070001 P.B.V. J-168-133
N/F SWEIGART, MARK E. & YASMINA L. DEED I.D. #6284774 P.B.V. J-168-133
N/F QUAIL HOLLOW HOMEOWNERS ASSOCIATION QUAIL HOLLOW SECTION THREE P.B.V. "J-192", P. 35 DEED I.D. #5505136
N/F PA DEPARTMENT OF TRANSPORTATION

1 2-STORY TOWNHOUSE UNIT
2 2-STORY TOWNHOUSE UNIT
3 2-STORY TOWNHOUSE UNIT
4 11,917 S.F.
5 11,520 S.F.
6 11,520 S.F.
7 11,520 S.F.
8 11,560 S.F.
9 100,949 S.F.

PLANS SUBJECT TO APPROVAL - NOT INTENDED FOR BID OR CONSTRUCTION PURPOSES

DM/A
DAVID MILLER/ASSOCIATES, INC.
LANDSCAPE ARCHITECTURE • CIVIL ENGINEERING • PLANNING • SURVEYING • GEOLOGIC SERVICES
1076 Centerville Road • Lancaster, PA 17601 • (717) 898-3402 • www.dmai.com
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REVISIONS
1 DMC 7/12/21 PER LCCD REVIEW LETTER DATED 6/29/21
2 TCV 11/10/21 PER LCCD REVIEW LETTER DATED 10/25/21
3 TCV 11/10/21 PER BECKER ENGINEERING REVIEW LETTER DATED 11/10/21
4 TCV 2/14/23 PER BECKER ENGINEERING REVIEW LETTER DATED 1/27/23
5 TCV 4/25/23 PER BECKER ENGINEERING REVIEW LETTER DATED 4/17/23
6 TCV 2/20/24 PER BECKER ENGINEERING REVIEW LETTER DATED 2/13/24
FOR CONNECTION TO SOUTH MUDDY CREEK ROAD

SEAL

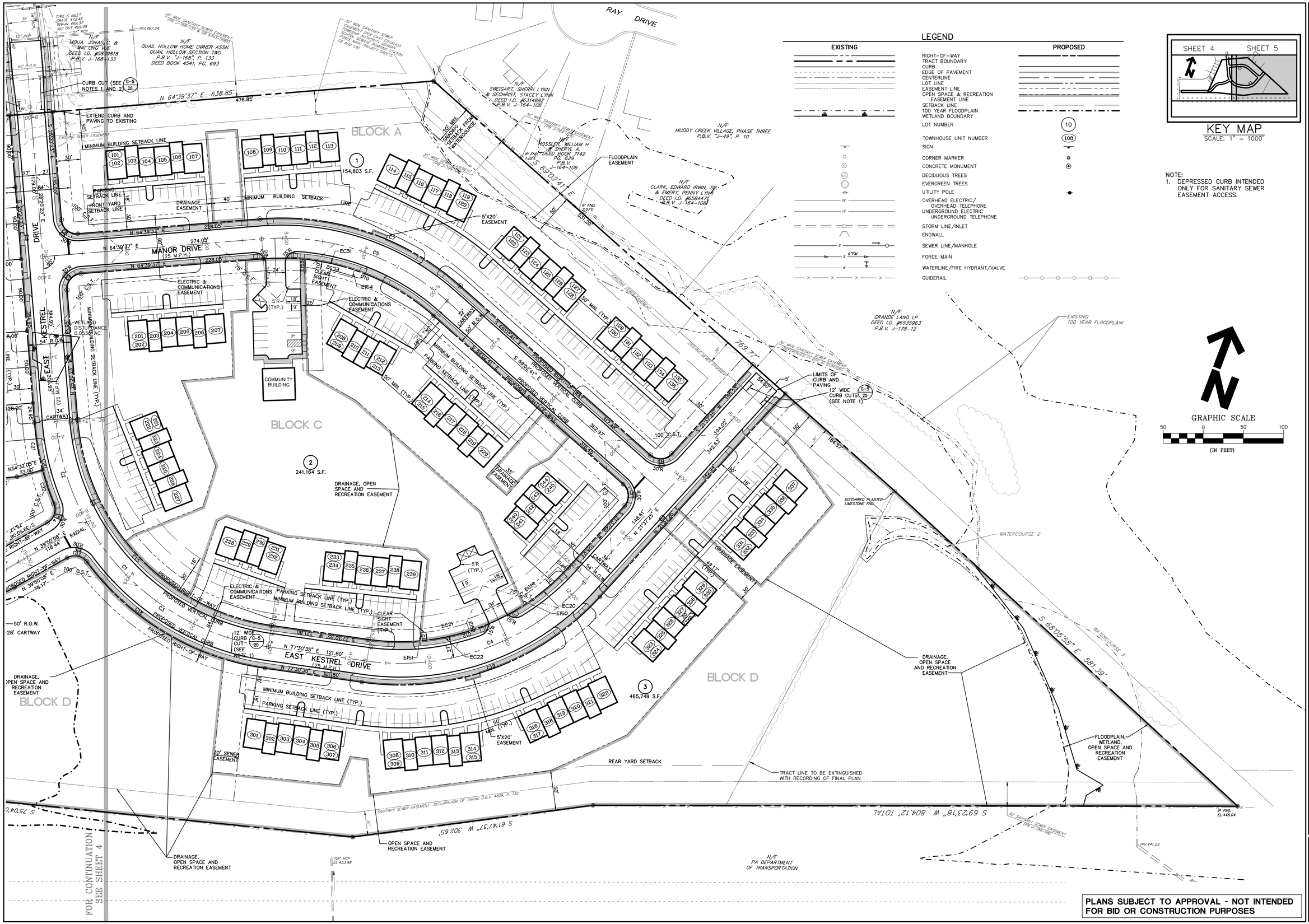
CLIENT / OWNER / APPLICANT
EAST COCALICO ASSOCIATES
1377-C SPENCER AVENUE
LANCASTER, PA 17603
(717) 380-0468

SUBDIVISION AND LAND DEVELOPMENT PLAN

VILLAGE AT EAST COCALICO

EAST COCALICO TOWNSHIP, LANCASTER COUNTY, PENNSYLVANIA

PRINCIPAL J. BOYER	PROJECT MANAGER T. VAUGHN
DRAWN BY M. WAPLES	CHECKED BY J. BOYER
JOB NO. 02-172.2	DRAWING NO. 02-172.27
FILE NO. 0217227SUBDIVISION	
DATE 5/14/21	SCALE 1"=50'
SHEET NO. 4 OF 34	



LEGEND

EXISTING		PROPOSED
	RIGHT-OF-WAY	
	TRACT BOUNDARY	
	CURB	
	EDGE OF PAVEMENT	
	CENTERLINE	
	LOT LINE	
	EASEMENT LINE	
	OPEN SPACE & RECREATION EASEMENT LINE	
	SETBACK LINE	
	100 YEAR FLOODPLAIN	
	WETLAND BOUNDARY	
	LOT NUMBER	(10)
	TOWNHOUSE UNIT NUMBER	(108)
	SIGN	
	CORNER MARKER	
	CONCRETE MONUMENT	
	DECIDUOUS TREES	
	EVERGREEN TREES	
	UTILITY POLE	
OE	OVERHEAD ELECTRIC/ OVERHEAD TELEPHONE	
UE	UNDERGROUND ELECTRIC UNDERGROUND TELEPHONE	
	STORM LINE/INLET	
	ENDWALL	
S	SEWER LINE/MANHOLE	
S	FORCE MAIN	
	WATERLINE/FIRE HYDRANT/VALVE	
	GUIDERAIL	

KEY MAP
SCALE: 1" = 1000'

NOTE:
1. DEPRESSED CURB INTENDED ONLY FOR SANITARY SEWER EASEMENT ACCESS.

GRAPHIC SCALE
50 0 50 100
(IN FEET)

PLANS SUBJECT TO APPROVAL - NOT INTENDED FOR BID OR CONSTRUCTION PURPOSES

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REVISIONS
1 DMC 7/12/21 PER LCCD REVIEW LETTER DATED 8/29/21
2 TCV 10/5/21 PER LCCD REVIEW LETTER DATED 10/20/21
3 TCV 11/9/21 PER BECKER ENGINEERING REVIEW LETTER DATED 10/22/21
PER LCCD REVIEW LETTER DATED 11/2/21
4 TCV 2/14/23 PER BECKER ENGINEERING REVIEW LETTER DATED 1/31/23
PER BECKER ENG. REVIEW LETTER DATED 4/17/23
5 TCV 4/25/23 PER LCCD REVIEW LETTER DATED 4/27/23
LETTER DATED 7/5/23 (MEAN TO BE 2023)
6 TCV 2/20/24 PER LCCD REVIEW LETTER DATED 2/16/24
FOR CONNECTION TO SOUTH MUDDY CREEK ROAD

SEAL

CLIENT / OWNER / APPLICANT
EAST COCALICO ASSOCIATES
1377-C SPENCER AVENUE
LANCASTER, PA 17603
(717) 393-0483

SUBDIVISION AND LAND DEVELOPMENT PLAN

VILLAGE AT EAST COCALICO

EAST COCALICO TOWNSHIP, LANCASTER COUNTY, PENNSYLVANIA

PRINCIPAL J. BOYER	PROJECT MANAGER T. VAUGHN
DRAWN BY M. WAPLES	CHECKED BY J. BOYER
JOB NO. 02-172.2	DRAWING NO. 02-172.27
FILE NO. 0217227SUBDIVISION	
DATE 5/14/21	SCALE 1"=50'
SHEET NO. 5 OF 34	

EASEMENT LINE DATA		
LINE	BEARING	LENGTH
E1	N 3°08'20" E	740.30'
E2	N 64°39'37" E	28.82'
E3	S 25°20'23" E	360.00'
E4	N 64°39'37" E	100.76'
E5	N 54°32'05" E	33.00'
E6	S 39°50'08" W	75.17'
E7	S 54°02'25" E	137.37'
E8	S 18°11'14" W	130.54'
E9	N 18°11'14" E	130.54'
E10	N 54°02'25" E	137.37'
E11	N 39°50'08" E	75.17'
E12	S 14°45'32" E	141.59'
E13	N 75°04'05" E	158.88'
E14	N 0°28'56" E	37.86'
E15	N 76°46'10" E	22.38'
E16	S 25°05'02" E	44.35'
E17	N 61°47'37" E	226.56'
E18	N 44°13'57" E	105.00'
E19	N 20°57'19" E	221.16'
E20	N 68°10'25" W	138.19'

EASEMENT LINE DATA		
LINE	BEARING	LENGTH
E21	N 21°37'25" E	30.00'
E22	S 68°10'25" E	137.84'
E23	N 20°57'19" E	133.25'
E24	N 56°30'58" W	92.20'
E25	N 69°02'41" W	46.06'
E26	N 21°37'25" E	45.00'
E27	S 69°02'41" E	182.82'
E28	S 68°05'58" E	581.39'
E29	S 69°23'18" W	804.12'
E30	S 61°47'37" W	302.65'
E31	S 75°04'05" W	703.61'
E32	S 69°23'12" W	176.29'
E33	N 64°39'37" E	40.00'
E34	S 25°20'23" E	114.00'
E35	S 64°39'37" W	40.00'
E36	N 25°20'23" W	114.00'
E99	N 14°58'12" W	49.43'
E100	N 34°57'36" W	87.38'
E101	N 44°47'25" W	93.65'
E102	N 58°07'41" W	54.28'

EASEMENT LINE DATA		
LINE	BEARING	LENGTH
E103	N 68°20'34" W	58.18'
E104	N 78°23'32" W	54.16'
E105	S 75°48'42" W	30.30'
E106	S 48°19'08" W	22.21'
E107	S 21°28'42" W	29.93'
E108	N 70°07'23" W	9.80'
E109	N 1°27'54" E	22.35'
E110	N 26°16'28" W	31.61'
E111	N 71°38'36" E	48.30'
E112	N 84°58'35" E	44.13'
E113	S 84°15'12" W	20.36'
E114	N 73°24'28" W	88.87'
E115	N 89°10'32" W	73.12'
E116	N 85°02'42" W	96.11'
E117	N 64°39'05" W	51.77'
E118	N 55°26'57" W	59.53'
E119	N 4°49'07" W	36.13'
E120	N 29°33'12" W	16.84'
E121	N 64°39'37" E	8.80'
E122	N 64°39'37" E	22.38'

EASEMENT CURVE DATA						
CURVE	RADIUS	LENGTH	TANGENT	DELTA	BEARING	DISTANCE
EC1	337.00'	44.70'	22.38'	7°35'58"	S 39°15'55" E	44.67'
EC2	19.00'	27.49'	16.78'	82°54'01"	N 1°36'53" W	25.15'
EC3	157.00'	52.62'	26.56'	19°12'17"	N 49°26'16" E	52.38'
EC4	175.00'	124.78'	65.17'	40°51'11"	S 38°36'49" W	122.15'
EC5	75.00'	67.04'	35.95'	51°12'55"	N 43°47'41" E	64.83'
EC6	125.00'	111.73'	59.91'	51°12'55"	N 43°47'41" E	108.05'
EC7	125.00'	89.13'	46.55'	40°51'11"	S 38°36'49" W	87.25'
EC8	207.00'	69.38'	35.02'	19°12'17"	N 49°26'16" E	69.06'
EC9	19.00'	27.49'	16.78'	82°54'01"	S 81°17'08" W	25.15'
EC10	337.00'	213.59'	110.52'	36°18'51"	S 75°25'17" E	210.03'
EC14	285.00'	52.77'	26.46'	10°36'33"	S 69°57'54" W	52.70'
EC17	283.00'	138.56'	70.70'	28°03'10"	N 50°08'13" E	137.18'
EC18	283.00'	106.33'	53.80'	21°31'37"	S 69°37'04" E	105.70'
EC19	273.00'	59.86'	30.05'	12°33'46"	N 29°31'53" E	59.74'
EC20	283.00'	63.46'	31.87'	12°50'55"	N 29°41'10" E	63.33'
EC21	273.00'	59.75'	30.00'	12°32'25"	N 57°52'26" E	59.63'
EC22	283.00'	62.03'	31.14'	12°33'34"	N 57°53'01" E	61.91'
EC31	285.00'	62.70'	31.47'	12°36'15"	S 81°34'17" W	62.57'
EC32	275.00'	59.17'	29.70'	12°19'39"	S 81°42'35" W	59.05'

EASEMENT LINE DATA		
LINE	BEARING	LENGTH
E123	S 22°17'29" E	142.30'
E124	S 80°54'17" E	68.10'
E125	S 69°02'41" E	208.13'
E126	S 45°49'11" E	128.83'
E127	N 25°18'38" W	12.40'
E128	N 14°47'05" W	88.68'
E129	N 69°47'05" W	18.31'
E130	S 75°12'55" W	163.59'
E131	S 88°26'16" W	77.64'
E132	S 43°26'16" W	12.84'
E133	S 1°33'44" E	87.92'
E134	S 9°37'08" W	13.00'
E135	N 31°08'45" E	13.86'
E136	N 47°30'23" E	92.08'
E137	N 2°50'09" W	53.09'
E138	N 42°29'37" W	115.31'
E139	N 64°39'37" E	64.12'
E140	N 22°17'29" W	81.29'
E141	N 64°39'37" E	20.03'
E142	N 22°17'29" W	62.09'

EASEMENT LINE DATA		
LINE	BEARING	LENGTH
E143	S 69°02'41" E	45.00'
E144	N 20°57'19" W	37.00'
E145	S 42°45'24" W	26.93'
E146	S 20°57'19" W	45.00'
E147	N 69°02'41" W	35.00'
E148	N 20°57'19" E	107.00'
E149	S 66°25'14" E	10.00'
E150	N 45°49'11" W	10.10'
E151	N 25°18'38" W	10.00'
E152	S 38°23'46" E	10.00'
E153	N 22°17'29" W	10.09'
E154	S 2°07'35" E	10.00'

KEY MAP
SCALE: 1" = 1000'

LEGEND

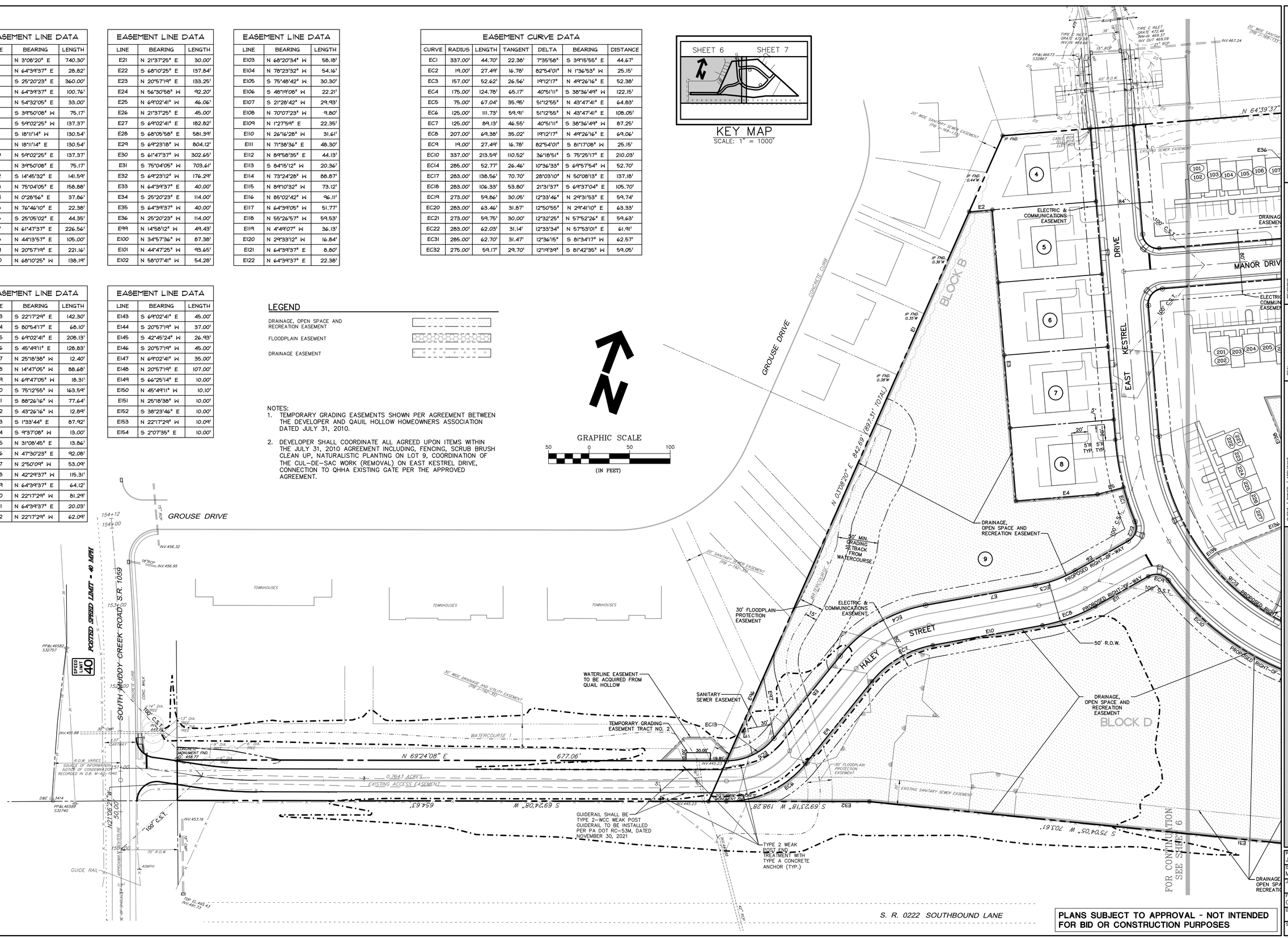
DRAINAGE, OPEN SPACE AND RECREATION EASEMENT

FLOODPLAIN EASEMENT

DRAINAGE EASEMENT

NOTES:
1. TEMPORARY GRADING EASEMENTS SHOWN PER AGREEMENT BETWEEN THE DEVELOPER AND QAUIL HOLLOW HOMEOWNERS ASSOCIATION DATED JULY 31, 2010.
2. DEVELOPER SHALL COORDINATE ALL AGREED UPON ITEMS WITHIN THE JULY 31, 2010 AGREEMENT INCLUDING, FENCING, SCRUB BRUSH CLEAN UP, NATURALISTIC PLANTING ON LOT 9, COORDINATION OF THE CUL-DE-SAC WORK (REMOVAL) ON EAST KESTREL DRIVE, CONNECTION TO QHHA EXISTING GATE PER THE APPROVED AGREEMENT.

GRAPHIC SCALE
50 0 50 100
(IN FEET)


GROUSE DRIVE
SOUTH MUDDY CREEK ROAD S.R. 1059
POSTED SPEED LIMIT - 40 MPH
SPEED LIMIT 40
TOWNHOUSES
TOWNHOUSES
TOWNHOUSES
154+12
154+00
153+00
152+00
151+00
150+00
INV.456.32
INV.456.95
PIP&L46582 S32757
PIP&L46589 S32740
CONCRETE MONUMENT FND. RC-458.77
INV.451.88
INV.455.16
INV.455.43
INV.491.73
INV.445.21
INV.445.23
INV.445.38
N 69°24'08" E 677.06'
0.7643 ACRES
EXISTING ACCESS EASEMENT
S 69°24'08" W 654.63'
S 69°23'18" W 198.28'
S 75°04'05" W 703.61'
N 21°06'52" W 50.00'
N 03°28'20" E 842.69' (842.31' TOTAL)
WATERCOURSE 1
WATERCOURSE 2
30' WIDE DRAINAGE AND UTILITY EASEMENT (PB J-192-35)
20' SANITARY SEWER EASEMENT (PB J-192-35)
WATERLINE EASEMENT TO BE ACQUIRED FROM QUAIL HOLLOW
SANITARY SEWER EASEMENT
TEMPORARY GRADING EASEMENT TRACT NO. 2
GUIDERAIL SHALL BE TYPE 2-WCO WEAK POST GUIDERAIL TO BE INSTALLED PER PA DOT RC-53M, DATED NOVEMBER 30, 2021
TYPE 2 WEAK POST END TREATMENT WITH TYPE A CONCRETE ANCHOR (TYP.)
30' MIN. GRADING SETBACK FROM WATERCOURSE
30' FLOODPLAIN PROTECTION EASEMENT
ELECTRIC & COMMUNICATIONS EASEMENT
DRAINAGE, OPEN SPACE AND RECREATION EASEMENT
50' R.O.W.
PROPOSED RIGHT-OF-WAY
HALEY STREET
KESTREL EAST DRIVE
MANOR DRIVE
BLOCK B
BLOCK D
GUIDE RAIL
S. R. 0222 SOUTHBOUND LANE
FOR CONTINUATION SEE SHEET 6
TYPE C INLET GRATE 472.45 INV=IN 469.37 INV OUT 469.09
TYPE C INLET GRATE 472.58 INV=IN 469.64
INV.467.24
20' WIDE SANITARY SEWER EASEMENT (PB J-168-33)
EXISTING SEWER EASEMENT
CABLE BOX TELEPHONE BOX ELEC. BOX
PP&L46673 S32867
N 64°39'37" E
IP FND.
IP FND. 0.44'W
IP FND. 0.36'W
IP FND. 0.35'W
IP FND. 0.38'W
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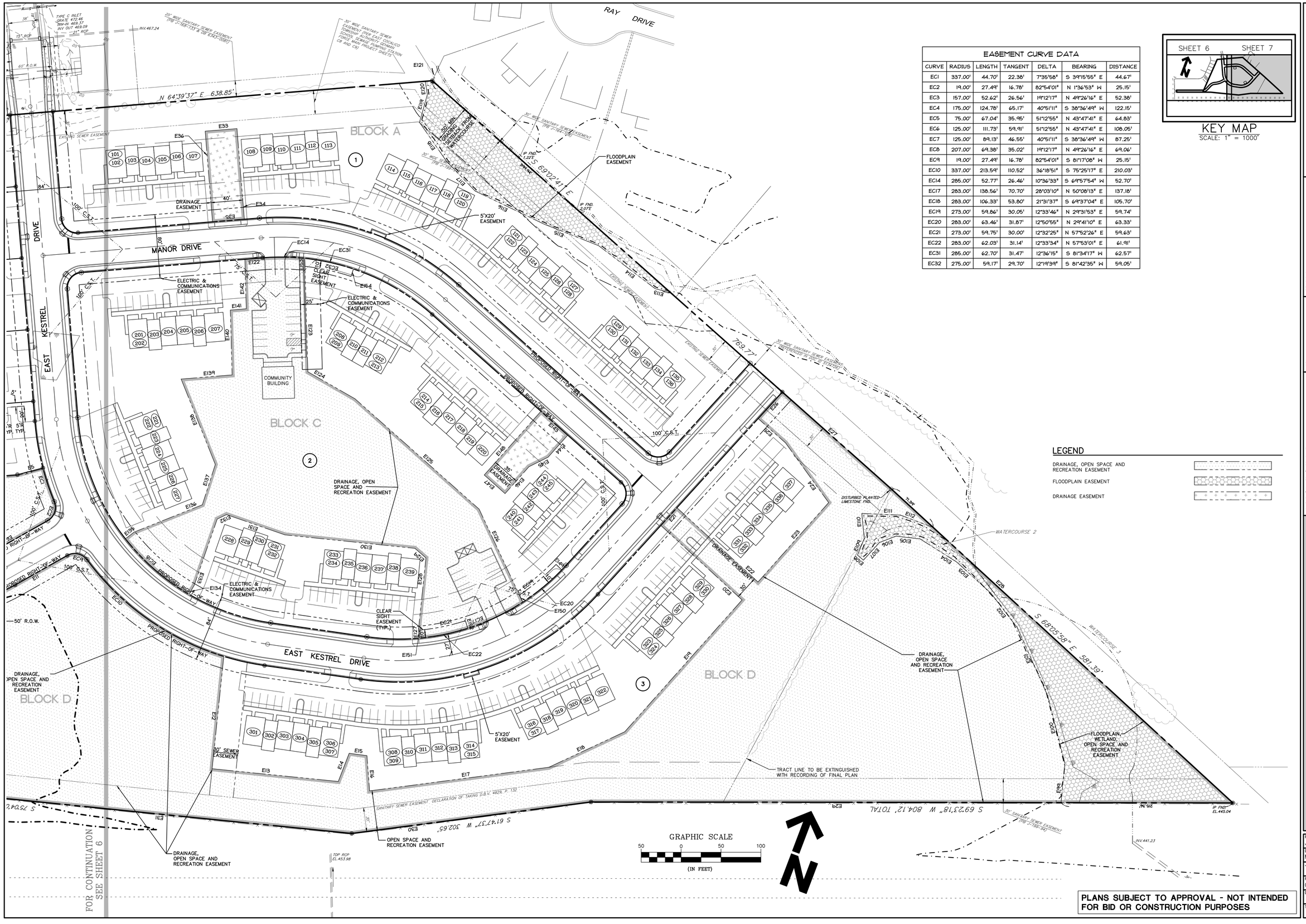

EASEMENT CURVE DATA						
CURVE	RADIUS	LENGTH	TANGENT	DELTA	BEARING	DISTANCE
EC1	337.00'	44.70'	22.38'	7°35'58"	S 39°15'55" E	44.67'
EC2	19.00'	27.49'	16.78'	82°54'01"	N 1°36'53" W	25.15'
EC3	157.00'	52.62'	26.56'	19°12'17"	N 49°26'16" E	52.38'
EC4	175.00'	124.78'	65.17'	40°51'11"	S 38°36'49" W	122.15'
EC5	75.00'	67.04'	35.95'	51°12'55"	N 43°47'41" E	64.83'
EC6	125.00'	111.73'	59.91'	51°12'55"	N 43°47'41" E	108.05'
EC7	125.00'	89.13'	46.55'	40°51'11"	S 38°36'49" W	87.25'
EC8	207.00'	69.38'	35.02'	19°12'17"	N 49°26'16" E	69.06'
EC9	19.00'	27.49'	16.78'	82°54'01"	S 81°17'08" W	25.15'
EC10	337.00'	213.59'	110.52'	36°18'51"	S 75°25'17" E	210.03'
EC14	285.00'	52.77'	26.46'	10°36'33"	S 69°57'54" W	52.70'
EC17	283.00'	138.56'	70.70'	28°03'10"	N 50°08'13" E	137.18'
EC18	283.00'	106.33'	53.80'	21°31'37"	S 69°37'04" E	105.70'
EC19	273.00'	59.86'	30.05'	12°33'46"	N 29°31'53" E	59.74'
EC20	283.00'	63.46'	31.87'	12°50'55"	N 29°41'10" E	63.33'
EC21	273.00'	59.75'	30.00'	12°32'25"	N 57°52'26" E	59.63'
EC22	283.00'	62.03'	31.14'	12°33'34"	N 57°53'01" E	61.91'
EC31	285.00'	62.70'	31.47'	12°36'15"	S 81°34'17" W	62.57'
EC32	275.00'	59.17'	29.70'	12°19'39"	S 81°42'35" W	59.05'

KEY MAP
SCALE: 1" = 1000'

LEGEND

DRAINAGE, OPEN SPACE AND RECREATION EASEMENT

FLOODPLAIN EASEMENT

DRAINAGE EASEMENT

PLANS SUBJECT TO APPROVAL - NOT INTENDED FOR BID OR CONSTRUCTION PURPOSES

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REVISIONS
1 CMC 7/12/21 PER LCCD REVIEW LETTER DATED 6/29/21
2 TCV 9/23/21 PER BECKER ENG. AND RETIEW REVIEW LETTERS
3 TCV 11/19/21 PER BECKER ENGINEERING REVIEW LETTER DATED 10/20/21 AND CDM REVIEW LETTER DATED 9/21/21
4 TCV 2/14/23 PER BECKER ENG. REVIEW LETTER DATED 12/20/21 AND CDM SMITH REVIEW LETTER DATED 1/17/22
5 TCV 4/21/23 PER BECKER ENG. REVIEW LETTER DATED 4/17/23, PER RETIEW LETTER DATED 4/12/23 AND PER CDM LETTER DATED 3/28/22 (MEANT TO BE 2023)
6 TCV 2/20/24 PER PADOT PLAN COORDINATION WITH TPD PLANS FOR CONNECTION TO SOUTH MOODY CREEK ROAD

SEAL

CLIENT / OWNER / APPLICANT
EAST COCALICO ASSOCIATES
1377-C SPENCER AVENUE
LANCASTER, PA 17603
(717) 393-0463

EASEMENT PLAN

VILLAGE AT EAST COCALICO

EAST COCALICO TOWNSHIP, LANCASTER COUNTY, PENNSYLVANIA

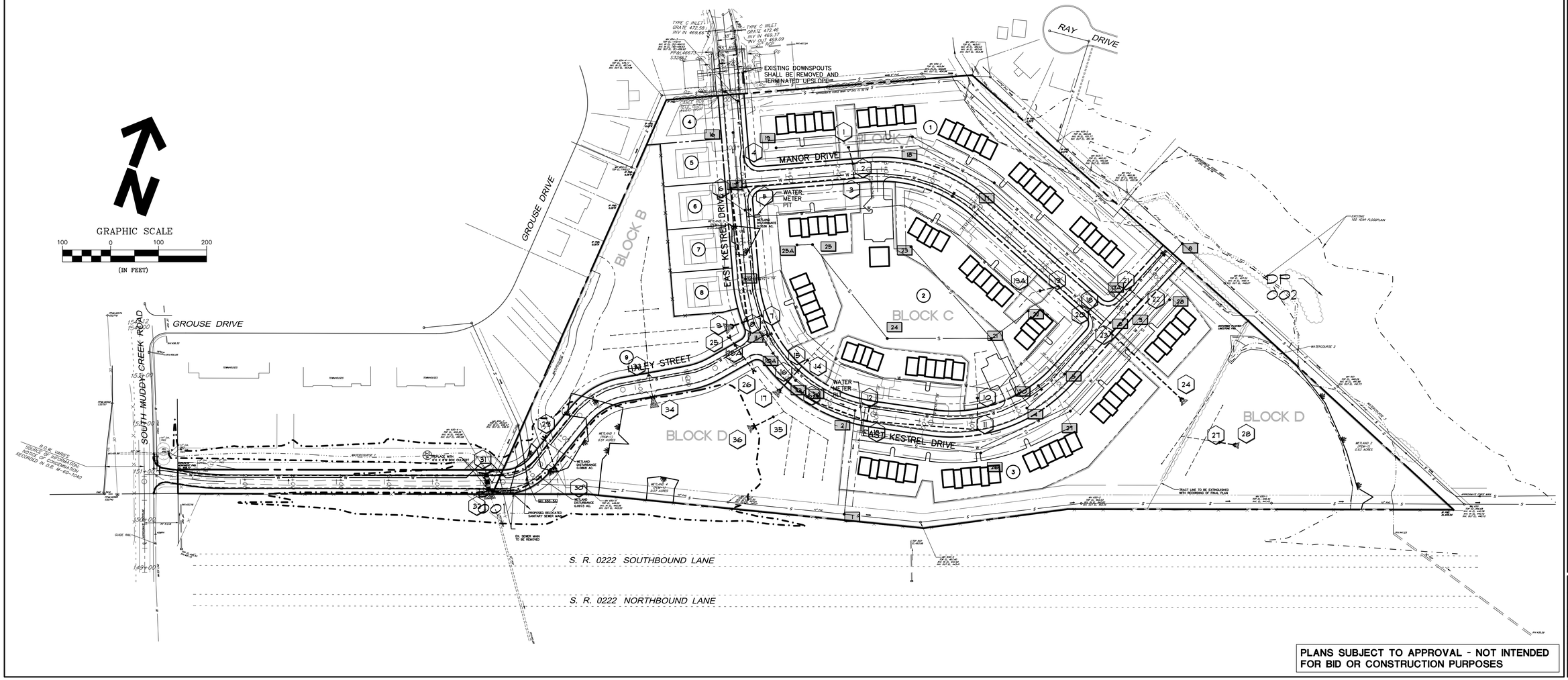
PRINCIPAL: J. BOYER	PROJECT MANAGER: T. VAUGHN
DRAWN BY: M. WAPLES	CHECKED BY: J. BOYER
JOB NO.: 02-172.2	DRAWING NO.: 02-172.27
FILE NO.: 0217227EASEMENT	
DATE: 5/14/21	SCALE: 1"=50'
SHEET NO.: 7 OF 34	

LEGEND

EXISTING		PROPOSED
	RIGHT-OF-WAY	
	TRACT BOUNDARY	
	CURB	
	EDGE OF PAVEMENT	
	CENTERLINE	
	LOT LINE	
	EASEMENT LINE	
	OPEN SPACE & RECREATION EASEMENT LINE	
	SETBACK LINE	
	100 YEAR FLOODPLAIN	
	WETLAND BOUNDARY	
	DECIDUOUS TREES	
	EVERGREEN TREES	
OE	OVERHEAD ELECTRIC/ OVERHEAD TELEPHONE	
UE	UNDERGROUND ELECTRIC UNDERGROUND TELEPHONE	
405	CONTOUR	406
(405.45)	SPOT ELEVATION	406.85
	FIRST FLOOR ELEVATION	F.F.E.
	STORM LINE/INLET	
	ENDWALL	
	STORMWATER STRUCTURE	10
	RIP-RAP OUTLET PROTECTION	
S	SEWER LINE/MANHOLE	S
	SANITARY SEWER STRUCTURE	10
S 6"FM	FORCE MAIN	S 6"FM
W	WATERLINE/FIRE HYDRANT/VALVE	W
	TO BE REMOVED	(TBR)

NOTE:

PLAN SHOWS INTENDED SEWER AND WATER MAIN WITHIN THE ROAD RIGHT-OF-WAY. LOTS TO BE SERVED BY ONE SEWER AND ONE WATER LATERAL PER LOT. SEE PLAN SHEETS 9 AND 10 FOR LATERAL LOCATIONS FOR LOTS AND UNITS.



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UTILITY INDEX PLAN

VILLAGE AT EAST COCALICO

EAST COCALICO TOWNSHIP, LANCASTER COUNTY, PENNSYLVANIA

PRINCIPAL J. BOYER	PROJECT MANAGER T. VAUGHN
DRAWN BY M. WAPLES	CHECKED BY J. BOYER
JOB NO. 02-172.2	DRAWING NO. 02-172.27
FILE NO. 02172270VERALLSTORM	
DATE 5/14/21	SCALE 1"=100"
SHEET NO. 8 OF 34	

OPERATION AND MAINTENANCE OF PCSM FACILITIES

OPERATION AND MAINTENANCE OF PCSM FACILITIES

THE PROPERTY OWNER OF THE DEVELOPMENT IS RESPONSIBLE FOR THE OPERATION, MAINTENANCE AND ROUTINE INSPECTION OF ANY STORMWATER MANAGEMENT FACILITIES PROPOSED. A RECORD DOCUMENTING ALL INSPECTIONS AND REPAIRS SHALL BE MAINTAINED BY THE PROPERTY OWNER OF THE DEVELOPMENT FOR THE RESPECTIVE FACILITY. A WRITTEN REPORT OF EACH INSPECTION SHALL BE DOCUMENTED TO INCLUDE A SUMMARY OF SITE CONDITIONS, BMPS, AND COMPLIANCE, ALONG WITH THE DATE, TIME, AND THE NAME OF THE PERSON CONDUCTING THAT INSPECTION.

•RESPONSIBILITIES, AS SET FORTH IN MORE DETAIL IN (1) THE STORMWATER MANAGEMENT OPERATION AND MAINTENANCE AGREEMENT ENTERED INTO BETWEEN THE TOWNSHIP AND DEVELOPER AND (11) THE DECLARATION AND CHART OF MAINTENANCE RESPONSIBILITIES ESTABLISHED BY THE DEVELOPER INCLUDE THE BASINS, CONVEYANCE PIPING, ENDWALLS, RIPRAP APRONS AND SWALES LOCATED OUTSIDE OF THE DEDICATED PUBLIC RIGHT-OF-WAY. ANY IMPROVEMENTS LOCATED ON LOTS 4, 5, 6, 7 AND 8 SHALL BE THE RESPONSIBILITY OF THE HOMEOWNER FOR ALL OPERATION, MAINTENANCE AND INSPECTION RESPONSIBILITIES. ALL MAINTENANCE OF BASIN A IS THE RESPONSIBILITY OF THE PROPERTY OWNER OF THE DEVELOPMENT.

BIORETENTION- WETLAND BASIN/ RAIN GARDENS

1. THE BASINS AND RAIN GARDENS SHALL BE INSPECTED TWICE ANNUALLY AND AFTER RAINFALL EVENTS GREATER THAN 0.80 INCH TO DETERMINE IF THEY ARE FUNCTIONING CORRECTLY. IN THE CASE OF RAIN GARDENS, 72 HOUR DEWATER TIMES MUST BE CONFIRMED.
2. INSPECTION EFFORTS SHALL INCLUDE INSPECTION FOR ACCUMULATED SEDIMENT, DRAINAGE TO THE OUTLET STRUCTURE, EROSIVE CONDITIONS, SIGNS OF CONTAMINATION AND INSTABILITY. EXCESS BIO-MATTER SHALL BE REMOVED ANNUALLY.
3. CONSTRUCTED WETLAND BMPS ALLOW STANDING WATER TO BE PRESENT FOR LONGER THAN 72 HOURS. ALL OTHER BMP AREAS - RAIN GARDENS AND BASINS - MUST DEWATER WITHIN 72 HOURS.
4. IF BUILT UP SEDIMENT IS OBSERVED DURING INSPECTION EFFORTS, IT SHALL BE REMOVED AND THE AREA RESTABILIZED IMMEDIATELY.
5. THE RAIN GARDEN BOTTOMS SHALL BE MOWED ANNUALLY IN THE FALL AFTER THE FIRST KILLING FROST TO PROHIBIT THE GROWTH OF WOODY PLANTS. THE RAIN GARDEN BOTTOMS SHALL NOT BE MOWED IF THE AREAS ARE SATURATED. THE BASIN AND RAIN GARDEN EMBANKMENTS AND SIDE SLOPES CAN BE MOWED AS DESIRED TO MAINTAIN A HEALTHY LAWN GRASS CONDITION FREE OF WEEDS. THE BASIN BOTTOMS SHALL NOT BE MOWED.
6. ANY VOLUNTEER TREES THAT BECOME ESTABLISHED IN THE BASIN EMBANKMENTS SHALL BE REMOVED IMMEDIATELY. TREES OR SHRUBS THAT MAY BECOME ESTABLISHED IN THE BASIN BOTTOM MAY REMAIN IF DESIRED.
7. THE OUTLET STRUCTURE SHALL BE INSPECTED ANNUALLY AND AFTER RAINFALL EVENTS GREATER THAN 0.80 INCH TO VERIFY THAT THE ORIFICE PLATES ARE CONNECTED IN A WATERTIGHT MANNER, AND THAT THERE IS NO DEBRIS CLOGGING THE PLATE OR TRASH RACK.
8. ANY TRASH, DEBRIS OR OTHER FOREIGN MATERIAL SHALL BE REMOVED FROM THE BASINS AND RAIN GARDENS WEEKLY.
9. ANY EROSIVE CONDITIONS OBSERVED WITHIN THE BASINS OR RAIN GARDENS SHALL BE CORRECTED AND STABILIZED IMMEDIATELY.
10. THE CRITICAL RELEASE POINTS FOR ALL CONSTRUCTED WETLANDS SHALL BE INSPECTED ANNUALLY AND AFTER RAINFALL EVENTS GREATER THAN 0.80 INCH TO VERIFY NO DEBRIS OR SEDIMENT ARE DISRUPTING DISCHARGE.
11. BASIN UNDERDRAINS SHALL BE TESTED AND FLUSHED ANNUALLY TO CONFIRM LONG-TERM FUNCTION IN CASE OF NEED TO ACTIVATE.
12. FLOW PATHS SHALL BE MONITORED FROM ALL DISCHARGE POINTS, INCLUDING CONSTRUCTED WETLANDS, TO ENSURE LONG-TERM FUNCTION OF THE FEATURE AND STABILITY OF THE FLOW PATH.

INLET AND PIPING SYSTEM

1. THE INLETS SHALL BE INSPECTED MONTHLY AND AFTER EACH RAINFALL EVENT GREATER THAN 0.80 INCH TO INSURE THAT THEY ARE FUNCTIONING PROPERLY.
2. ANY TRASH OR DEBRIS SHALL BE REMOVED FROM THE INLETS AND PIPING SYSTEM IMMEDIATELY.
3. ANY BUILT UP SEDIMENT SHALL BE VACUUMED FROM THE BOTTOM OF THE INLETS ANNUALLY.
4. RIPRAP APRONS SHALL BE INSPECTED AT THE SAME INTERVAL AS THE PIPING SYSTEM. THEY SHALL BE INSPECTED FOR STABILITY. ANY EROSIVE CONDITIONS WITHIN THE RIPRAP APRONS SHALL BE FIXED IMMEDIATELY. SHOULD THE RIPRAP APRON BECOME CLOGGED WITH BUILT UP SILTS AND SEDIMENTS, THE RIPRAP APRON SHALL BE REMOVED AND REPLACED WITH CLEAN STONE.
5. ANY DEBRIS OR TRASH FOUND IN THE RIPRAP APRON SHALL BE REMOVED AND DISPOSED OF IMMEDIATELY.
6. PIPE LEADING TO HW34 AND THE PIPE CONNECTING HW25 TO HW26 MUST BE FLUSHED BI-ANNUALLY TO ACCOUNT FOR MAINTENANCE FOR SUBMERGED CONDITION. THE ROUTINE FLUSHING SHALL BE THE RESPONSIBILITY OF THE PRIVATE PARTY RESPONSIBLE FOR BASIN A, EVEN AFTER DEDICATION OF HALEY STREET TO THE TOWNSHIP.

SWALES

1. SWALE SHALL BE INSPECTED ANNUALLY AND AFTER RAINFALL EVENTS GREATER THAN 0.80 INCH TO VERIFY THAT THEY ARE FUNCTIONING PROPERLY.
2. SWALES SHALL BE MOWED WEEKLY TO MAINTAIN A STABLE, WEED FREE GRASS COVER CONDITION. MOWING SHALL NOT OCCUR IF SWALE IS SATURATED.
3. ANY TRASH, DEBRIS OR OTHER FOREIGN MATERIAL SHALL BE REMOVED FROM THE SWALE WEEKLY.
4. ANY EROSIVE CONDITIONS WITHIN THE SWALE SHALL BE STABILIZED IMMEDIATELY.

EXISTING WETLANDS (TO REMAIN)/ PROPOSED WETLANDS

1. THE WETLAND AREAS SHALL BE INSPECTED ANNUALLY.
2. ANY TRASH, DEBRIS OR OTHER FOREIGN MATERIAL SHALL BE REMOVED FROM THE WETLANDS IMMEDIATELY.
3. NO MOWING, GRADING OR OTHER MAINTENANCE ACTIVITIES SHALL OCCUR WITHIN THE WETLAND AREAS.
4. VOLUNTEER TREES AND SHRUBS SHALL REMAIN IF DESIRED.

SCHEDULE OF INSPECTIONS FOR BMP INSTALLATION

THE FOLLOWING IS A SCHEDULE OUTLINING THE CRITICAL ITEMS OF THE PCSM PLAN THAT WILL REQUIRE A LICENSED PROFESSIONAL OR DESIGNEE TO BE PRESENT ON SITE DURING CONSTRUCTION.

1. PRECONSTRUCTION MEETING.
2. INSTALLATION OF SEDIMENT BASINS.
3. CONVERSION OF THE SEDIMENT BASINS INTO PERMANENT BASIN CONDITIONS INCLUDING REMOVAL OF BUILT UP SEDIMENTS, CONVERSION OF THE OUTLET STRUCTURES AND STABILIZATION OF THE BASIN BOTTOMS.
4. FINAL SITE STABILIZATION.

CRITICAL STAGES

1. PRECONSTRUCTION MEETING.
2. INSTALLATION OF E&S CONTROL MEASURES.
3. FINAL STABILIZATION OF ANY SWALE AREAS.
4. CONVERSION OF THE BIORETENTION/ CONSTRUCTED WETLAND BASINS.
5. CONSTRUCTION OF RAIN GARDEN AREAS.
6. FINAL SITE STABILIZATION.

SEQUENCE OF BMP INSTALLATION

1. INSTALL E&S CONTROLS AS SHOWN ON THE PLAN.
2. SEDIMENT BASINS SHALL BE INSTALLED CONCURRENTLY WITH THE BULK GRADING AND IN CONCURRENCE WITH THE STAGING OF EARTHMOVING ACTIVITIES FOUND IN THE EROSION AND SEDIMENT POLLUTION CONTROL NARRATIVE.
3. UPON FULL SITE STABILIZATION, THE SEDIMENT BASINS SHALL BE CONVERTED TO THE PERMANENT BASIN CONDITIONS AS SHOWN ON THE PLANS.
4. INSTALL AND STABILIZE RAIN GARDEN AREAS.

BASIN BOTTOM SEED MIX:

ROHRER'S LOW MAINTENANCE SEED MIX

SEEDING RATE: 4 LB PER 1,000 SF

MIX TYPE: EROSION CONTROL

- 34% MATTERHORN HARD FESCUE
- 33% GIBRALTER CREEPING RED FESCUE
- 33% RUSHMORE CHEWINGS FESCUE

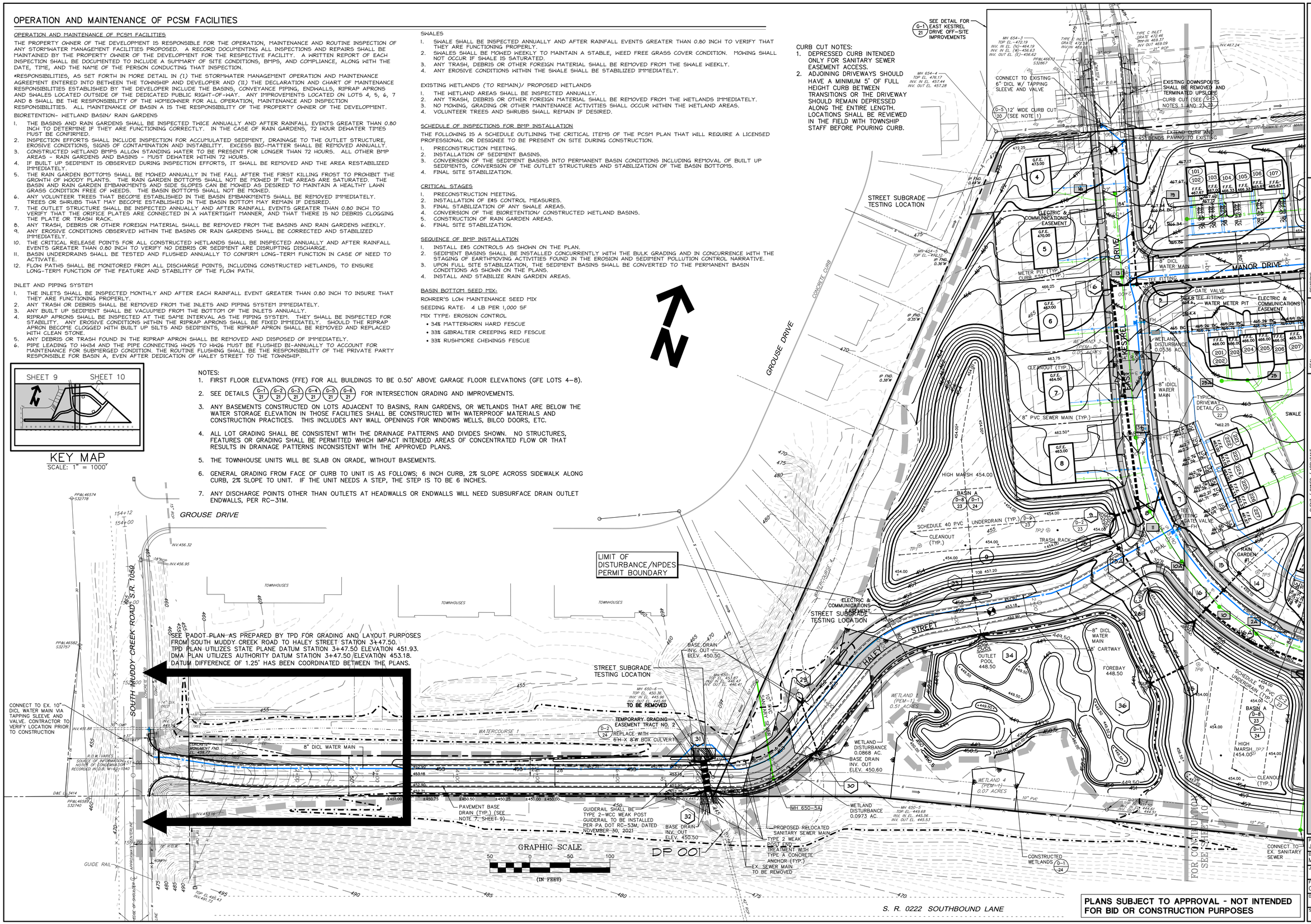
CURB CUT NOTES:

1. DEPRESSED CURB INTENDED ONLY FOR SANITARY SEWER EASEMENT ACCESS.
2. ADJOINING DRIVEWAYS SHOULD HAVE A MINIMUM 5' OF FULL HEIGHT CURB BETWEEN TRANSITIONS OR THE DRIVEWAY SHOULD REMAIN DEPRESSED ALONG THE ENTIRE LENGTH. LOCATIONS SHALL BE REVIEWED IN THE FIELD WITH TOWNSHIP STAFF BEFORE POURING CURB.

NOTES:

1. FIRST FLOOR ELEVATIONS (FFE) FOR ALL BUILDINGS TO BE 0.50' ABOVE GARAGE FLOOR ELEVATIONS (GFE LOTS 4-8).
2. SEE DETAILS (G-1 21) (G-2 21) (G-3 21) (G-4 21) (G-5 21) (G-6 21) FOR INTERSECTION GRADING AND IMPROVEMENTS.
3. ANY BASEMENTS CONSTRUCTED ON LOTS ADJACENT TO BASINS, RAIN GARDENS, OR WETLANDS THAT ARE BELOW THE WATER STORAGE ELEVATION IN THOSE FACILITIES SHALL BE CONSTRUCTED WITH WATERPROOF MATERIALS AND CONSTRUCTION PRACTICES. THIS INCLUDES ANY WALL OPENINGS FOR WINDOWS WELLS, BILCO DOORS, ETC.
4. ALL LOT GRADING SHALL BE CONSISTENT WITH THE DRAINAGE PATTERNS AND DIVIDES SHOWN. NO STRUCTURES, FEATURES OR GRADING SHALL BE PERMITTED WHICH IMPACT INTENDED AREAS OF CONCENTRATED FLOW OR THAT RESULTS IN DRAINAGE PATTERNS INCONSISTENT WITH THE APPROVED PLANS.
5. THE TOWNHOUSE UNITS WILL BE SLAB ON GRADE, WITHOUT BASEMENTS.
6. GENERAL GRADING FROM FACE OF CURB TO UNIT IS AS FOLLOWS; 6 INCH CURB, 2% SLOPE ACROSS SIDEWALK ALONG CURB, 2% SLOPE TO UNIT. IF THE UNIT NEEDS A STEP, THE STEP IS TO BE 6 INCHES.
7. ANY DISCHARGE POINTS OTHER THAN OUTLETS AT HEADWALLS OR ENDWALLS WILL NEED SUBSURFACE DRAIN OUTLET ENDWALLS, PER RC-31M.

KEY MAP
SCALE: 1" = 1000'



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PER LCCD JEROME REVIEW LETTER DATED 4/11/22
FOR CONNECTION TO SOUTH MUDDY CREEK ROAD
6 TCV 2/20/24 PER LCCD JEROME REVIEW LETTER DATED 1/29/24
FOR CONNECTION TO SOUTH MUDDY CREEK ROAD

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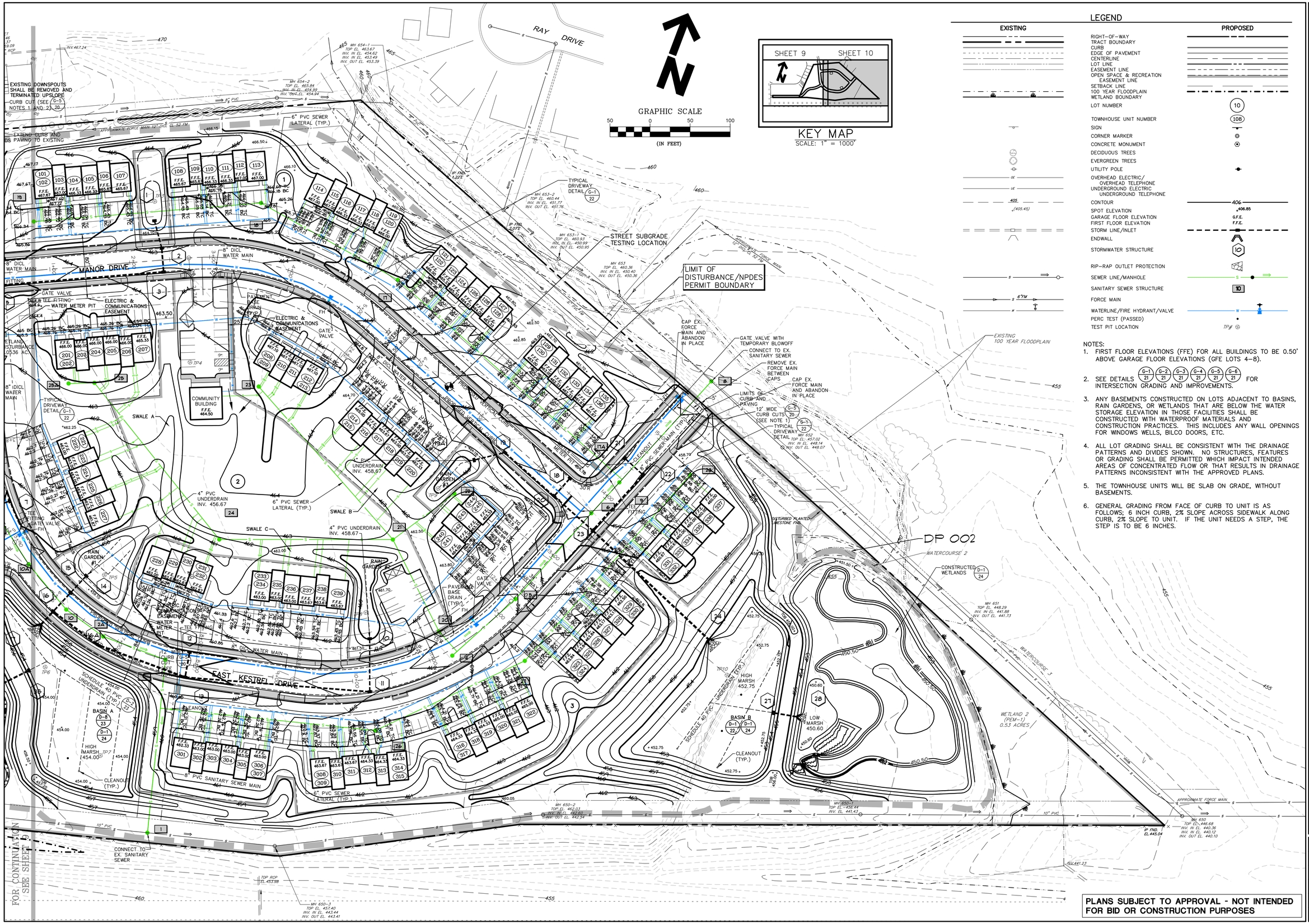
GRADING, UTILITY AND POST CONSTRUCTION STORMWATER MANAGEMENT PLAN

VILLAGE AT EAST COCALICO

EAST COCALICO TOWNSHIP, LANCASTER COUNTY, PENNSYLVANIA

PRINCIPAL J. BOYER	PROJECT MANAGER T. VAUGHN
DRAWN BY M. WAPLES	CHECKED BY J. BOYER
JOB NO. 02-172.2	DRAWING NO. 02-172.27
FILE NO. 0217227STORMWATER	
DATE 5/14/21	SCALE 1"=50'
SHEET NO. 9 OF 34	



LEGEND

EXISTING	PROPOSED
	RIGHT-OF-WAY
	TRACT BOUNDARY
	CURB
	EDGE OF PAVEMENT
	CENTERLINE
	LOT LINE
	EASEMENT LINE
	OPEN SPACE & RECREATION EASEMENT LINE
	SETBACK LINE
	100 YEAR FLOODPLAIN
	WETLAND BOUNDARY
	LOT NUMBER (10)
	TOWNHOUSE UNIT NUMBER (108)
	SIGN
	CORNER MARKER
	CONCRETE MONUMENT
	DECIDUOUS TREES
	EVERGREEN TREES
	UTILITY POLE
OE	OVERHEAD ELECTRIC/ OVERHEAD TELEPHONE
UE	UNDERGROUND ELECTRIC UNDERGROUND TELEPHONE
405 (405.45)	CONTOUR 406
	SPOT ELEVATION 406.85
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	STORMWATER STRUCTURE (10)
	RIP-RAP OUTLET PROTECTION
S	SEWER LINE/MANHOLE S
	SANITARY SEWER STRUCTURE 10
S 6"FM	FORCE MAIN
W	WATERLINE/FIRE HYDRANT/VALVE W
	PERC TEST (PASSED)
	TEST PIT LOCATION TP#
EXISTING 100 YEAR FLOODPLAIN	

NOTES:

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4 TCV 4/21/23 PER LCCD JEREMY LETTER DATED 4/17/23
PER BECKER ENG. REVIEW LETTER DATED 4/17/23
5 TCV 9/20/24 PER LCCD JEREMY LETTER DATED 7/26/23 (WQAP) TO BE 2023-0
PER BECKER ENG. REVIEW LETTER DATED 8/2/23 (WQAP)
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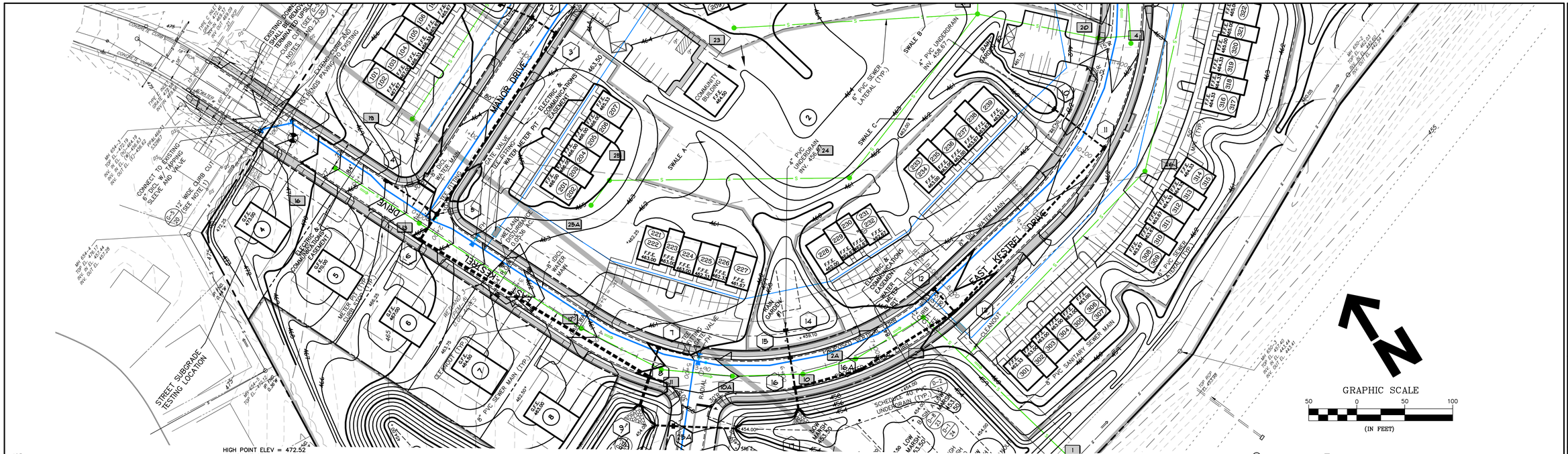
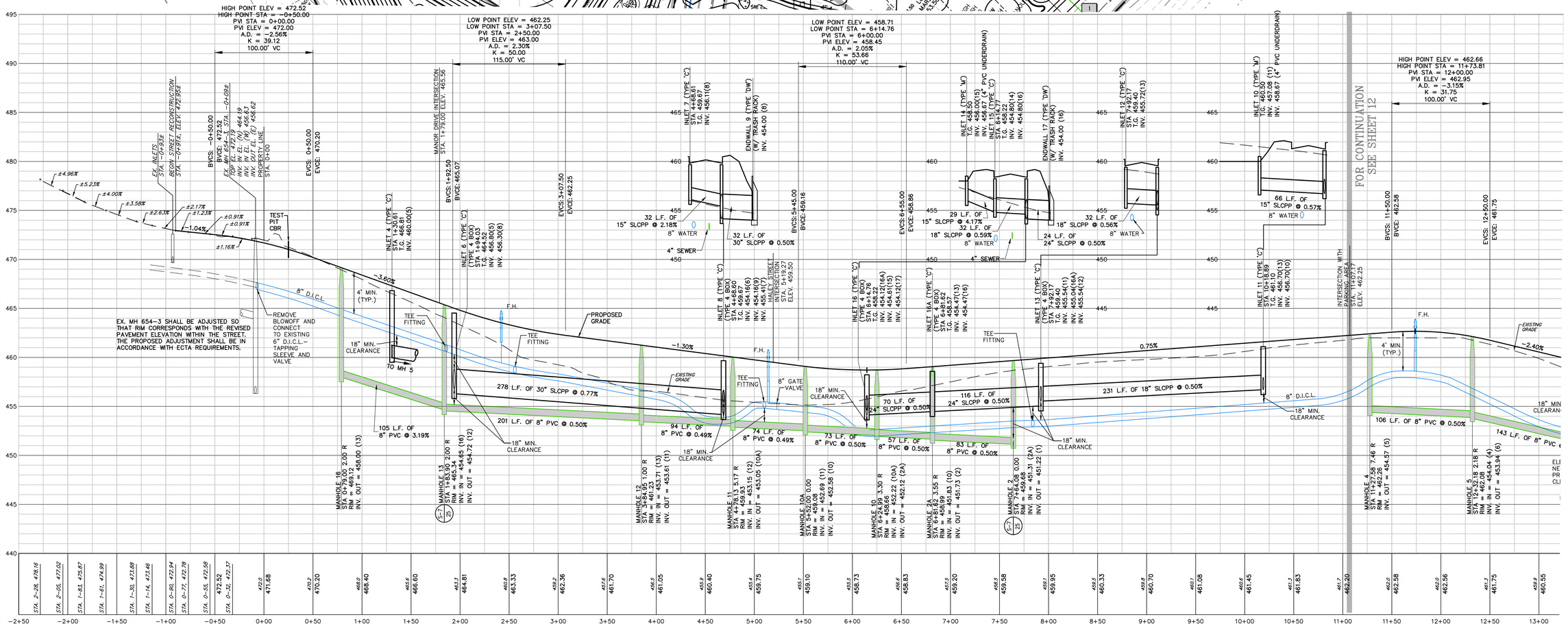
JOB NO. 02-172.2	DRAWING NO. 02-172.27
FILE NO. 0217227STORMWATER	
DATE 5/14/21	SCALE 1"=50'
SHEET NO. 10 OF 34	





PROFILE: EAST KESTREL DRIVE
Scale: Horiz. 1"= 50'
Vert. 1"= 5'

PLANS SUBJECT TO APPROVAL - NOT INTENDED FOR BID OR CONSTRUCTION PURPOSES

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REVISIONS
1 DMC 7/12/21 PER LCCD JEROM LETTER DATED 6/29/21
2 DMC 11/8/21 PER LCCD JEROM LETTER DATED 10/25/21
3 TCV 11/19/21 PER BECKER ENG. REVIEW LETTER DATED 11/16/21
4 TCV 2/14/23 PER BECKER ENG. REVIEW LETTER DATED 12/20/21
PER LCCD JEROM LETTER DATED 1/27/22
PER BECKER ENG. REVIEW LETTER DATED 1/17/22
5 TCV 4/20/23 PER LCCD JEROM LETTER DATED 3/27/23 & 4/11/23
LETTER DATED 3/28/23 (MEMO TO BE 3932.1)
PER BECKER ENG. REVIEW LETTER DATED 4/17/23
6 TCV 2/20/24 FOR CONNECTION TO SOUTH MUDDY CREEK ROAD

SEAL

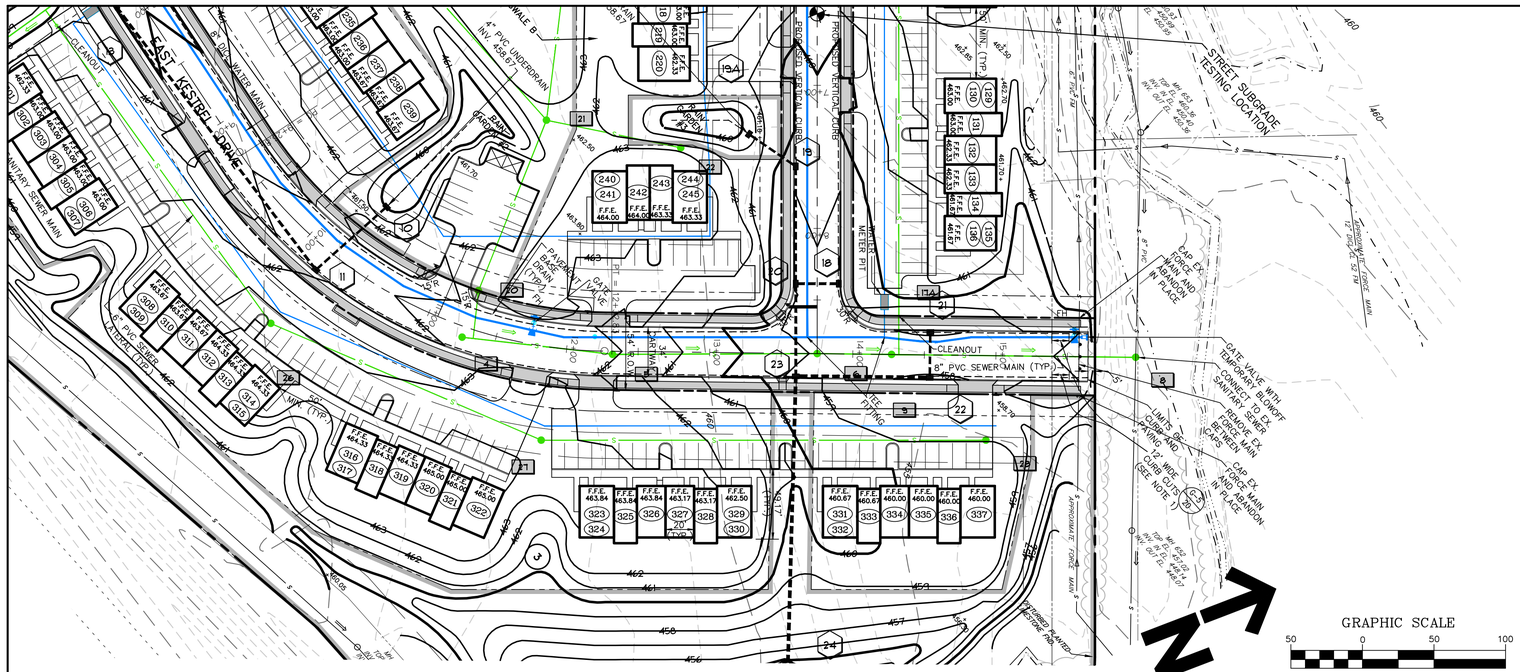
CLIENT / OWNER / APPLICANT
EAST COCALICO ASSOCIATES
1577-C SPENCER AVENUE
LANCASTER, PA 17603
(717) 393-0463

PLAN AND PROFILE: EAST KESTREL DRIVE

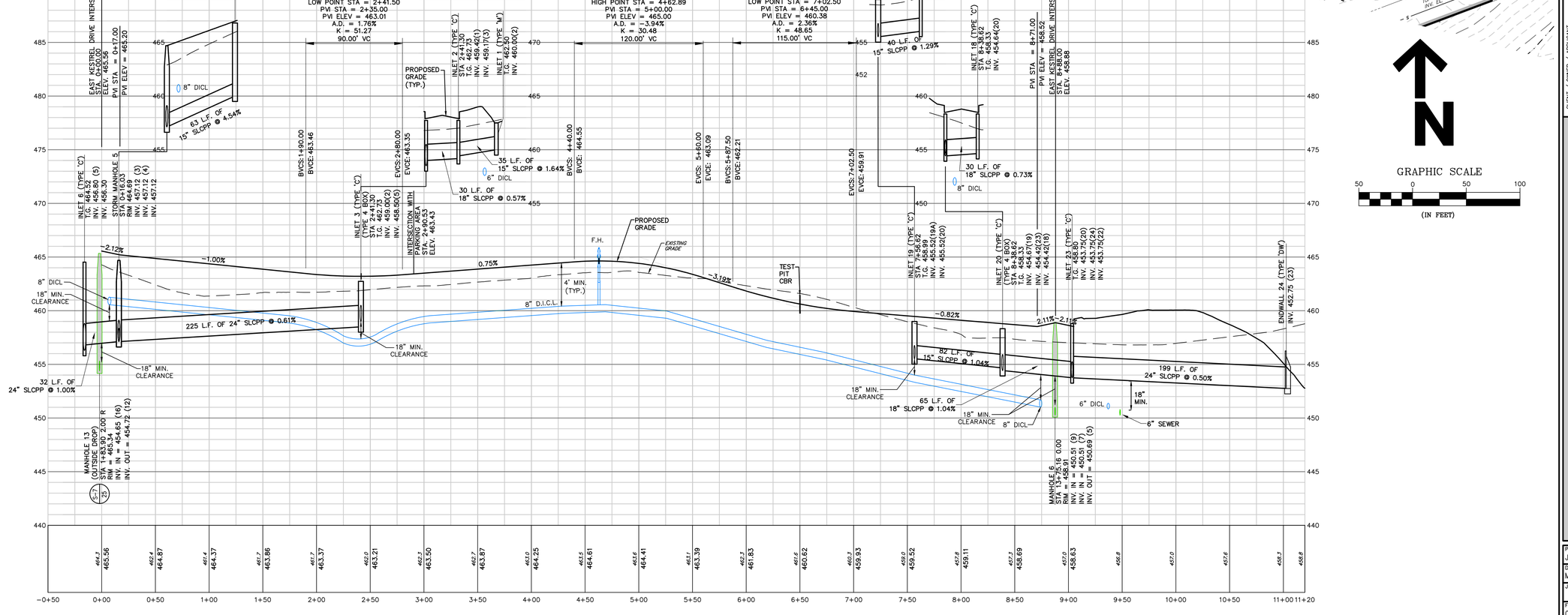
VILLAGE AT EAST COCALICO

EAST COCALICO TOWNSHIP, LANCASTER COUNTY, PENNSYLVANIA

PRINCIPAL: J. BOYER	PROJECT MANAGER: T. VAUGHN
DRAWN BY: M. WAPLES	CHECKED BY: J. BOYER
JOB NO.: 02-172.2	DRAWING NO.: 02-172.27
FILE NO.: 0217227PROFILE	
DATE: 5/14/21	SCALE: AS SHOWN
SHEET NO.: 11 OF 34	


EAST KESTREL DRIVE
PROPOSED VERTICAL CURB
PROPOSED TEMPORARY CUL-DE-SAC
STREET TESTING LOCATION - SUBGRADE
CLEANOUT
8" PVC SEWER MAIN (TYP.)
8" PVC SANITARY SEWER MAIN
8" PVC SEWER LATERAL (TYP.)
8" DUCTILE IRON WATER MAIN
8" PVC WATER MAIN
GATE VALVE WITH TEMPORARY BLOWOFF
CONNECT TO EX. SANITARY SEWER
REMOVE EX. FORCEMAIN BETWEEN CAPS
CAP EX. MAIN AND ABANDON IN PLACE
LIMIT OF PAVING AND CURB WIDTH (SEE NOTE 1)
CAP EX. FORCEMAIN AND ABANDON IN PLACE
EXISTING STORM MAIN
EXISTING SANITARY MAIN
EXISTING WATER MAIN
PROPOSED STORM MAIN
PROPOSED SANITARY MAIN
PROPOSED WATER MAIN
PROPOSED STORM INLET
PROPOSED STORM MANHOLE
PROPOSED SANITARY MANHOLE
PROPOSED WATER VALVE
PROPOSED FIRE HYDRANT
PROPOSED WATER METER PIT
PROPOSED WATER TEE FITTING
PROPOSED WATER VALVE

NOTE:
1. DEPRESSED CURB INTENDED ONLY FOR SANITARY SEWER EASEMENT ACCESS.



PROFILE: MANOR DRIVE
Scale: Horiz. 1"= 50'
Vert. 1"= 5'

PLANS SUBJECT TO APPROVAL - NOT INTENDED FOR BID OR CONSTRUCTION PURPOSES

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2 DMC 10/25/21 PER LCCD JEROM LETTER DATED 10/20/21
3 TCV 11/10/21 PER BECKER ENG. REVIEW LETTER DATED 10/22/21
4 TCV 2/14/23 PER BECKER ENG. REVIEW LETTER DATED 1/27/23
5 TCV 4/20/23 PER LCCD JEROM LETTER DATED 4/17/23
PER BECKER ENG. REVIEW LETTER DATED 4/19/23
6 TCV 2/20/24 PER BECKER ENG. REVIEW LETTER DATED 2/15/24
FOR CONNECTION TO SOUTH MOODY CREEK ROAD

SEAL

CLIENT / OWNER / APPLICANT
EAST COCALICO ASSOCIATES
1377-C SPENCER AVENUE
LANCASTER, PA 17603
(717) 393-0483

PLAN AND PROFILE: MANOR DRIVE

VILLAGE AT EAST COCALICO

EAST COCALICO TOWNSHIP, LANCASTER COUNTY, PENNSYLVANIA

PRINCIPAL J. BOYER	PROJECT MANAGER T. VAUGHN
DRAWN BY M. WAPLES	CHECKED BY J. BOYER
JOB NO. 02-172.2	DRAWING NO. 02-172.27
FILE NO. 0217227PROFILE	
DATE 5/14/21	SCALE AS SHOWN
SHEET NO. 13 OF 34	

SEE PADOT PLAN AS PREPARED BY TPD FOR GRADING AND LAYOUT PURPOSES FROM SOUTH MUDDY CREEK ROAD TO HALEY STREET STATION 3+47.50. TPD PLAN UTILIZES STATE PLANE DATUM STATION 3+47.50 ELEVATION 451.93. DMA PLAN UTILIZES AUTHORITY DATUM STATION 3+47.50 ELEVATION 453.18. DATUM DIFFERENCE OF 1.25' HAS BEEN COORDINATED BETWEEN THE PLANS.

GRAPHIC SCALE
50 0 50 100
(IN FEET)

SOUTH MUDDY CREEK ROAD S.R. 7059

STREET SUBGRADE TESTING LOCATION

MH 650-6 TOP EL. 450.36 INV. IN EL. 445.96 INV. OUT EL. 445.86 TO BE REMOVED

REPLACE WITH 6'H X 8'W BOX CULVERT

8" DICL WATER MAIN

WATERCOURSE 1

PAVEMENT BASE DRAIN (TYP.) (SEE NOTE 7, SHEET 9)

BASE DRAIN INV. OUT ELEV. 450.50

BASE DRAIN

MH 650-5A

PROPOSED RELOCATED 10" PVC SANITARY SEWER

WETLAND DISTURBANCE 0.0973 AC.

WETLAND DISTURBANCE 0.0868 AC.

BASE DRAIN INV. OUT ELEV. 450.60

WETLAND 1 (ITEM-1) 0.51 ACRES

WETLAND 4 (ITEM-1) 0.07 ACRES

ELECTRIC & COMMUNICATIONS EASEMENT

STREET SUBGRADE TESTING LOCATION

CLEANOUT LOW MARSH 453.50

TRASH RACK

RADIAL

HALEY STREET

8" DICL WATER MAIN

28' CARTWAY

OUTLET POOL 448.50

HIGH MARSH 449.50

LOW MARSH 449.00

FOREBAY 448.50

OUTLET POOL 448.50

HIGH MARSH 449.50

LOW MARSH 449.00

HIGH MARSH 449.50

OUTLET POOL 448.50

EXISTING GRADE

PROPOSED GRADE

124 L.F. OF 10" PVC @ 0.45%

EX. MH 650-7 RIM = 452.71 INV. IN = 441.71 INV. OUT = 441.61

PROP. INV. OUT = 446.41

MH 650-5A RIM = 452.00 INV. IN = 435.85 INV. OUT = 435.75

PROFILE: EX. MH 650-7 TO PROP. MH 650-5A
Scale: Horiz. 1"= 50'
Vert. 1"= 5'

SEE PADOT PLAN AS PREPARED BY TPD FOR GRADING AND LAYOUT PURPOSES FROM SOUTH MUDDY CREEK ROAD TO HALEY STREET STATION 3+47.50. TPD PLAN UTILIZES STATE PLANE DATUM STATION 3+47.50 ELEVATION 451.93. DMA PLAN UTILIZES AUTHORITY DATUM STATION 3+47.50 ELEVATION 453.18. DATUM DIFFERENCE OF 1.25' HAS BEEN COORDINATED BETWEEN THE PLANS.

APPROX. CENTERLINE MUDDY CREEK ROAD

(TPD STA. 3+47.50, ELEV. 451.93)
STA. 3+47.50, ELEV. 453.18

CONNECT TO EXISTING 10" DICL WATER MAIN VIA TAPPING SLEEVE AND VALVE. CONTRACTOR TO VERIFY LOCATION PRIOR TO CONSTRUCTION

8" D.I.C.L.

4' MIN. (TYP.)

SEE DETAILED CULVERT DESIGN FOR HEADWALL AND ENDWALL CONFIGURATION

31 INV. 444.73

32 INV. 444.54* (31')

38 L.F. OF 6'H X 8'W @ 0.50%

HEADWALL 29 (TYPE 'DW') (W/ TRASH RACK) INV. 449.73

ENDWALL 30 (TYPE 'DW') (W/ TRASH RACK) INV. 449.40 (29)

66 L.F. OF 15" RCP @ 0.53%

PROPOSED GRADE

EXISTING GRADE (TYP.)

PROPOSED CLEANOUT INV. IN 452.15 INV. OUT 452.16

4" PERFORATED PVC UNDERDRAIN

62 L.F. OF 4" PVC @ 2.69%

INLET 33 (TYPE 'M') T.C. 451.50 INV= 450.71 (4" PVC) INV. 450.50 (BASE DRAIN)

ENDWALL 34 (TYPE 'DW') INV. 449.25 (33)

46 L.F. OF 4" PVC @ 0.54%

TEST PIT CBR

EX. 100 YR FLOODPLAIN STA. 13+47.82

BVCS:11+84.65 BVCE:453.18

EVCS:13+04.65 EVCE:455.96

LOW POINT ELEV = 453.18
LOW POINT STA = 11+84.65
PVI STA = 12+44.65
PVI ELEV = 453.18
A.D. = 4.63%
K = 25.92
120.00' VC

PVI STA. 13+73.40
PVI ELEV 459.14

EAST KESTREL DRIVE INTERSECTION STA. 13+85.40 ELEV. 459.60

ENDWALL 25 (TYPE 'DW') INV. 454.00 (25A)

INLET 25A (TYPE 'M') T.C. 456.50 INV. 454.00 INV. 454.00

ENDWALL 26 (TYPE 'DW') W/ TRASH RACK INV. 454.00 (25A)

66 L.F. OF 19"X30" CLASS III ERCP @ 0.00%

20 L.F. OF 19"X30" CLASS III ERCP @ 0.00%

8" D.I.C.L.

LOW POINT ELEV = 453.18
LOW POINT STA = 11+84.65
PVI STA = 12+44.65
PVI ELEV = 453.18
A.D. = 4.63%
K = 25.92
120.00' VC

19"X30" ERCP

100 YEAR FLOODPLAIN 452.44

EXISTING 36" CMP INV. 445.23 (TO BE REMOVED)

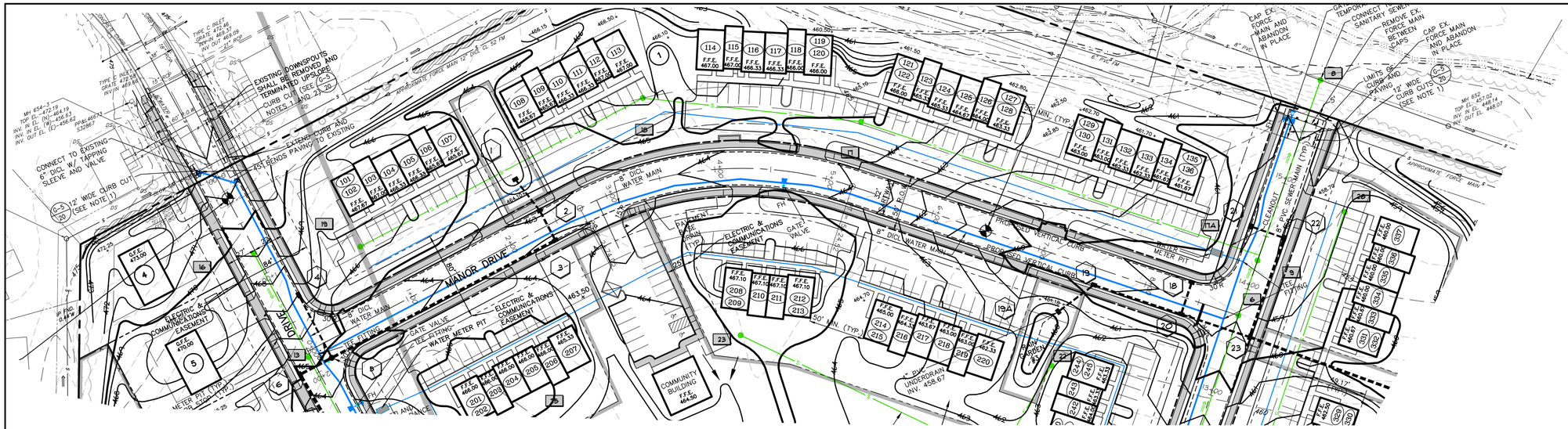
EXISTING 10" PVC (TO BE REMOVED)

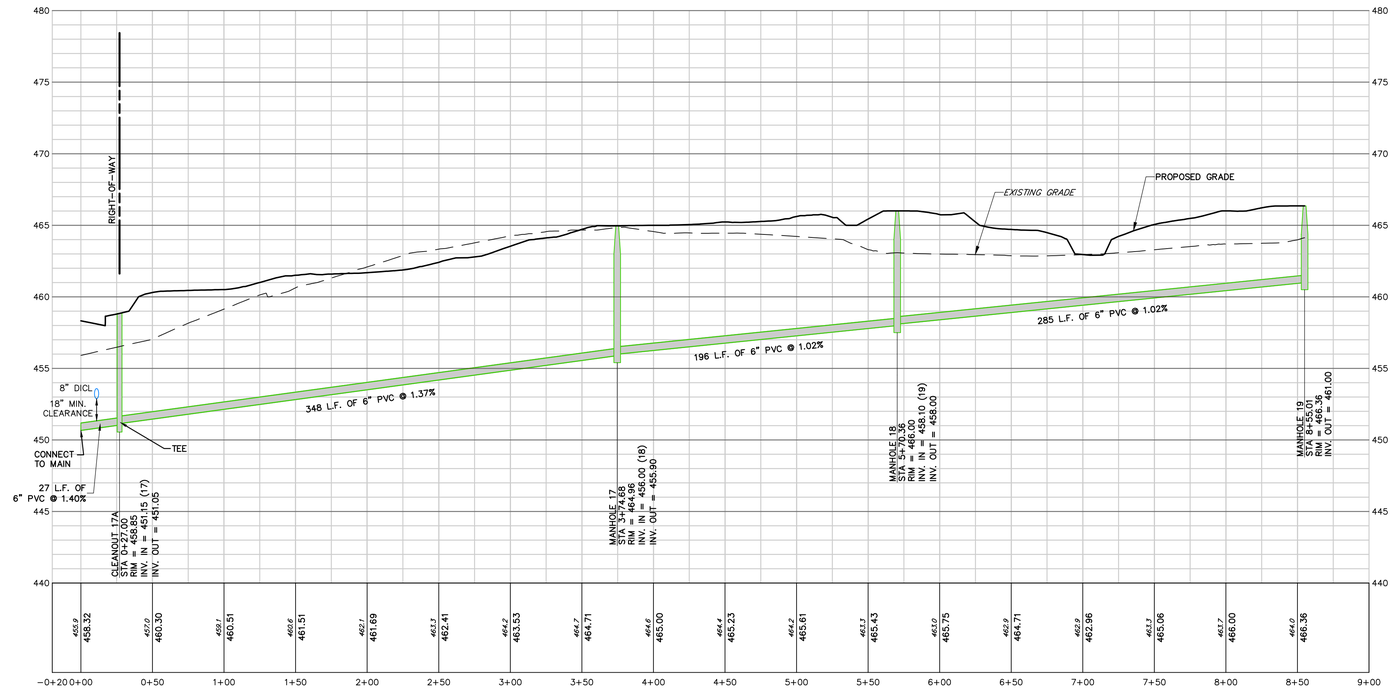
PROPOSED 10" PVC

PROPOSED WATERLINE TRAVELS OUTSIDE OF STREET

18" MIN. CLEARANCE (TYP.)

| | | |





PROFILE: MH 19 TO MAIN CONNECTION
Scale: Horiz. 1"= 50'
Vert. 1"= 5'

PLANS SUBJECT TO APPROVAL - NOT INTENDED FOR BID OR CONSTRUCTION PURPOSES

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1 DMC 7/12/21 PER LCCD JEROM LETTER DATED 6/29/21
2 DMC 7/26/21 PER LCCD JEROM LETTER DATED 7/23/21
3 TCV 11/19/21 PER BECKER ENGINEERING REVIEW LETTER DATED 11/17/21
PER BECKER ENGINEERING REVIEW LETTER DATED 12/20/21
4 TCV 2/14/23 PER BECKER ENGINEERING REVIEW LETTER DATED 2/13/23
5 TCV 4/20/23 PER BECKER ENGINEERING REVIEW LETTER DATED 4/17/23
PER LCCD JEROM LETTER DATED 4/19/23 & PENNDOT LETTER DATED 3/28/23 (MPA# 75 SE 29323)
6 TCV 3/20/24 PER LCCD JEROM LETTER DATED 3/19/24 & PENNDOT LETTER DATED 3/7/24 (MPA# 75 SE 29323) FOR CONNECTION TO SOUTH MUDDY CREEK ROAD

SEAL

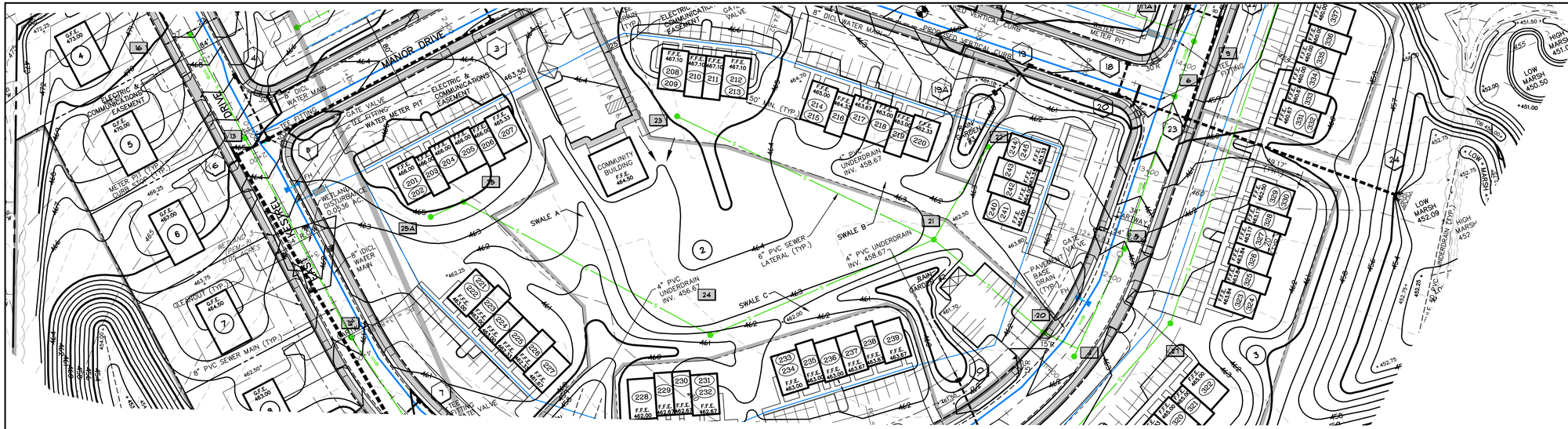
CLIENT / OWNER / APPLICANT
EAST COCALICO ASSOCIATES
1377-C SPENCER AVENUE
LANCASTER, PA 17603
(717) 393-0463

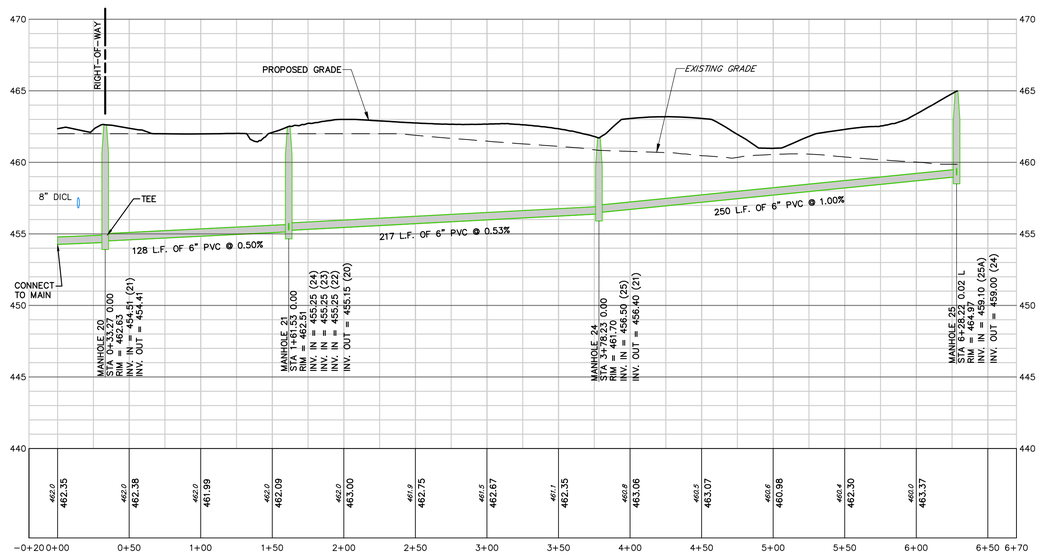
PLAN AND PROFILE: SANITARY SEWER

VILLAGE AT EAST COCALICO

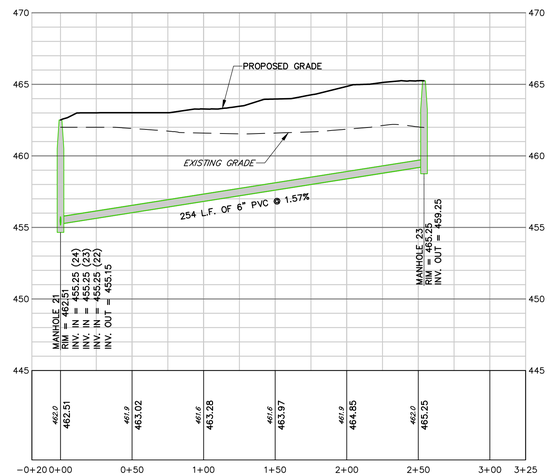
EAST COCALICO TOWNSHIP, LANCASTER COUNTY, PENNSYLVANIA

PRINCIPAL: J. BOYER	PROJECT MANAGER: T. VAUGHN
DRAWN BY: M. WAPLES	CHECKED BY: J. BOYER
JOB NO.: 02-172.2	DRAWING NO.: 02-172.27
FILE NO.: 0217227PROFILE	
DATE: 5/14/21	SCALE: AS SHOWN
SHEET NO.: 15 OF 34	





PROFILE: MH 25 TO MAIN CONNECTION
Scale: Horiz. 1"= 50'
Vert. 1"= 5'



PROFILE: MH 23 TO MH 21
Scale: Horiz. 1"= 50'
Vert. 1"= 5'

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REVISIONS
1 DMC 7/12/21 PER LCCD JESCH LETTER DATED 6/29/21
2 DMC 7/22/21 PER BECKER ENGINEERING JESCH LETTER DATED 7/20/21
3 TCV 11/15/21 PER BECKER ENGINEERING JESCH LETTER DATED 11/12/21
4 TCV 2/14/23 PER BECKER INC. REVIEW LETTER DATED 12/20/21
PER BECKER ENGINEERING JESCH LETTER DATED 1/31/23
5 TCV 4/20/23 PER BECKER INC. SEWER LETTER DATED 4/17/23A
LETTER DATED 3/28/23 (WAIVER TO BE 2023)
6 TCV 3/20/24 PER LCCD JESCH LETTER DATED 2/29/24 & PLAN REVIEW
FOR CONNECTION TO SOUTH MUDDY CREEK ROAD

SEAL

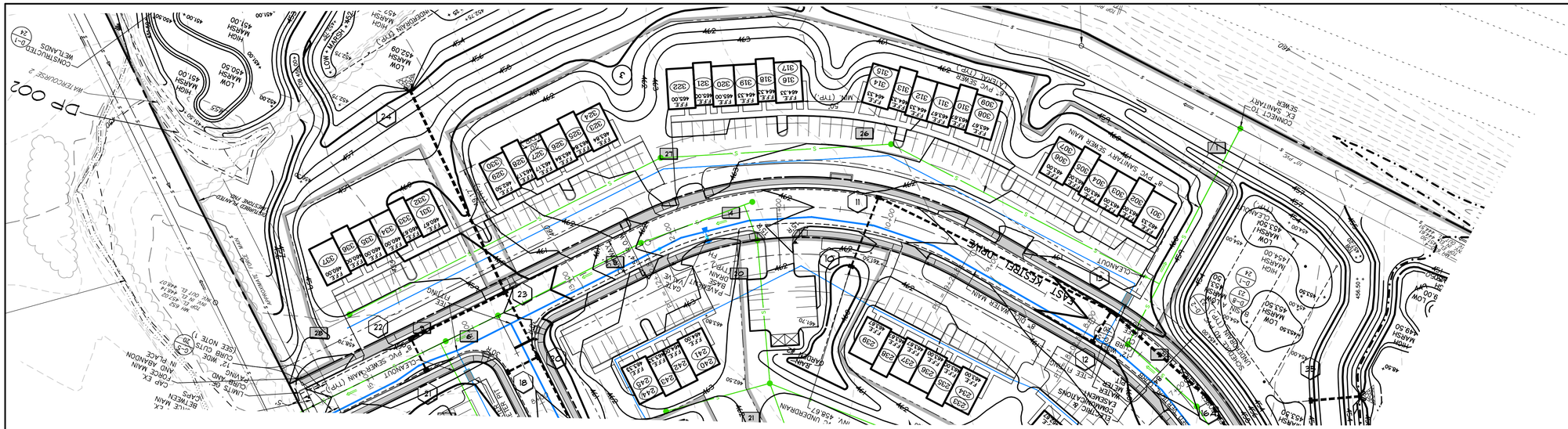
CLIENT / OWNER / APPLICANT
EAST COCALICO ASSOCIATES
1377-C SPENCER AVENUE
LANCASTER, PA 17603
(717) 393-0463

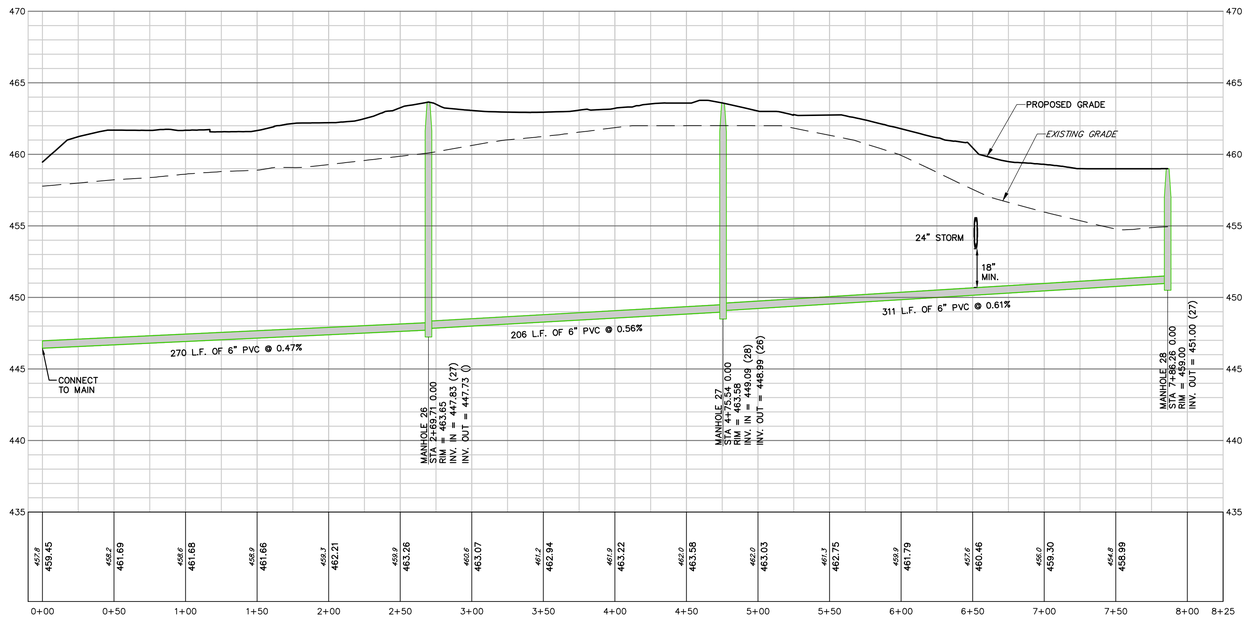
PLAN AND PROFILE: SANITARY SEWER

VILLAGE AT EAST COCALICO

EAST COCALICO TOWNSHIP, LANCASTER COUNTY, PENNSYLVANIA

PRINCIPAL: J. BOYER	PROJECT MANAGER: T. VAUGHN
DRAWN BY: M. WAPLES	CHECKED BY: J. BOYER
JOB NO.: 02-172.2	DRAWING NO.: 02-172.27
FILE NO.: 0217227PROFILE	
DATE: 5/14/21	SCALE: AS SHOWN
SHEET NO.: 16 OF 34	





PROFILE: MH 28 TO MAIN CONNECTION
Scale: Horiz. 1"= 50'
Vert. 1"= 5'

PLANS SUBJECT TO APPROVAL - NOT INTENDED FOR BID OR CONSTRUCTION PURPOSES

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REVISIONS
1 DMC 7/12/21 PER LCCD JEWH LETTER DATED 6/29/21
2 DMC 7/22/21 PER LCCD JEWH LETTER DATED 7/21/21 COMMENTS
3 TCV 11/15/21 PER BECKER ENGINEERING REVIEW LETTER DATED 11/12/21
4 TCV 2/14/23 PER BECKER ENGINEERING REVIEW LETTER DATED 12/20/21
PER BECKER ENGINEERING REVIEW LETTER DATED 1/17/22
5 TCV 4/25/23 PER BECKER ENGINEERING REVIEW LETTER DATED 4/17/23
LETTER DATED 3/28/23 (MEAN TIME 7:30 AM)
6 TCV 5/20/24 PER BECKER ENGINEERING REVIEW LETTER DATED 4/15/24
FOR CONNECTION TO SOUTH MUDDY CREEK ROAD

SEAL

CLIENT / OWNER / APPLICANT
EAST COCALICO ASSOCIATES
1377-C SPENCER AVENUE
LANCASTER, PA 17603
(717) 393-0463

PLAN AND PROFILE: SANITARY SEWER

VILLAGE AT EAST COCALICO

EAST COCALICO TOWNSHIP, LANCASTER COUNTY, PENNSYLVANIA

PRINCIPAL: J. BOYER	PROJECT MANAGER: T. VAUGHN
DRAWN BY: M. WAPLES	CHECKED BY: J. BOYER
JOB NO.: 02-172.2	DRAWING NO.: 02-172.27
FILE NO.: 0217227PROFILE	
DATE: 5/14/21	SCALE: AS SHOWN
SHEET NO.: 17 OF 34	

KEY MAP
SCALE: 1" = 1000'

PLANT LIST– STREET, PARKING ISLAND, & YARD TREES

KEY	QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE	CONDITION
CANOPY TREE MIX					
	33	ACER RUBRUM 'OCTOBER GLORY'	OCTOBER GLORY RED MAPLE	2.5" CALIPER	B&B
	8	ACER X FREEMANII 'ARMSTRONG'	ARMSTRONG FREEMAN'S MAPLE	2.5" CALIPER	B&B
	33	CERCIS CANADENSIS	AMERICAN REDBUD	2.5" CALIPER	B&B
	10	PARROTIA PERSICA 'VANESSA'	VANESSA PERSIAN PERROTIA	2.5" CALIPER	B&B
	29	TILIA AMERICANA	AMERICAN LINDEN	2.5" CALIPER	B&B

PLANT LIST – REAR YARD AND LOT LINE TREES

KEY	QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE	CONDITION
DECIDUOUS TREES					
NS	4	NYSSA SYLVATICA	BLACK TUPELO	1"–1.5" CAL.	B&B
OV	3	OSTRYA VIRGINIANA	AMERICAN HOP HORNBEAM	1"–1.5" CAL.	B&B
UA	1	ULMUS AMERICANA 'VALLEY FORGE'	VALLEY FORGE AMERICAN ELM	1"–1.5" CAL.	B&B
EVERGREEN TREES					
TC	11	TSUGA CANADENSIS	CANADIAN HEMLOCK	6' H.	B&B

PLANT LIST – PARKING AREA SCREENING

KEY	QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE	CONDITION
DECIDUOUS AND EVERGREEN SHRUBS					
IG	41	ILEX GLABRA	COMPACT INKBERRY	24"	
JP	18	JUNIPERUS X PFITZERIANA	'SEA GREEN' CHINESE JUNIPER	24"	
TD	46	TAXUS X MEDIA 'DENSIFORMIS'	DENSIFORMIS YEW AMERICAN ELM	24"	
AK	79	ABELIA X GRANDIFLORA 'KALEIDOSCOPE'	KALEIDOSCOPE ABELIA	24"	
CS	52	CORNUS SERICEA 'FARROW'	ARCTIC FIRE RED TWIG DOGWOOD	24"	
VS	54	VIRGINIA SWEETSPIRE	ITEA HENRY'S GARNET	24"	
MS	37	EULALIA GRASS	MISCANTHUS SINENSIS 'GRACILLIMUS'	24"	

SIGNAGE LEGEND

KEY	QUANTITY	DESCRIPTION	PENNDOT NOMENCLATURE	SIZE	MAXIMUM SPACING
1	21	STOP SIGN	R1–1	30" x 30"	
2	10	SPEED LIMIT SIGN (25 MPH)	R2–1	24" x 30"	MIN. EVERY 1/2 MILE
3	4	STREET NAME SIGN	PER EAST COCALICO TOWNSHIP SPECIFICATIONS		
4	33	NO PARKING SYMBOL/ARROW SIGN	R7–7A	12" x 18"	
5	3	END OF ROADWAY MARKER	OM4–3	18" x 18"	
6	7	NO PARKING HERE TO CORNER		18" x 12"	
7	2	REVERSE LEFT TURN W/ ADVISORY SPEED LIMIT SIGN (15 MPH)	W1–3R WITH W13–IP(15)	24" x 30"/ 18" x 18"	
8	1	NO OUTLET			

* STOP SIGNS AT INTERSECTIONS INCLUDE STREET NAME SIGNS ABOVE STOP SIGN

NOTES – LANDSCAPE

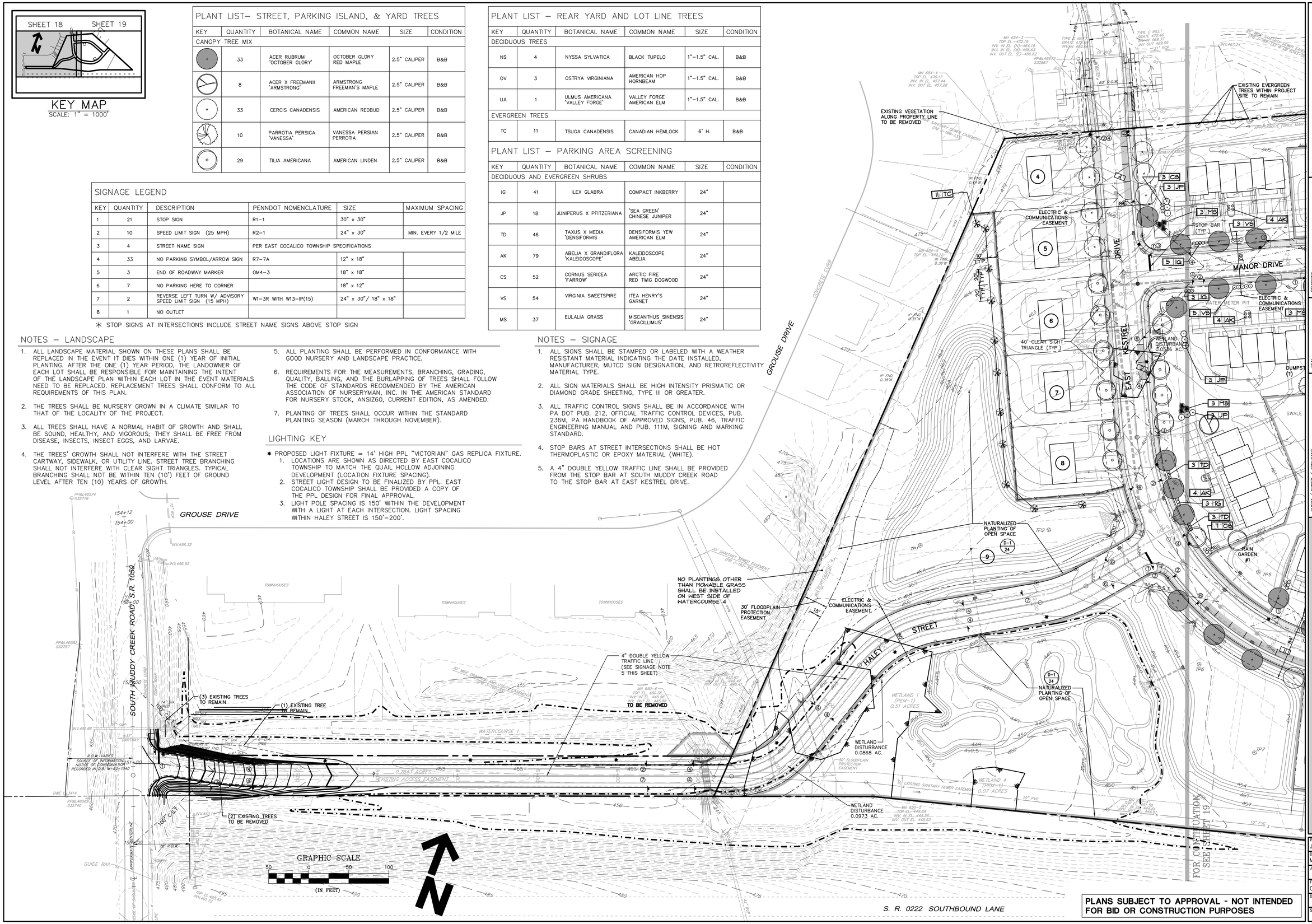
1. ALL LANDSCAPE MATERIAL SHOWN ON THESE PLANS SHALL BE REPLACED IN THE EVENT IT DIES WITHIN ONE (1) YEAR OF INITIAL PLANTING. AFTER THE ONE (1) YEAR PERIOD, THE LANDOWNER OF EACH LOT SHALL BE RESPONSIBLE FOR MAINTAINING THE INTENT OF THE LANDSCAPE PLAN WITHIN EACH LOT IN THE EVENT MATERIALS NEED TO BE REPLACED. REPLACEMENT TREES SHALL CONFORM TO ALL REQUIREMENTS OF THIS PLAN.
2. THE TREES SHALL BE NURSERY GROWN IN A CLIMATE SIMILAR TO THAT OF THE LOCALITY OF THE PROJECT.
3. ALL TREES SHALL HAVE A NORMAL HABIT OF GROWTH AND SHALL BE SOUND, HEALTHY, AND VIGOROUS; THEY SHALL BE FREE FROM DISEASE, INSECTS, INSECT EGGS, AND LARVAE.
4. THE TREES' GROWTH SHALL NOT INTERFERE WITH THE STREET CARTWAY, SIDEWALK, OR UTILITY LINE. STREET TREE BRANCHING SHALL NOT INTERFERE WITH CLEAR SIGHT TRIANGLES. TYPICAL BRANCHING SHALL NOT BE WITHIN TEN (10') FEET OF GROUND LEVEL AFTER TEN (10) YEARS OF GROWTH.
5. ALL PLANTING SHALL BE PERFORMED IN CONFORMANCE WITH GOOD NURSERY AND LANDSCAPE PRACTICE.
6. REQUIREMENTS FOR THE MEASUREMENTS, BRANCHING, GRADING, QUALITY, BALLING, AND THE BURLAPPING OF TREES SHALL FOLLOW THE CODE OF STANDARDS RECOMMENDED BY THE AMERICAN ASSOCIATION OF NURSERYMAN, INC. IN THE AMERICAN STANDARD FOR NURSERY STOCK, ANSIZ60, CURRENT EDITION, AS AMENDED.
7. PLANTING OF TREES SHALL OCCUR WITHIN THE STANDARD PLANTING SEASON (MARCH THROUGH NOVEMBER).

LIGHTING KEY

* PROPOSED LIGHT FIXTURE = 14' HIGH PPL "VICTORIAN" GAS REPLICA FIXTURE.
  1. LOCATIONS ARE SHOWN AS DIRECTED BY EAST COCALICO TOWNSHIP TO MATCH THE QUAIL HOLLOW ADJOINING DEVELOPMENT (LOCATION FIXTURE SPACING).
  2. STREET LIGHT DESIGN TO BE FINALIZED BY PPL. EAST COCALICO TOWNSHIP SHALL BE PROVIDED A COPY OF THE PPL DESIGN FOR FINAL APPROVAL.
  3. LIGHT POLE SPACING IS 150' WITHIN THE DEVELOPMENT WITH A LIGHT AT EACH INTERSECTION. LIGHT SPACING WITHIN HALEY STREET IS 150'–200'.

NOTES – SIGNAGE

1. ALL SIGNS SHALL BE STAMPED OR LABELED WITH A WEATHER RESISTANT MATERIAL INDICATING THE DATE INSTALLED, MANUFACTURER, MUTCD SIGN DESIGNATION, AND RETROREFLECTIVITY MATERIAL TYPE.
2. ALL SIGN MATERIALS SHALL BE HIGH INTENSITY PRISMATIC OR DIAMOND GRADE SHEETING, TYPE III OR GREATER.
3. ALL TRAFFIC CONTROL SIGNS SHALL BE IN ACCORDANCE WITH PA DOT PUB. 212, OFFICIAL TRAFFIC CONTROL DEVICES, PUB. 236M, PA HANDBOOK OF APPROVED SIGNS, PUB. 46, TRAFFIC ENGINEERING MANUAL AND PUB. 111M, SIGNING AND MARKING STANDARD.
4. STOP BARS AT STREET INTERSECTIONS SHALL BE HOT THERMOPLASTIC OR EPOXY MATERIAL (WHITE).
5. A 4" DOUBLE YELLOW TRAFFIC LINE SHALL BE PROVIDED FROM THE STOP BAR AT SOUTH MUDDY CREEK ROAD TO THE STOP BAR AT EAST KESTREL DRIVE.



PLANS SUBJECT TO APPROVAL - NOT INTENDED FOR BID OR CONSTRUCTION PURPOSES

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REVISIONS
1 DMC 7/12/21 PER LCCD JEROM LETTER DATED 8/29/21
2 DMC 11/5/21 PER LCCD JEROM LETTER DATED 11/5/21
3 TCV 11/9/21 PER BECKER ENGINEERING REVIEW LETTER DATED 11/9/21
4 TCV 2/14/23 PER BECKER ENGINEERING REVIEW LETTER DATED 2/14/23
5 TCV 4/21/23 PER BECKER ENGINEERING REVIEW LETTER DATED 4/17/23
6 TCV 2/20/24 PER BECKER ENGINEERING REVIEW LETTER DATED 2/20/24
FOR CONNECTION TO SOUTH MUDDY CREEK ROAD

SEAL

CLIENT / OWNER / APPLICANT
EAST COCALICO ASSOCIATES
1377-C SPENCER AVENUE
LANCASTER, PA 17603
(717) 393-0463

OPEN SPACE, RECREATION, LANDSCAPE AND SIGNAGE PLAN

VILLAGE AT EAST COCALICO

EAST COCALICO TOWNSHIP, LANCASTER COUNTY, PENNSYLVANIA

PRINCIPAL J. BOYER	PROJECT MANAGER T. VAUGHN
DRAWN BY M. WAPLES	CHECKED BY J. BOYER
JOB NO. 02–172.2	DRAWING NO. 02–172.27
FILE NO. 0217227LANDSCAPE	
DATE 5/14/21	SCALE 1"= 50'
SHEET NO. 18 OF 34	

(SEE SHEET 18
FOR PLANT LIST AND
SIGNAGE LEGEND)

NOTE

1. US MAIL DELIVERY WILL BE PROVIDED TO TWO CLUSTER MAILBOX LOCATIONS. 1 LOCATION FOR 4–16 DOOR BOXES ON MANOR DRIVE FOR UNITS FACING MANOR DRIVE AND A SECOND LOCATION ON EAST KESTREL WITH 5–16 DOOR BOXES FOR UNITS FACING EAST KESTREL DRIVE. MAILBOX CLUSTER BOXES PER APPROVED USPS VENDOR – BUDGET MAILBOXES UNIT CBU–16. CONCRETE BASE AND ANCHORING PER CURRENT PROVIDER SPECIFICATIONS AS FOUND ON THEIR WEBSITE (HTTPS: //WWW.BUDGETMAILBOXES.COM)
2. THE CURBING ADJACENT TO THE MAILBOX CLUSTER BOXES SHALL BE PAINTED FEDERAL YELLOW FOR A DISTANCE OF 66' (3 SPACES) THAT ARE RESERVED FOR MAIL DELIVERY AND PICK UP.

PARKING SUMMARY

ON STREET PARKING (8'Wx22'L)

EAST KESTREL DRIVE	–	33 SPACES
(–3 RESERVED SPACES AT CLUSTER MAILBOX)		
MANOR DRIVE	–	11 SPACES
(–3 RESERVED SPACES AT CLUSTER MAILBOX)		
HALEY STREET	–	0 SPACES
TOTAL	–	38 SPACES

* ON STREET PARKING LINES SHOWN FOR GRAPHIC PURPOSES. NO LINES ARE TO BE PAINTED ON THE STREETS.

LOTS 4–8 (SINGLE FAMILY)

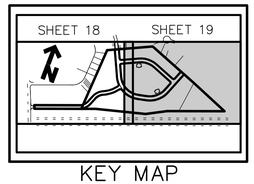
LOT 4	–	2 SPACES, ON–LOT
LOT 5	–	2 SPACES, ON–LOT
LOT 6	–	2 SPACES, ON–LOT
LOT 7	–	2 SPACES, ON–LOT
LOT 8	–	2 SPACES, ON–LOT

UNIT PARKING

LOT 1	–	36 UNITS, 72 SPACES
LOT 2	–	45 UNITS, 90 SPACES
LOT 3	–	37 UNITS, 74 SPACES
TOTAL	–	118 UNITS, 236 SPACES

OVERFLOW LOTS (2)

NORTH PARKING LOT	–	14 SPACES
SOUTH PARKING LOT	–	10 SPACES



KEY MAP
SCALE: 1" = 1000'

N

GRAPHIC SCALE
50 0 50 100
(IN FEET)

PLANS SUBJECT TO APPROVAL - NOT INTENDED FOR BID OR CONSTRUCTION PURPOSES

FOR CONTINUATION
SEE SHEET 18

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PER BECKER ENGINEERING REVIEW LETTER DATED 10/25/21
4 TCV 2/14/23 PER BECKER INC. REVIEW LETTER DATED 12/20/21
PER BECKER INC. REVIEW LETTER DATED 1/17/22
5 TCV 4/21/23 PER BECKER INC. REVIEW LETTER DATED 4/17/23
PER LCCD JEROM LETTER DATED 4/18/23
6 TCV 3/20/24 LETTER DATED 3/18/23 (MEMO TO BE 2023-0)
PER PENNDOT COMMENTS DATED 2/29/24 (MEMO TO BE 2024-0)
FOR CONNECTION TO SOUTH MUDDY CREEK ROAD

SEAL

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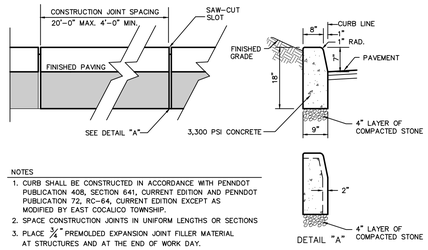
PRINCIPAL: J. BOYER	PROJECT MANAGER: T. VAUGHN
DRAWN BY: M. WAPLES	CHECKED BY: J. BOYER
JOB NO.: 02-172.2	DRAWING NO.: 02-172.27
FILE NO.: 0217227LANDSCAPE	
DATE: 5/14/21	SCALE: 1"= 50'
SHEET NO.: 19 OF 34	



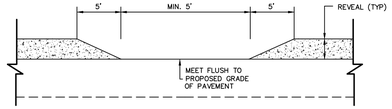
NOTES

1. CURB SHALL BE CONSTRUCTED IN ACCORDANCE WITH PENNDOT PUBLICATION 408, SECTION 641, CURRENT EDITION AND PENNDOT PUBLICATION 72, RC-64, CURRENT EDITION EXCEPT AS MODIFIED BY EAST COCALICO TOWNSHIP.
2. SPACE CONSTRUCTION JOINTS IN UNIFORM LENGTHS OR SECTIONS
3. PLACE ¾" PREMOLDED EXPANSION JOINT FILLER MATERIAL AT STRUCTURES AND AT THE END OF WORK DAY.

G-1 / 20 — CU-001

STANDARD VERTICAL CURB

NO SCALE

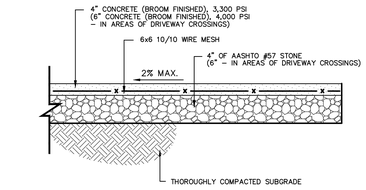


G-2 / 20 — CU-031

CURB DEPRESSION FOR PEDESTRIAN ACCESS

NO SCALE

NOTES:
1. INSTALLATION METHODS, INCLUDING CONSTRUCTION JOINT SPACING, TO BE IN ACCORDANCE WITH ACI-330R-92 PUBLICATION, LATEST EDITION.
2. EXPANSION JOINTS, WITH RUBBERIZED EXPANSION JOINT MATERIAL, TO BE LOCATED AT 30' O.C. MAXIMUM.

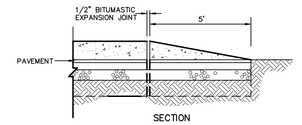


G-3 / 20 — TS-051

CONCRETE WALK CROSS SECTION

NO SCALE

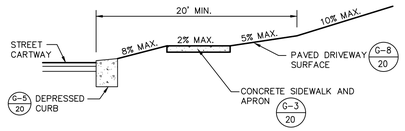
* CONCRETE THICKNESS AND STONE DEPTH SHALL BE INCREASED TO 6 INCHES IN AREAS OF DRIVEWAY CROSSINGS, INCLUDING ALL EAST COCALICO TOWNSHIP AUTHORITY DEPRESSED CURB EASEMENT ACCESS AREAS IDENTIFIED ON THE PLANS.



G-4 / 20 — CU-008

CONCRETE CURB TAPER

NO SCALE

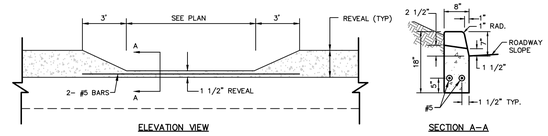


G-6 / 20

DRIVEWAY CROSS-SECTION

NO SCALE

NOTE: 1. INTENDED ONLY FOR EXISTING AND PROPOSED SANITARY SEWER EASEMENT ACCESS.

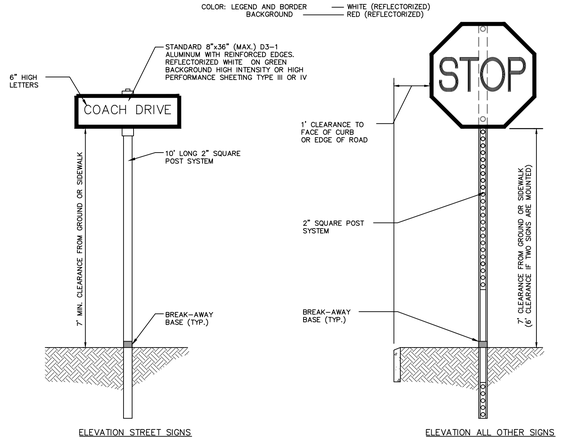


G-5 / 20 — CU-032

CURB DEPRESSION FOR VEHICLE ACCESS

NO SCALE

NOTE: PLACE STREET SIGN NAME ON TOP OF STOP SIGN AS SHOWN ON THE PLAN.

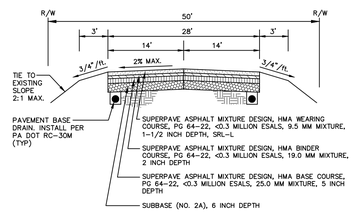


G-9 / 20

STREET AND TRAFFIC SIGN DETAILS

NO SCALE

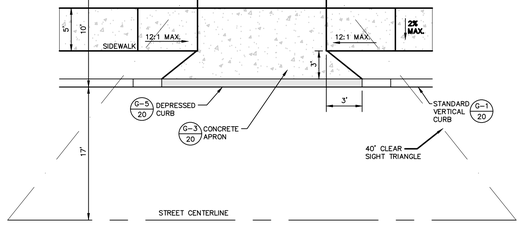
* PAVEMENT SPECIFICATIONS SHALL BE IN STRICT ACCORDANCE WITH SECTION 194-25.K. OF THE CURRENT EAST COCALICO TOWNSHIP SUBDIVISION AND LAND DEVELOPMENT ORDINANCE FOR DESIGN CONSTRUCTION AND INSPECTION PURPOSES. NO MODIFICATIONS TO THIS SECTION ARE PERMITTED WITHOUT APPROVAL OF THE BOARD OF SUPERVISORS.



G-10 / 20

TYPICAL STREET CROSS SECTION – HALEY STREET (MINOR STREET)

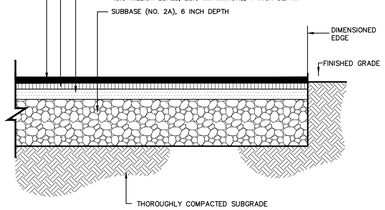
NO SCALE



G-7 / 20

TYPICAL SINGLE FAMILY DRIVEWAY PLAN

NO SCALE



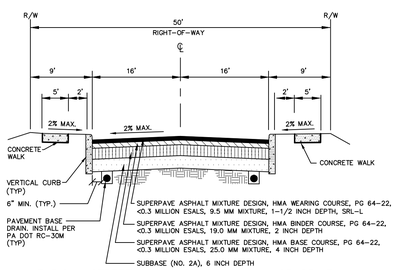
G-8 / 20 — TS-008

ACCESS DRIVE, PARKING LOT, DRIVEWAY CROSS SECTION

NO SCALE

NOTE: CONNECT ALL PAVEMENT BASE DRAINS TO ADJACENT INLETS WHEN PRESENT.

* PAVEMENT SPECIFICATIONS SHALL BE IN STRICT ACCORDANCE WITH SECTION 194-25.K. OF THE CURRENT EAST COCALICO TOWNSHIP SUBDIVISION AND LAND DEVELOPMENT ORDINANCE FOR DESIGN CONSTRUCTION AND INSPECTION PURPOSES. NO MODIFICATIONS TO THIS SECTION ARE PERMITTED WITHOUT APPROVAL OF THE BOARD OF SUPERVISORS.



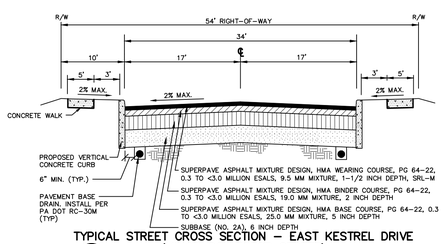
G-11 / 20

TYPICAL STREET CROSS SECTION – MANOR DRIVE (MINOR STREET)

NO SCALE

NOTE: CONNECT ALL PAVEMENT BASE DRAINS TO ADJACENT INLETS WHEN PRESENT.

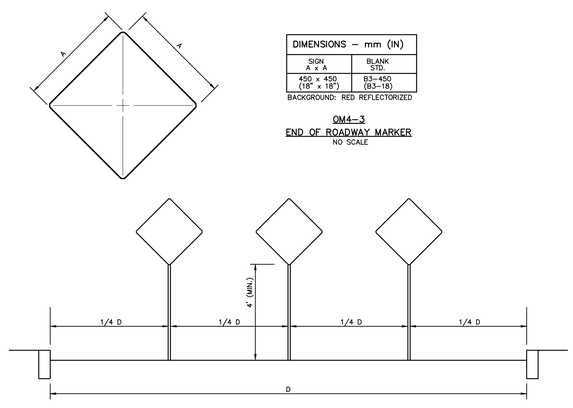
* PAVEMENT SPECIFICATIONS SHALL BE IN STRICT ACCORDANCE WITH SECTION 194-25.K. OF THE CURRENT EAST COCALICO TOWNSHIP SUBDIVISION AND LAND DEVELOPMENT ORDINANCE FOR DESIGN CONSTRUCTION AND INSPECTION PURPOSES. NO MODIFICATIONS TO THIS SECTION ARE PERMITTED WITHOUT APPROVAL OF THE BOARD OF SUPERVISORS.



G-12 / 20

TYPICAL STREET CROSS SECTION – EAST KESTREL DRIVE (MINOR COLLECTOR STREET)

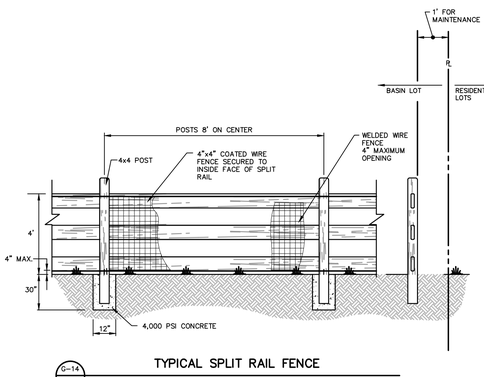
NO SCALE



G-13 / 20

END OF ROADWAY SIGN PLACEMENT

NO SCALE



G-14 / 20 — LS-005

TYPICAL SPLIT RAIL FENCE

NO SCALE

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4 TCV 2/14/23 PER BOYER ENG. REVIEW LETTER DATED 12/20/21
PER LANCASTER CITY REVIEW LETTER DATED 1/27/22
5 TCV 4/21/23 PER BOYER ENG. REVIEW LETTER DATED 4/17/23
PER LANCASTER CITY REVIEW LETTER DATED 4/17/23
6 TCV 2/20/24 PER LCCD REVIEW LETTER DATED 1/9/24 (MAY TO BE 2025)
PER CONSTRUCTION TO SOUTH MOOMAW ROAD

SEAL

CLIENT / OWNER / APPLICANT
EAST COCALICO ASSOCIATES
1377-C SPENCER AVENUE
LANCASTER, PA 17603
(717) 393-0463

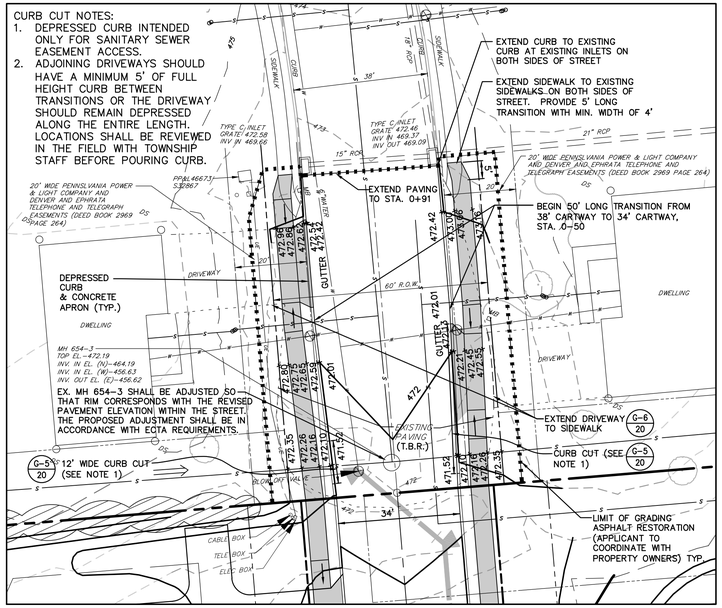
SITE DETAILS

VILLAGE AT EAST COCALICO

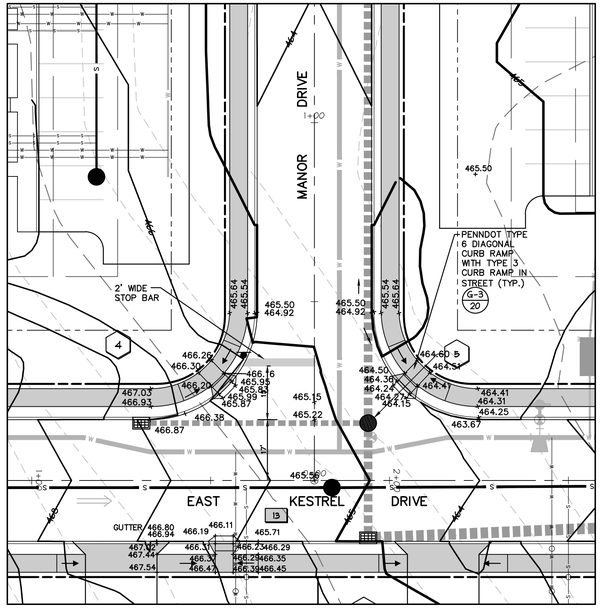
EAST COCALICO TOWNSHIP, LANCASTER COUNTY, PENNSYLVANIA

PRINCIPAL	PROJECT MANAGER
J. BOYER	T. VAUGHN
DRAWN BY	CHECKED BY
M. WAPLES	J. BOYER
JOB NO.	DRAWING NO.
02-172.2	02-172.27
FILE NO.	
0217227DETSITE1	
DATE	SCALE
5/14/21	AS SHOWN
SHEET NO.	
20 OF 34	

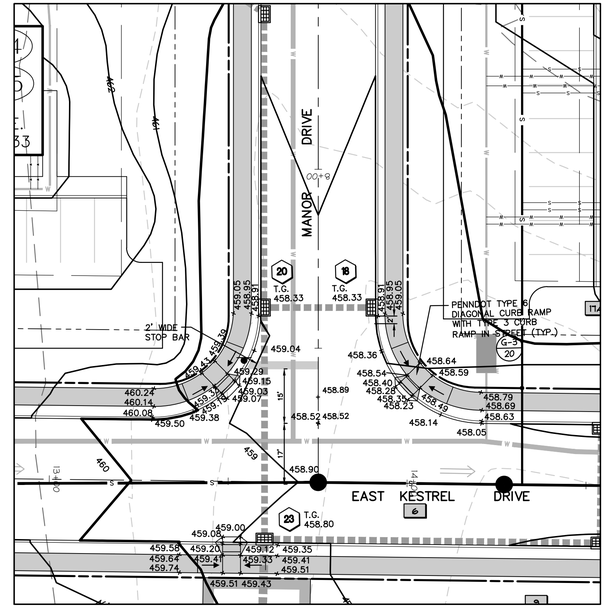
CURB CUT NOTES:
1. DEPRESSED CURB INTENDED ONLY FOR SANITARY SEWER EASEMENT ACCESS.
2. ADJOINING DRIVEWAYS SHOULD HAVE A MINIMUM 5' OF FULL HEIGHT CURB BETWEEN TRANSITIONS OR THE DRIVEWAY SHOULD REMAIN DEPRESSED ALONG THE ENTIRE LENGTH. LOCATIONS SHALL BE REVIEWED IN THE FIELD WITH TOWNSHIP STAFF BEFORE POURING CURB.



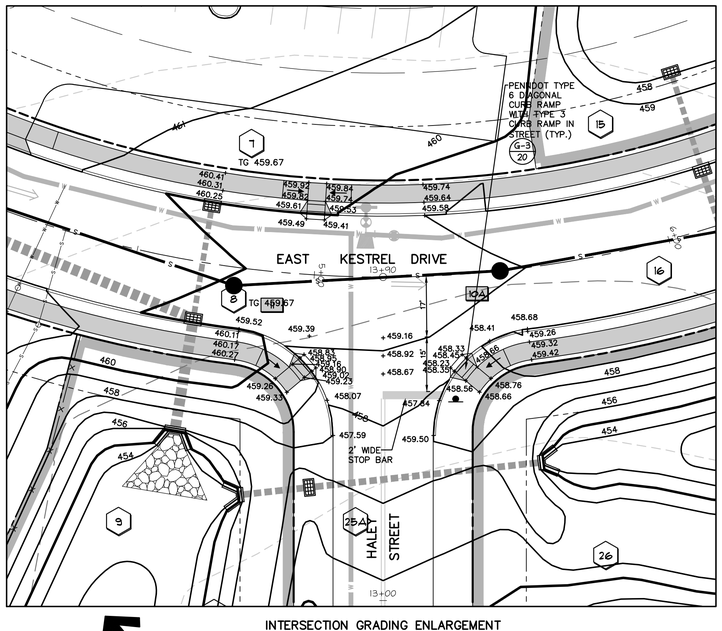
EAST KESTREL DRIVE
OFF-SITE IMPROVEMENTS
G-1 / 21
SCALE: 1"=20'



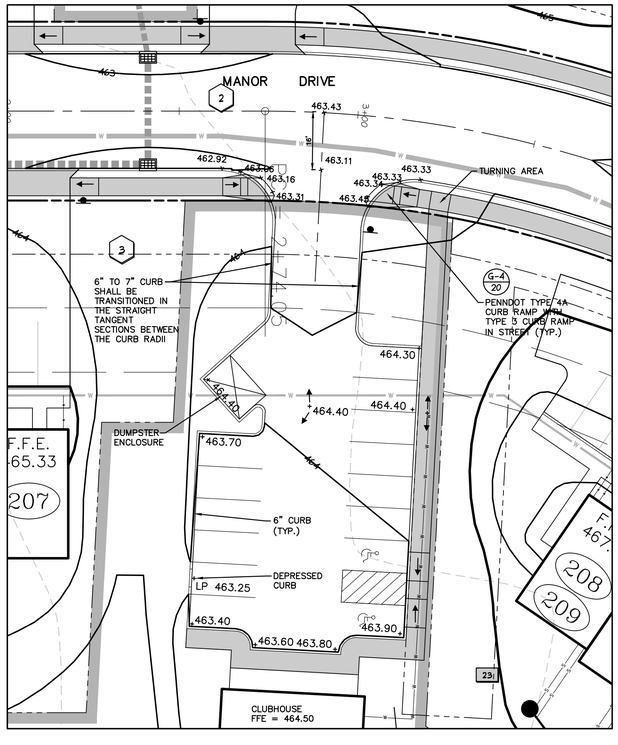
INTERSECTION GRADING ENLARGEMENT
AT STA. 1+79.00 OF EAST KESTREL DRIVE
G-2 / 21
SCALE: 1"=20'



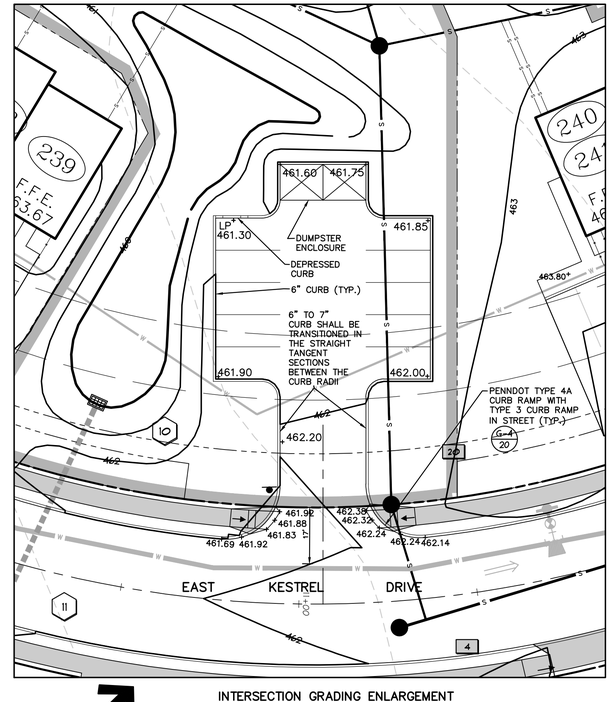
INTERSECTION GRADING ENLARGEMENT
AT STA. 13+76.35 OF EAST KESTREL DRIVE
G-3 / 21
SCALE: 1"=20'



INTERSECTION GRADING ENLARGEMENT
AT STA. 5+19.27 OF EAST KESTREL DRIVE
G-4 / 21
SCALE: 1"=20'



INTERSECTION GRADING ENLARGEMENT
AT STA. 2+90.54 OF MANOR DRIVE
G-5 / 21
SCALE: 1"=20'



INTERSECTION GRADING ENLARGEMENT
AT STA. 11+07.17 OF EAST KESTREL DRIVE
G-6 / 21
SCALE: 1"=20'

GRAPHIC SCALE
20 0 20 40
(IN FEET)

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5 TCV 4/20/23 PER BECKER ENGINEERING REVIEW LETTER DATED 4/17/23
6 TCV 2/20/24 PER BECKER ENGINEERING REVIEW LETTER DATED 1/26/24 & PER LCCD JEROM LETTER DATED 1/30/24 & PER PENNDOT COMMENTS RECEIVED 2/15/24 & FOR CONNECTION TO SOUTH MOODY CREEK ROAD

SEAL

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LANCASTER, PA 17603
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SITE DETAILS

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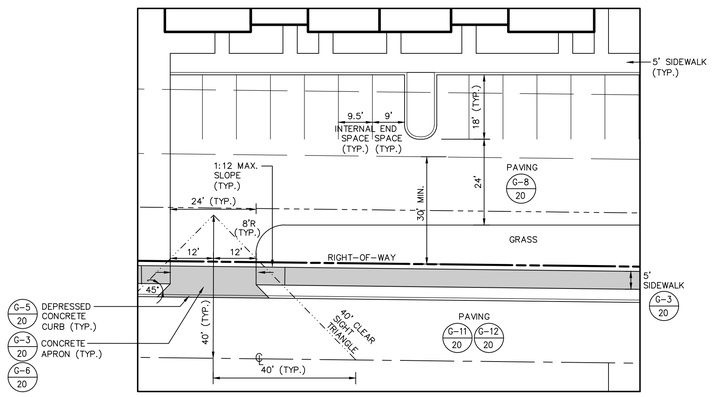
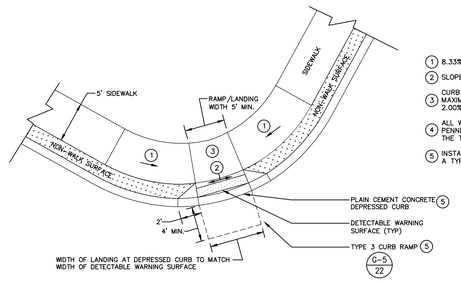
EAST COCALICO TOWNSHIP, LANCASTER COUNTY, PENNSYLVANIA

PRINCIPAL: J. BOYER	PROJECT MANAGER: T. VAUGHN
DRAWN BY: M. WAPLES	CHECKED BY: J. BOYER
JOB NO.: 02-172.2	DRAWING NO.: 02-172.27
FILE NO.: 0217227DETSITE2	
DATE: 5/14/21	SCALE: AS SHOWN
SHEET NO.: 21 OF 34	



G-1 22 **TYPICAL DRIVEWAY DETAIL**

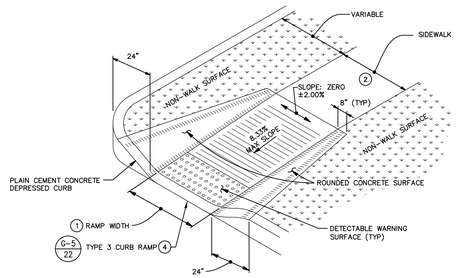
SCALE: 1"=20'



1. 8.33% MAX. RAMP SLOPE
2. SLOPE: ZERO ±2.00%
3. CURB RAMPS REQUIRE A 4'-0" MINIMUM LANDING WITH A MAXIMUM CROSS SLOPE AND LONGITUDINAL SLOPE OF 2.00% WHERE PEDESTRIANS PERFORM TURNING MANEUVERS
4. ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH PENNDOT PUBLICATION 72, RC-67, CURRENT EDITION AT THE TIME OF CONSTRUCTION
5. INSTALL A 1 1/2" CURB REVEAL AT ALL RAMPS; INSTALL A TYPE 3 CURB RAMP WITHIN A STREET.

G-3 22 **TYPE 6 CURB RAMP COMBINATION DIAGONAL**

NO SCALE

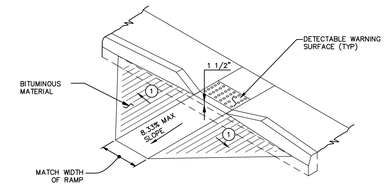


NOTES:

1. CURB RAMP WIDTH IS EQUAL TO SIDEWALK WIDTH WHEN THE SIDEWALK WIDTH IS GREATER THAN OR EQUAL TO 4'-0".
2. SIDEWALK WIDTH MAY BE REDUCED TO 4'-0" WHEN PASSING AREAS 5'-0" x 5'-0" ARE PROVIDED EVERY 200'.
3. ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH PA DOT PUBLICATION 72, RC-67, CURRENT EDITION AT THE TIME OF CONSTRUCTION.
4. EXCEPT AT THE HALEY STREET/SOUTH MUDDY CREEK ROAD INTERSECTION, INSTALL A 1 1/2" CURB REVEAL AT ALL RAMPS; INSTALL A TYPE 3 CURB RAMP WITHIN THE STREET

G-4 22 PD-016 **ALTERNATE TYPE 4A CURB RAMP (PARALLEL)**

NO SCALE



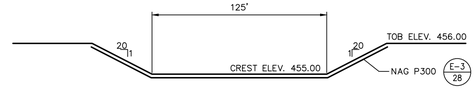
NOTES:

1. SIDE FLARES 10.00% MAX. SLOPE
2. CONSTRUCT TYPE 3 BUILT-UP CURB RAMP OF BITUMINOUS MATERIALS AS INDICATED, INCLUDING SURFACE PREPARATION AND TACK COAT, AS REQUIRED.
3. ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH PENNDOT PUBLICATION 72, RC-67, CURRENT EDITION AT THE TIME OF CONSTRUCTION.

G-5 22 PD-014 **TYPE 3 CURB RAMP (BUILT UP FOR ALTERATIONS ONLY)**

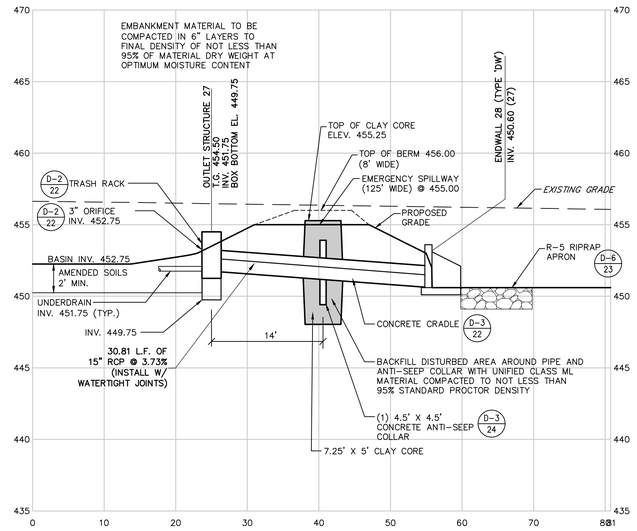
NO SCALE

NOTE: TOP OF CLAY CORE SHALL BE LOWERED IN THE AREA OF THE SPILLWAY TO PROVIDE A MINIMUM OF 6-INCHES OF TOPSOIL.



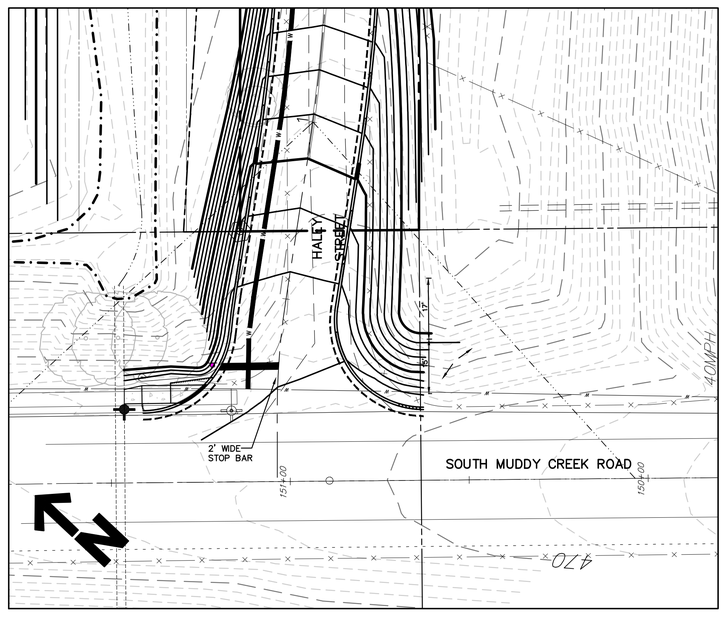
BASIN B SPILLWAY DETAIL

NO SCALE



D-1 22 **BASIN B CROSS SECTION**

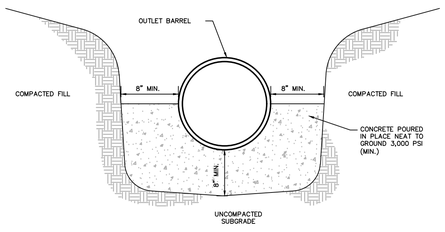
SCALE: HORIZ. 1"=10' VERT. 1"=5'



G-6 22 **INTERSECTION GRADING ENLARGEMENT AT STA. 0+00 OF HALEY STREET**

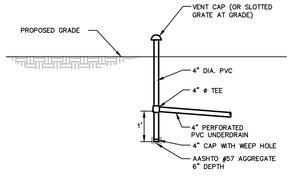
SCALE: 1"=20'

✳ SEE TPD PLANS FOR FINAL GRADING AND LAYOUT AT SOUTH MUDDY CREEK ROAD



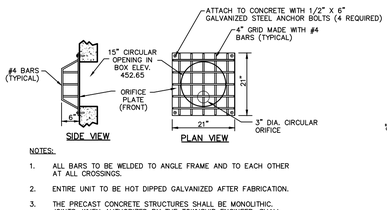
D-3 22 **CRADLE FOR BASIN OUTLET BARREL**

NO SCALE



D-4 22 **UNDERDRAIN CLEANOUT DETAIL**

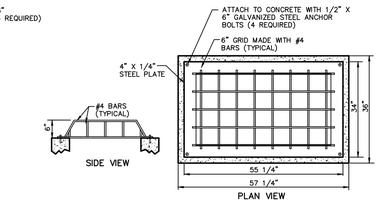
NO SCALE



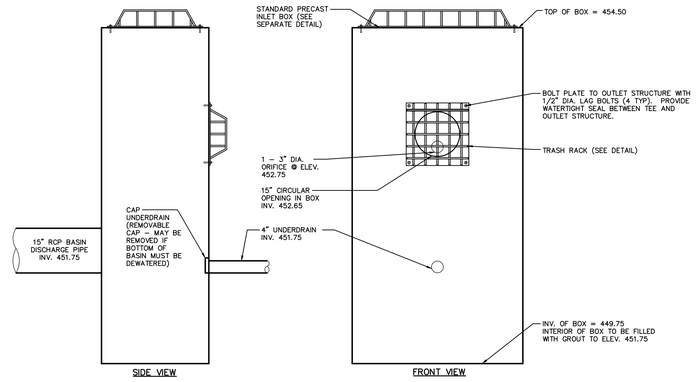
NOTES:

1. ALL BARS TO BE WELDED TO ANGLE FRAME AND TO EACH OTHER AT ALL CROSSINGS.
2. ENTIRE UNIT TO BE HOT DIPPED GALVANIZED AFTER FABRICATION.
3. THE PRECAST CONCRETE STRUCTURES SHALL BE MONOLITHIC. JOINTS, WHEN AUTHORIZED BY THE TOWNSHIP ENGINEER, SHALL BE WATERTIGHT.

TRASH RACK COVERING FRONT ORIFICE



TRASH RACK COVERING TOP ORIFICE



D-2 22 SW-OS-SCALED **OUTLET STRUCTURE DETENTION BASIN 'B'**

NO SCALE

PLANS SUBJECT TO APPROVAL - NOT INTENDED FOR BID OR CONSTRUCTION PURPOSES

DM/A
DAVID MILLER ASSOCIATES, INC.
LANDSCAPE ARCHITECTURE • CIVIL ENGINEERING • PLANNING • SURVEYING • GEOLOGIC SERVICES
1076 Centerville Road • Lancaster, PA 17601 • (717) 898-3402 • www.dmai.com
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REVISIONS
1 DMC 7/12/21 PER LCCD REVIEW LETTER DATED 6/30/21
2 DMC 11/19/21 PER BECKER ENGINEERING REVIEW LETTER DATED 11/17/21
3 TCV 1/19/23 PER BECKER ENGINEERING REVIEW LETTER DATED 12/20/22
4 TCV 2/14/23 PER BECKER INC. REVIEW LETTER DATED 12/20/21
PER BECKER ENGINEERING REVIEW LETTER DATED 1/19/23
5 TCV 4/21/23 PER BECKER INC. REVIEW LETTER DATED 4/17/23
PER LCCD REVIEW LETTER DATED 4/20/23 AND PCSM LETTER DATED 3/20/23 (NEXT TO BE 2023)
6 TCV 2/20/24 PER CONDITION #3 OF CONDITIONAL USE APPROVAL
PER CONDITION #2 OF SOUTH MUDDY CREEK ROAD LOT LINE CHANGE

SEAL

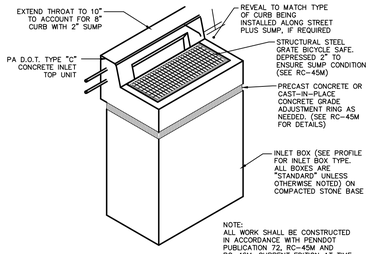
CLIENT / OWNER / APPLICANT
EAST COCALICO ASSOCIATES
1377-C SPENCER AVENUE
LANCASTER, PA 17603
(717) 393-0463

SITE AND STORMWATER DETAILS

VILLAGE AT EAST COCALICO

EAST COCALICO TOWNSHIP, LANCASTER COUNTY, PENNSYLVANIA

PRINCIPAL	PROJECT MANAGER
J. BOYER	T. VAUGHN
DRAWN BY	CHECKED BY
M. WAPLES	J. BOYER
JOB NO.	DRAWING NO.
02-172.2	02-172.27
FILE NO.	
021722DETSTORM1	
DATE	SCALE
5/14/21	AS SHOWN
SHEET NO.	
22 OF 34	

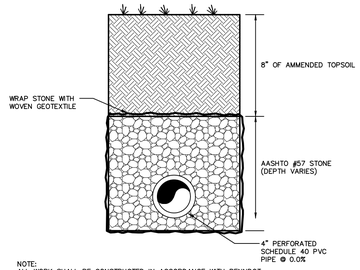


NOTE:
ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH PENNDOT PUBLICATION 72, RC-45M AND RC-46M, CURRENT EDITION AT TIME OF CONSTRUCTION.

(PA D.O.T. RC-45M AND RC-46M)
TYPE 'C' INLET SECTION VIEW
NO SCALE

D-1 / 23 — I-001

NOTES:
1. UNDERDRAIN HOLES SHALL BE ORIENTED TO THE BOTTOM OF THE TRENCH.
2. HOLE SIZING SHALL BE 1/2" DIA.
3. SPACING BETWEEN HOLES SHALL BE 3" LONGITUDINALLY ALONG PIPE.
4. 2 HOLES PER ROW SPACED AT 120° APART, PARALLEL TO THE AXIS OF THE PIPE.
5. PIPE SUBSTITUTION SHALL BE APPROVED BY BECKER ENGINEERING.

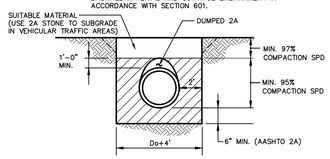


NOTE:
ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH PENNDOT PUBLICATION 72, RC-39M, CURRENT EDITION AT TIME OF CONSTRUCTION.

UNDERDRAIN DETAIL
NO SCALE

D-2 / 23

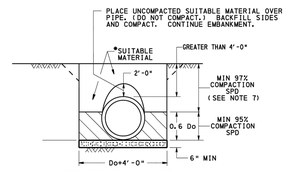
PLACE 2A COARSE AGGREGATE MATERIAL (IN 4" LIFTS) ADJACENT TO THE LOWER HAUNCHES TO A HEIGHT OF 1' ABOVE TOP OF PIPE COMPACT TO 95% SPD. TEST THE SIDE BACKFILL MATERIAL AND CONTINUE EMBANKMENT IN ACCORDANCE WITH SECTION 601.



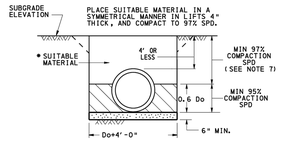
THERMOPLASTIC PIPE

PLACE 2A COARSE AGGREGATE MATERIAL, IN LIFTS 4" THICK, ADJACENT TO THE LOWER HAUNCHES TO A HEIGHT OF Do+4'-0". COMPACT TO 95% SPD. TEST THE SIDE BACKFILL MATERIAL AND CONTINUE EMBANKMENT IN ACCORDANCE WITH SECTION 601, SECTION 601.

PLACE UNCOMPACTED SUITABLE MATERIAL OVER PIPE. (DO NOT COMPACT.) BACKFILL SIDES AND COMPACT. CONTINUE EMBANKMENT.



GREATER THAN 4' TO 48'
FOR FILLS OVER 48', SEE NOTE 8.

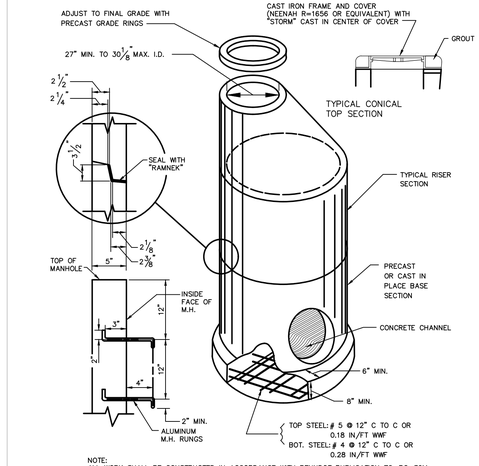


SHALLOW FILLS 4'-0" AND LESS
CONCRETE PIPE

NOTE:
1. FOR TRENCH BOX/SHORING INSTALLATION REQUIREMENTS REFER TO PUBLICATION 408, SECTION 601.
2. 4' HORIZONTAL SEPARATION MUST BE PRESENT BETWEEN THE WATER MAIN AND THE STORMWATER INLET AND PIPING SYSTEM IN ALL LOCATIONS.

STORM SEWER PIPE INSTALLATION WITHIN R.O.W.
NO SCALE

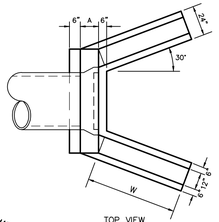
D-3 / 23 — TR-048



NOTE:
ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH PENNDOT PUBLICATION 72, RC-39M, CURRENT EDITION AT TIME OF CONSTRUCTION.

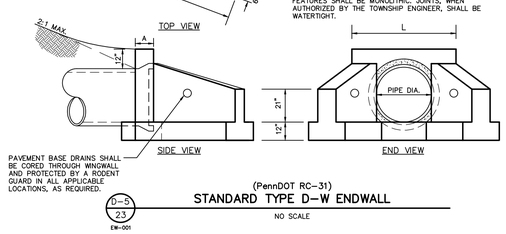
PRE-CAST STORMWATER MANHOLE
NO SCALE

D-4 / 23 — MH-004



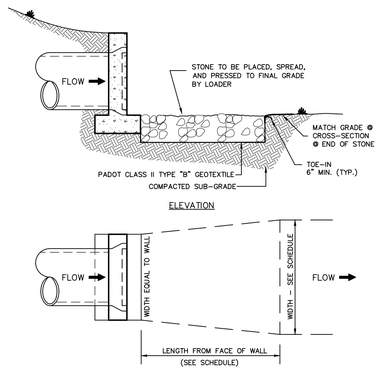
PIPE DIA.	L	W	A
≤ 18"	4.0'	4.0'	12"
24"	4.3'	4.25'	12"
36"	5.5'	4.7'	12"
42"	6.0'	5.8'	12"
48"	6.5'	7.0'	12"
54"	7.0'	8.1'	12"
60"	7.5'	9.25'	15"
72"	8.5'	11.5'	15"

NOTES:
1. EXPOSED EDGES SHALL BE CHAMFERED ONE INCH.
2. ALL WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH PENNDOT PUBLICATION 72, RC-31, CURRENT EDITION AT TIME OF CONSTRUCTION.
3. THE PRECAST CONCRETE STRUCTURES FOR THESE FEATURES SHALL BE MONOLITHIC, JOINTS, WHEN AUTHORIZED BY THE TOWNSHIP ENGINEER, SHALL BE WATERTIGHT.



(PennDOT RC-31)
STANDARD TYPE D-W ENDWALL
NO SCALE

D-5 / 23 — EW-001



RIP-RAP SCHEDULE

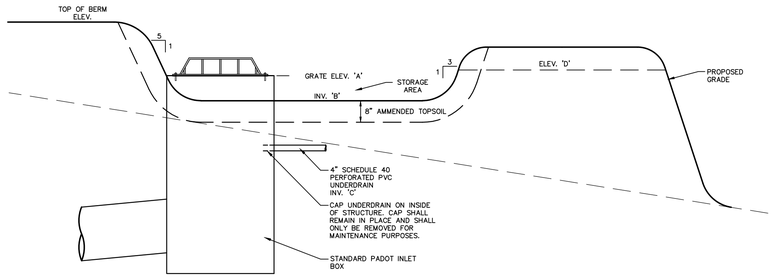
ENDWALL NUMBER	STONE SIZE (AASHTO)	LENGTH (FEET)	WIDTH (FEET)	DEPTH (INCHES)
EW-9	R-5	16'	24'	18"
EW-17	R-4	12'	18'	18"
EW-24	R-4	12'	18'	18"
EW-28	R-5	15'	19'	18"
EW-30	R-4	10'	14'	18"
EW-34	R-4	10'	14'	18"
EW-36	R-5	15'	23'	18"

PERMANENT RIP RAP OUTLET PROTECTION
NO SCALE

D-6 / 23 — MC-001

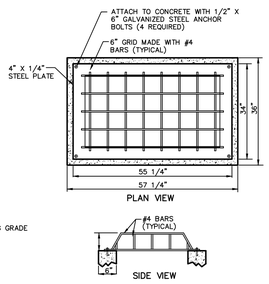
NOTE:
THE PRECAST CONCRETE STRUCTURES FOR THESE FEATURES SHALL BE MONOLITHIC, JOINTS, WHEN AUTHORIZED BY THE TOWNSHIP ENGINEER, SHALL BE WATERTIGHT.

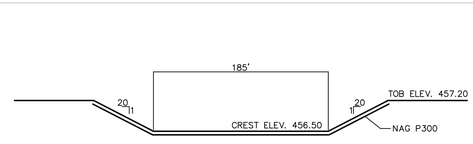
RAIN GARDEN	GRATE ELEVATION 'A'	BOTTOM ELEVATION 'B'	4" PVC UNDERDRAIN ELEVATION 'C'	SPILLWAY ELEVATION 'D'
1	458.50	458.00	456.67	459.10
2	460.50	460.00	458.67	461.50
3	460.50	460.00	458.67	461.10



RAIN GARDEN
NO SCALE

D-7 / 23

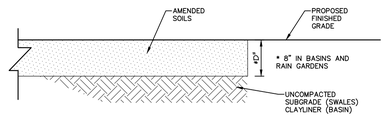




BASIN A SPILLWAY DETAIL
NO SCALE

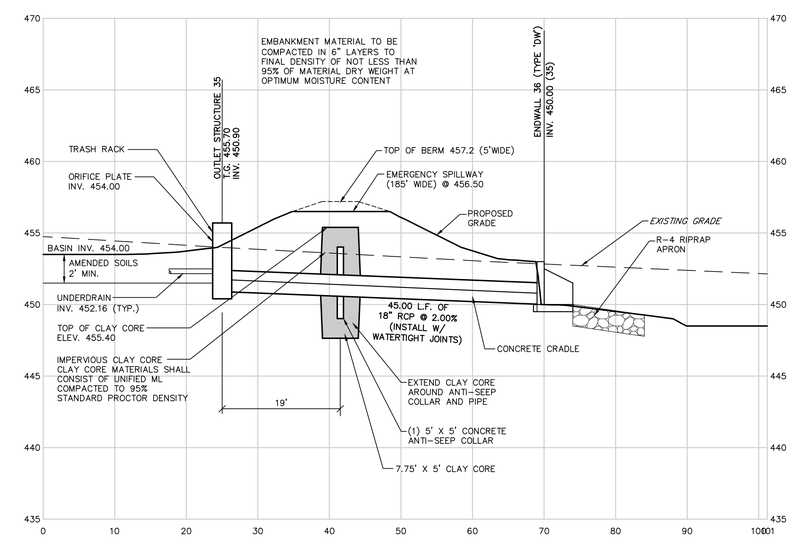
AMENDED SOILS SPECIFICATIONS AND INSTALLATION FOR RAIN GARDENS 1-4 AND BASINS A AND B

1. AMENDED SOILS SHALL BE COMPRISED OF 2 PARTS TOPSOIL, 1 PART ORGANIC MATERIAL MIXED TO UNIFORM DISTRIBUTION.
2. TOPSOIL SHALL BE DEFINED AS A NATURAL OR CULTIVATED SURFACE-SOIL LAYER CONTAINING ORGANIC MATTER AND SAND, SILT, AND CLAY PARTICLES; FRIABLE, PERVIOUS, AND BLACK OR A DARKER SHADE OF BROWN, GRAY, OR RED THAN UNDERLYING SUBSOIL; REASONABLY FREE OF SUBSOIL, CLAY LUMPS, GRAVEL AND OTHER OBJECTS MORE THAN 2 INCHES IN DIAMETER; AND FREE OF ROOTS, WEEDS, TOXIC MATERIALS, OR OTHER NONSOIL MATERIALS. ON SITE TOPSOIL OR IMPORTED TOPSOIL MAY BE USED.
3. ONLY COMPOST PRODUCTS THAT MEET ALL APPLICABLE STATE AND FEDERAL REGULATIONS PERTAINING TO ITS PRODUCTION AND DISTRIBUTION MAY BE USED IN THIS APPLICATION. APPROVED COMPOST PRODUCTS MUST MEET RELATED STATE AND FEDERAL CHEMICAL CONTAMINANT (E.G. HEAVY METALS, PESTICIDES, ETC.) AND PATHOGEN LIMIT STANDARDS PERTAINING TO THE FEEDSTOCKS (SOURCE MATERIALS) IN WHICH IT IS DERIVED.
4. THE COMPOST MATERIAL SHALL HAVE A PH RANGING FROM 5.0-8.5, A MOISTURE CONTENT OF 30-60% BY WEIGHT, AND A MAXIMUM PARTICLE SIZE OF 3/4".
5. THE AMENDED SOILS SHALL NOT BE PLACED UNTIL ALL AREAS CONTRIBUTING FLOWS TO THE AREAS HAVE BEEN COMPLETELY STABILIZED. THE AMENDED SOILS SHALL NOT BE PLACED UNTIL A SITE INSPECTION HAS BEEN PERFORMED BY THE ENGINEER OF RECORD.
6. THE BASINS SHALL BE EXCAVATED TO THE ELEVATION SPECIFIED FOR THE BOTTOM OF THE AMENDED SOILS. THE SUBSOIL AT THIS LOCATION SHOULD BE EITHER SCARIFIED OR RIPPED TO A DEPTH OF 8-INCHES TO CREATE AN UNCOMPACTED CONDITION IN THE BASINS.
7. THE AMENDED SOILS SHALL BE INSTALLED IN 8-INCH UNCOMPACTED LIFTS AND SPREAD UNIFORMLY OVER THE BASINS UNTIL REACHING FINAL GRADE.
8. THE UNDERDRAIN SYSTEM WITHIN THE BASINS SHALL BE CONSTRUCTED AS SHOWN ON THE PLANS.
9. THE AMENDED SOILS AREAS SHALL BE SEEDED WITH THE SEEDING MIX AS SPECIFIED ON THE PLANS.



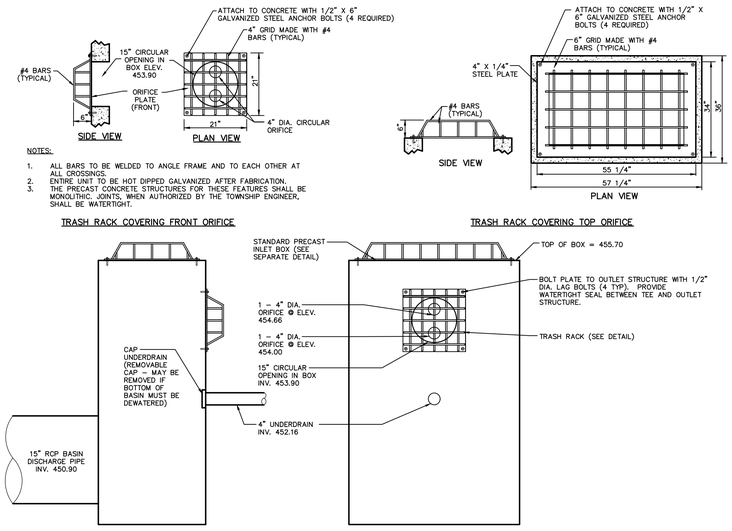
AMENDED SOILS
NO SCALE

D-10 / 23



BASIN A CROSS SECTION
SCALE: HORIZ. 1"=10' VERT. 1"=5'

D-8 / 23 — SW-OS-SCALED



OUTLET STRUCTURE 35 - DETENTION BASIN 'A'
NO SCALE

D-9 / 23 — SW-OS-SCALED

PLANS SUBJECT TO APPROVAL - NOT INTENDED FOR BID OR CONSTRUCTION PURPOSES

DM/A
DAVID MILLER/ASSOCIATES, INC.
LANDSCAPE ARCHITECTURE • CIVIL ENGINEERING • PLANNING • SURVEYING • GEOLOGIC SERVICES
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REVISIONS
1 DMC 7/12/21 PER LCCD JEROM LETTER DATED 6/29/21
2 TCV 11/10/21 PER LCCD JEROM LETTER DATED 10/25/21
3 TCV 2/14/23 PER BECKER ENG. REVIEW LETTER DATED 12/22/21
4 TCV 4/21/23 PER BECKER ENG. REVIEW LETTER DATED 3/22/23
5 TCV 2/20/24 PER LCCD JEROM LETTER DATED 1/17/24
6 TCV 2/20/24 PER BECKER ENG. REVIEW LETTER DATED 1/22/24
FOR CONNECTION TO SOUTH MOODY CREEK ROAD

SEAL

CLIENT / OWNER / APPLICANT
EAST COCALICO ASSOCIATES
1577-C SPENCER AVENUE
LANCASTER, PA 17603
(717) 393-0463

STORMWATER DETAILS

VILLAGE AT EAST COCALICO
EAST COCALICO TOWNSHIP, LANCASTER COUNTY, PENNSYLVANIA

PRINCIPAL	PROJECT MANAGER
J. BOYER	T. VAUGHN
DRAWN BY	CHECKED BY
M. WAPLES	J. BOYER
JOB NO.	DRAWING NO.
02-172.2	02-172.27
FILE NO.	
021722DETSTORM2	
DATE	SCALE
5/14/21	AS SHOWN
SHEET NO.	
23 OF 34	

CONSTRUCTION NOTES:

1. A PRE-CONSTRUCTION MEETING SHALL BE HELD PRIOR TO ANY EARTH DISTURBANCE IN THE VICINITY OF THE DETENTION BASINS, THE CONSTRUCTED WETLANDS, AND RAIN GARDENS IN THE FLOODPLAIN AND THE CONTRIBUTARY AREA TO REVIEW CONSTRUCTION METHODS AND IDENTIFY ANY SITE-SPECIFIC CONCERNS. THE CONTRACTOR AND A REPRESENTATIVE OF DAVID MILLER/ ASSOCIATES, INC. SHALL BE PRESENT AT THIS MEETING.
2. THE BASINS, THE CONSTRUCTED WETLANDS, AND RAIN GARDENS SHALL BE STAKED AND ROPED OFF PRIOR TO COMMENCEMENT OF EARTHMOVING ACTIVITIES. CONSTRUCTION VEHICLE TRAFFIC OVER THESE AREAS SHALL BE AVOIDED TO THE GREATEST EXTENT POSSIBLE TO MINIMIZE COMPACTION. EXCAVATION SHOULD BE PERFORMED BY A TRACK HOE POSITIONED OUTSIDE OF THE FACILITY OR BY THE LIGHTEST TRACKED VEHICLES SUITABLE FOR THE JOB. BULLDOZERS OR OTHER FLAT BLADED IMPLEMENTS SHOULD NOT BE USED FOR FINAL GRADING BECAUSE OF THE TENDENCY TO SEAL THE SOIL SURFACE.
3. IF ROCK IS ENCOUNTERED DURING EXCAVATION, EARTHWORK MAY CONTINUE AROUND OUTCROPS, BUT BLASTING SHALL NOT BE USED AS A MEANS OF ROCK REMOVAL. IF THE ROCK WILL ELIMINATE STORAGE VOLUME OR OTHERWISE IMPEDE THE FUNCTION OF THE FACILITY, DAVID MILLER/ ASSOCIATES, INC. SHALL BE NOTIFIED TO EVALUATE THE IMPACT ON THE DESIGN.
4. IF SINKHOLES ARE ENCOUNTERED DURING CONSTRUCTION, THE TOWNSHIP ENGINEER AND DAVID MILLER/ ASSOCIATES, INC. SHALL BE CONTACTED IMMEDIATELY TO ASSESS THE SITUATION AND DEVELOP SOLUTIONS.
5. BECAUSE THE BASINS MAY BE USED AS TEMPORARY SEDIMENT BASINS, ALL ACCUMULATED SEDIMENT SHALL BE REMOVED FOLLOWING SITE STABILIZATION, AND THE BOTTOM OF THE BASINS SHALL BE CHISEL PLOWED PRIOR TO THE PLACEMENT OF TOPSOIL.
6. UPON REACHING SUBGRADE, THE BOTTOM OF THE WETLAND BASINS, THE CONSTRUCTED WETLAND, AND THE RAIN GARDENS SHALL BE SCARIFIED TO LOOSEN THE SOIL.
7. A MINIMUM OF EIGHT (8) INCHES OF TOPSOIL SHALL BE REPLACED OVER THESE AREAS.
8. THE FLOORS OF BASINS A AND B AND THE CONSTRUCTED WETLANDS AND RAIN GARDENS SHALL BE DISTURBED DURING FINAL GRADING TO CREATE LOCAL HIGH AND LOW SPOTS AND AN IRREGULAR BOTTOM.
9. BASINS A AND B, AND THE CONSTRUCTED WETLANDS SHALL BE PLANTED, SEEDED, AND MULCHED IMMEDIATELY FOLLOWING CONSTRUCTION ACCORDING TO THE SPECIFICATIONS PROVIDED ON THIS PLAN.
10. THE RAIN GARDENS SHALL BE PLANTED, SEEDED, AND MULCHED IMMEDIATELY FOLLOWING CONSTRUCTION USING THE ROHRER'S SEED MIX SPECIFICATIONS.

PLANTING/ SEEDING SPECIFICATIONS:

1. IF DESIRED, TREES AND SHRUBS MAY BE PLANTED IN THE BASINS AND CONSTRUCTED WETLANDS ACCORDING TO GOOD NURSERY AND LANDSCAPE PRACTICE AND TO THE STANDARDS ESTABLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INC. TREES AND SHRUBS SHALL BE SELECTED FROM THE LISTS THAT FOLLOW. ADDITIONAL PLANT MATERIAL MAY BE SELECTED, BUT ALL PLANTS SHOULD BE ADAPTABLE FOR A VARIETY OF WATER SATURATION CONDITIONS AND SELECTED FOR THE PARTICULAR SITE CONDITIONS.
2. THE FOLLOWING SEEDING SCHEDULE SHALL BE FOLLOWED: SEED BASINS A AND B, AND THE CONSTRUCTED WETLAND AREAS TO THEIR RESPECTIVE TOP OF BERM ELEVATIONS WITH RETENTION BASIN FLOOR SEED MIXTURE FOR WILDLIFE AND PLANT DIVERSITY (ERNMX-127) OR APPROVED EQUIVALENT. SUGGESTED SEED MIXTURES ARE AVAILABLE FROM ERNST CONSERVATION SEEDS (1-800-873-3321). SEED SHALL BE HAND BROADCAST - DO NOT HYDROSEED. IF THE BOTTOM OF THE BASIN, WETLAND OR RAIN GARDEN IS INUNDATED FOR AN EXTENDED PERIOD, SEEDING OF THE PONDED AREA IS NOT REQUIRED (SEE ADDITIONAL PLANTING REQUIREMENTS BELOW).
3. MULCH ALL SEEDED AREAS WITH CHOPPED STRAW AT A RATE OF 1 TON/AC.
4. PLANT BOTTOM OF BASINS A AND B, AND THE CONSTRUCTED WETLANDS WITH 2" CONTAINER GROWN SEEDLINGS (PLUGS) IN A GRID PATTERN WITH A MAXIMUM SPACING OF THREE FEET. IF THE BASIN BOTTOM IS INUNDATED, MAKING SEEDING INEFFECTIVE, PLUG SPACING SHALL BE REDUCED TO TWO FEET. PLANT SPECIES MAY BE SELECTED FROM THE SEED MIXTURES SPECIFIED ABOVE, OR THE SUITABLE PERENNIAL LIST PROVIDED BELOW. ACTUAL SITE CONDITIONS SHOULD BE EVALUATED PRIOR TO PLANTING AND APPROPRIATE SPECIES SHOULD BE SELECTED ACCORDINGLY.
5. ALL SEEDED AREAS SHALL BE THOROUGHLY WATERED IMMEDIATELY FOLLOWING SEEDING. IRRIGATION OF THE AREAS SHOULD CONTINUE REGULARLY, AS NEEDED, UNTIL SEEDS HAVE GERMINATED AND PLANTS BECOME ESTABLISHED.

DETENTION BASIN, WETLAND AND RAIN GARDEN CONSTRUCTION SPECIFICATIONS

D-1 / 24 — NO SCALE

SUITABLE TREE SPECIES

Acer negundo	Box Elder
Acer saccharinum	Silver Maple
Betula nigra	River Birch
Magnolia virginiana	Sweet Bay Magnolia
Plantanus occidentalis	American Sycamore
Salix nigra	Black Willow
Liquidambar styraciflua	Sweet Gum
Acer rubrum	Red Maple
Nyssa syvatica	Black Gum
Fraxinus pennsylvanica	Green Ash

SUITABLE SHRUB SPECIES

Aronia arbutifolia	Red Chokeberry
Alnus rugosa	Speckled Alder
Cornus amomum	Silky Dogwood
Cornus sericia	Red-osier Dogwood
Ilex verticillata	Winterberry
Lindera benzoin	Spicebush
Myrica ceritera	Wax Myrtle
Sambucus canadensis	Elderberry
Viburnum dentatum	Arrowwood
Viburnum trilobum	Cranberry Bush
Ilex glabara	Inkberry
Itea virginica	Virginia Sweet Spire
Clethra alnifolia	Sweet Pepperbush
Vaccinum corymbosum	Highbush Blueberry

SUITABLE PERENNIAL SPECIES

Acorus calumus	Sweet Flag
Asclepias incarnata	Swamp Milkweed
Aster novae angliae	New England Aster
Chelone glabra	White Turtlehead
Eupatorium fistulosum	Joe Pye Weed
Glyceria canadensis	Rattlesnake Grass
Iris versicolor	Blue Flag
Juncus Effusus	Soft Rush
Lobelia cardinalis	Cardinal Flower
Lobelia siphilitica	Blue Lobelia
Onoclea sensibilis	Sensitive Fern
Panicum virgatum	Switch Grass
Peltandra virginica	Arrow Arum
Pontederia cordata	Pickerelweed
Sagittaria latifolia	Duck Potato
Scirpus atrovirens	Dark Green Bullrush
Sparganium americanum	Burreed
Vernonia novebaracensis	New York Ironweed

LOW MAINTENANCE GRASS-LIKE SPECIES MIX ERNMX-126 (BASIN/WETLANDS)

Agrostis alba	Red Top
Agrostis stolonifera	Creeping Bentgrass
Elymus riparius	Riverbank Wild Rye
Poa palustris	Fowl Bluegrass
Puccinellia distans	Alkaligrass

SEED AT 25 BULK POUNDS PER ACRE

RETENTION BASIN FLOOR SEEDING FOR WILDLIFE AND PLANT DIVERSITY ERNMX-127 (BASIN/WETLANDS)

Agrostis stolonifera	Creeping Bentgrass
Alopecurus pratensis	Meadow Foxtail
Aster puniceus	Purple Stemmed Aster
Bidens aristosa	Tickseed Sunflower
Elymus virginicus	Virginia Wild Rye
Glyceria canadensis	Rattle Snake Grass
Glyceria striata	Fowl Mannagrass
Leersia oryzoides	Rice Cut-Grass
Mimulus rigens	Square Stem Monkeyflower
Scirpus atrovirens	Green Bulrush
Scirpus cyperinus	Wool Grass
Scirpus microcarpus	Small Seeded Bulrush
Scirpus polyphyllus	Many-Leaved Bulrush
Solidago patula	Rough-Leaved Goldenrod
Sparganium eurycarpum	Giant Bur-Reed
Verbena hastata	Blue Vervain

LOW MAINTENANCE SEED MIX (RAIN GARDENS) ROHRER'S LOW MAINTENANCE SEED MIX

34% MATTERHORN HARD FESCUE
33% GIBRALTAR CREEPING RED FESCUE
33% RUSHMORE CHEWINGS FESCUE

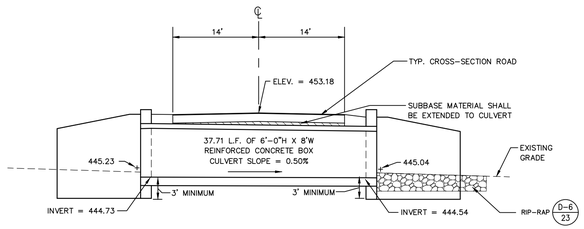
SEEDING RATE: 4 LB. PER 1,000 S.F.

STAGING OF EARTHMOVING ACTIVITIES (CULVERT ONLY)

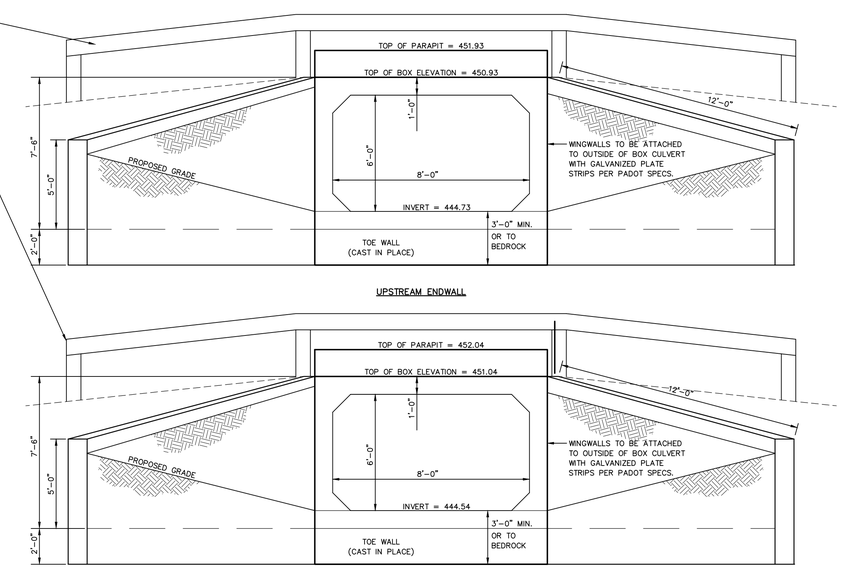
1. INSTALL SANDBAGS UPSLOPE OF PROPOSED CULVERT.
2. INSTALL PUMPED BYPASS
3. BEGIN CULVERT INSTALLATION
4. IMMEDIATELY INSTALL SLOPE PROTECTION ON DISTURBED AREA.
5. ONCE CULVERT IS INSTALLED BEGIN INSTALLATION OF HALEY DRIVE.
6. UPON STABILIZATION OF ALL AREAS, REMOVE ALL E&S CONTROLS.

NOTES:
1. DEVELOPER'S CONTRACTOR MUST SUBMIT THE SHOP DRAWINGS TO DAVID MILLER ASSOCIATES, INC. FOR REVIEW AND CERTIFICATION THAT THEY ARE IN COMPLIANCE WITH THE LAND DEVELOPMENT PLANS, TOWNSHIP STANDARDS AND ALL PENNDOT STANDARDS BEFORE SUBMITTING TO THE TOWNSHIP ENGINEER.
2. BOX TO BE SUMP 6" BELOW ADJACENT GRADE.
3. STRUCTURAL DESIGN SHALL BE PROVIDED TO THE TOWNSHIP BY STRUCTURAL ENGINEER TO VERIFY THAT THE CULVERT, WING WALLS, AND ALL GUIDERAIL CONNECTIONS MEET ALL PENNDOT RC STANDARDS, PUBLICATION 408 SPECIFICATIONS AND STRUCTURAL LOADING REQUIREMENTS TO SUPPORT ANTICIPATED TRAFFIC.
4. SHOULD THE STRUCTURAL DESIGN YIELD A TOP SLAB THICKNESS THAT INFRINGES UPON THE PAVEMENT STRUCTURE OF THE ROADWAY OR NECESSITATES REPROFILING THE ROADWAY TO PROVIDE THE NECESSARY COVER OVER THE BOX CULVERT, THE ROADWAY PLAN SHALL BE RESUBMITTED FOR TOWNSHIP REVIEW.
5. THE BOX CULVERT SHALL BE DESIGNED AND DETAILED ACCORDING TO PENNDOT PUB. 15M, DESIGN MANUAL, PART 4 (DECEMBER 2019), AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 8TH EDITION AND PENNDOT BRIDGE DESIGN STANDARD BD-632 M (FEBRUARY 14, 2023).

GUIDERAIL- SEE PLAN FOR LIMITS.
GUIDERAIL SHALL BE TYPE 2 - WCC WEAK POST GUIDERAIL (WEATHERING STEEL) TO BE INSTALLED PER PADOT RC-53M, DATED NOVEMBER 30, 2021.
GUIDERAIL SHALL HAVE TYPE 2 WEAK POST END TREATMENT WITH TYPE A CONCRETE ANCHOR.

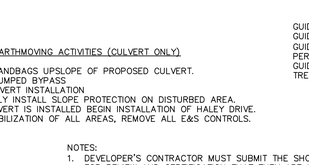


PROFILE ALONG CULVERT CENTERLINE

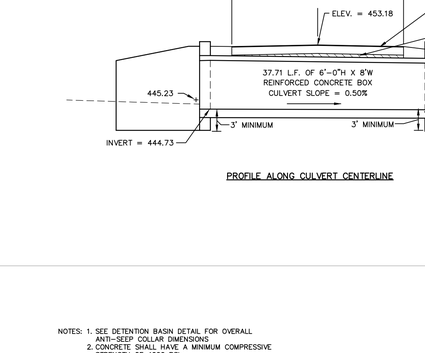


D-2 / 24 — CULVERT DETAIL — NO SCALE

NOTES: 1. SEE DETENTION BASIN DETAIL FOR OVERALL ANTI-SEEP COLLAR DIMENSIONS
2. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI.
3. REINFORCE ANTI-SEEP COLLAR WITH 6"x6" 10 GA. WELDED WIRE FABRIC.

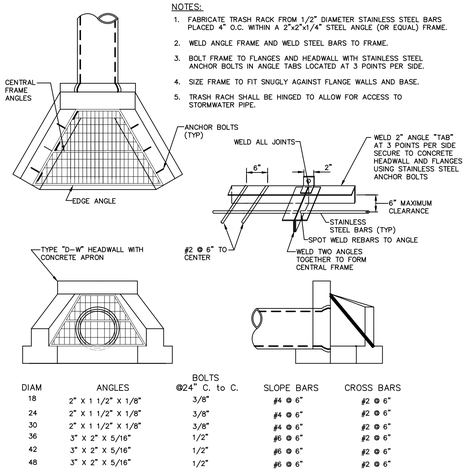


D-3 / 24 / SW-056 — CONCRETE ANTI-SEEP COLLAR — NO SCALE



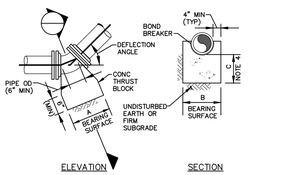
(PA D.O.T. RC-45M AND RC-46M)
D-4 / 24 / I-011 — TYPE 'M' INLET — NO SCALE

NOTES:
1. FABRICATE TRASH RACK FROM 1/2" DIAMETER STAINLESS STEEL BARS PLACED 4" O.C. WITHIN A 2"x2"x1/4" STEEL ANGLE (OR EQUAL) FRAME.
2. WELD ANGLE FRAME AND WELD STEEL BARS TO FRAME.
3. BOLT FRAME TO FLANGES AND HEADWALL WITH STAINLESS STEEL ANCHOR BOLTS IN ANGLE TABS LOCATED AT 3 POINTS PER SIDE.
4. SIZE FRAME TO FIT SNUGLY AGAINST FLANGE WALLS AND BASE.
5. TRASH RACH SHALL BE HINGED TO ALLOW FOR ACCESS TO STORMWATER PIPE.

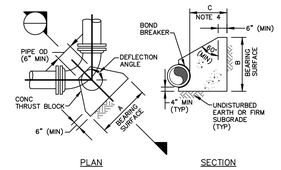


DIAM	ANGLES	BOLTS @24" C. to C.	SLOPE BARS	CROSS BARS
18	2" X 1 1/2" X 1/8"	3/8"	#4 @ 6"	#2 @ 6"
24	2" X 1 1/2" X 1/8"	3/8"	#4 @ 6"	#2 @ 6"
30	2" X 1 1/2" X 1/8"	3/8"	#4 @ 6"	#2 @ 6"
36	3" X 2" X 5/16"	1/2"	#6 @ 6"	#2 @ 6"
42	3" X 2" X 5/16"	1/2"	#6 @ 6"	#2 @ 6"
48	3" X 2" X 5/16"	1/2"	#6 @ 6"	#2 @ 6"

D-5 / 24 / EW-008 — TRASH RACK (@ HEADWALLS & ENDWALLS) — NO SCALE



DETAIL FOR LOWER VERTICAL BENDS



DETAIL FOR HORIZONTAL BENDS

NOMINAL PIPE SIZE (INCHES)	MAXIMUM PIPE OD (INCHES)	REQUIRED BEARING AREA (SQ FT)					
		90 DEG	60 DEG	45 DEG	30 DEG	22.50 DEG	11.25 DEG
4	4.80	2.9	2.0	1.6	1.1	0.8	0.4
8	9.05	10	7	6	4	3	1.4
12	13.20	22	15	12	8	6	3
18	19.50	48	34	26	17	13	7
20	21.60	58	41	32	21	16	8
24	25.80	83	59	45	30	23	12

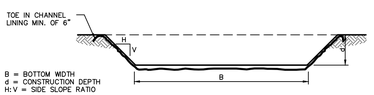
THRUST BLOCKS FOR HORIZONTAL BENDS AND LOWER VERTICAL BENDS

NOTES:
1. MAXIMUM TEST PRESURE = 1.5 x 150 PSI
2. MINIMUM ALLOWABLE SOIL BEARING PRESSURE = 2000 PSF
3. BEARING AREA = A x B
4. C SHALL BE GREATER THAN A/2 AND B/2.

THRUST BLOCKS FOR HORIZONTAL BENDS AND LOWER VERTICAL BENDS — NO SCALE — S-1 / 24 / ESWD7024

SWALE NO.	BOTTOM WIDTH (FT.) (B)	SIDE SLOPE (H:V)	SLOPE (%)	CHANNEL LINING (FT.)	CONSTRUCTION DEPTH (FT.) MINIMUM (d)	STAPLE PATTERN
SWALE A	2.5'	10:1, 20:1	2.0%	S75BN	1.0'	D
SWALE B	2.5'	6:1, 6:1	3.0%	S75BN	1.0'	D
SWALE C	2'	20:1, 10:1	2.0%	S75BN	0.75'	D

* NORTH AMERICAN GREEN PRODUCT



TYPICAL TRAPEZOIDAL SWALE CROSS SECTION — NO SCALE — D-6 / 24 / SW-037

PLANS SUBJECT TO APPROVAL - NOT INTENDED FOR BID OR CONSTRUCTION PURPOSES

DM/A
DAVID MILLER/ASSOCIATES, INC.
LANDSCAPE ARCHITECTURE • CIVIL ENGINEERING • PLANNING • SURVEYING • GEOLOGIC SERVICES
1076 Centerville Road • Lancaster, PA 17601 • (717) 898-3402 • www.dmal.com

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REVISIONS
1 DMC 7/12/21 PER LCCD JEROM LETTER DATED 6/29/21
2 DMC 10/29/21 PER LCCD JEROM LETTER DATED 10/27/21
3 TCV 11/10/21 PER BECKER ENGINEERING REVIEW LETTER DATED 11/10/21
PER BECKER ENG. REVIEW LETTER DATED 12/22/21
PER LCCD JEROM LETTER DATED 12/22/21
4 TCV 2/14/23 PER BECKER ENG. REVIEW LETTER DATED 1/17/23
PER BECKER ENG. REVIEW LETTER DATED 4/17/23
5 TCV 4/20/23 PER LCCD JEROM LETTER DATED 4/19/23
LETTER DATED 7/26/22 (WHAT TO BE 2023)
6 TCV 2/20/24 PER PADOT COMMENTS DATED 1/30/24
FOR CONNECTION TO SOUTH MOOR CREEK ROAD

SEAL

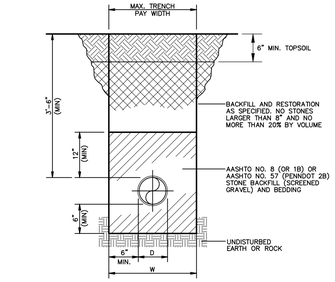
CLIENT / OWNER / APPLICANT
EAST COCALICO ASSOCIATES
1377-C SPENCER AVENUE
LANCASTER, PA 17603
(717) 393-0463

STORMWATER AND SANITARY SEWER DETAILS

VILLAGE AT EAST COCALICO

EAST COCALICO TOWNSHIP, LANCASTER COUNTY, PENNSYLVANIA

PRINCIPAL: J. BOYER	PROJECT MANAGER: T. VAUGHN
DRAWN BY: M. WAPLES	CHECKED BY: J. BOYER
JOB NO.: 02-172.2	DRAWING NO.: 02-172.27
FILE NO.: 0217227DETSTORM3	
DATE: 5/14/21	SCALE: AS SHOWN
SHEET NO.: 24 OF 34	

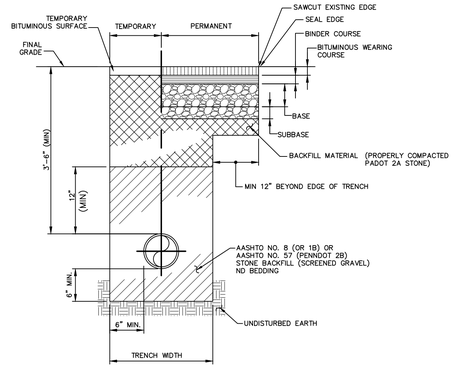


NOTE: TRENCH SIDE SLOPES SHALL BE IN ACCORDANCE WITH OSHA REQUIREMENTS. BEGIN SIDE SLOPES, IF USED, APPROXIMATELY 18" ABOVE TOP OF PIPE (TYPICAL ALL BEDDING TYPES).

S-1 / 25 — ESMDT001

WATER/SEWER R.O.W. RESTORATION DETAIL

NO SCALE



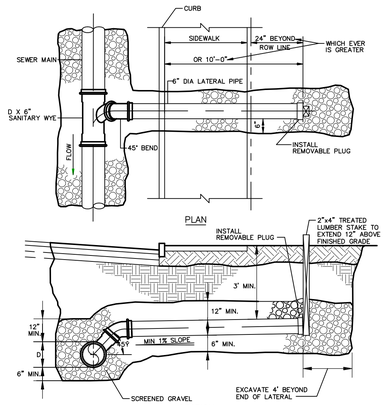
NOTES:

1. BACKFILL & PAVEMENT RESTORATION IN STATE ROADS SHALL BE AS SPECIFIED BY PADOT.
2. BACKFILL & PAVEMENT RESTORATION IN TOWNSHIP ROADS, ACCESS DRIVES, PARKING AREAS AND LOADING AREAS SHALL BE AS SPECIFIED IN THE EAST COCALICO TOWNSHIP SUBDIVISION AND LAND DEVELOPMENT ORDINANCE.

S-2 / 25 — ESMDT003

PAVEMENT RESTORATION

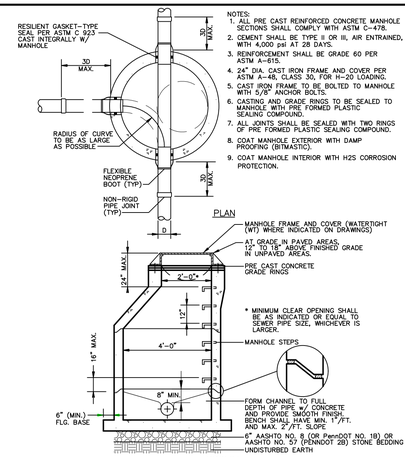
NO SCALE



S-3 / 25 — ESMDT004

LATERAL

NO SCALE



NOTES:

1. ALL PRE CAST REINFORCED CONCRETE MANHOLE SECTIONS SHALL COMPLY WITH ASTM C-478.
2. CEMENT SHALL BE TYPE II OR III, AIR ENTRAINED, WITH 4,000 psi AT 28 DAYS.
3. REINFORCEMENT SHALL BE GRADE 60 PER ASTM A-615.
4. 24" DIA. CAST IRON FRAME AND COVER PER ASTM A-48, CLASS 30, FOR H-20 LOADING.
5. CAST IRON FRAME TO BE BOLTED TO MANHOLE WITH 5/8" ANCHOR BOLTS.
6. CASTING AND GRADE RINGS TO BE SEALED TO MANHOLE WITH PRE FORMED PLASTIC SEALING COMPOUND.
7. ALL JOINTS SHALL BE SEALED WITH TWO RINGS OF PRE FORMED PLASTIC SEALING COMPOUND.
8. COAT MANHOLE EXTERIOR WITH DAMP PROOFING (BITMASTIC).
9. COAT MANHOLE INTERIOR WITH H2S CORROSION PROTECTION.

S-4 / 25 — ESMDT006

PRECAST MANHOLE DETAIL

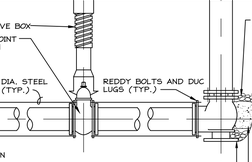
NO SCALE

NOTE: PROVIDE 6" OF AASHTO NO. 8 (OR PENNDOT 1B) STONE BELOW PIPE AND 12" ABOVE ENTIRE LENGTH OF PIPE.

S-5 / 25 — ESWDT011

EAST COCALICO TOWNSHIP AUTHORITY TYPICAL SERVICE LINE - PROFILE

NO SCALE



TYPICAL TRENCH FOR WATER AND SEWER PIPE

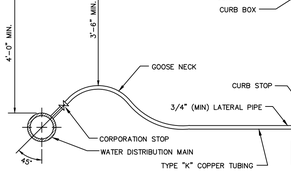
NOTES:

1. ALL CLEANOUTS SHALL BE LOCATED IN THE YARD AREA AND NOT IN DRIVEWAY.
2. IF SEWER LATERAL IS LOCATED UNDER DRIVEWAY, ADD FITTINGS AND PIPE AS REQUIRED TO LOCATE CLEANOUT IN YARD AREA.
3. CLEANOUTS SHALL BE A MINIMUM OF 6" ABOVE FINISHED GRADE.
4. IF 18" VERTICAL SEPARATION CANNOT BE MAINTAINED BETWEEN WATER AND SEWER SERVICES, PROVIDE 5' HORIZONTAL SEPARATION WITH WATER ABOVE SEWER.

S-6 / 25 — ESWDT012

EAST COCALICO TOWNSHIP AUTHORITY TYPICAL SERVICE LINE DETAIL

NO SCALE



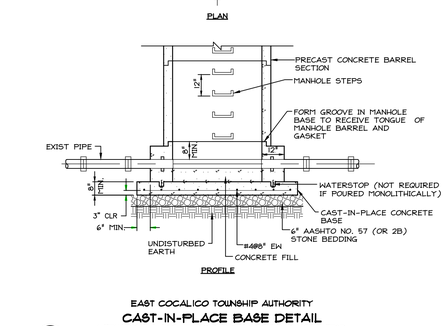
NOTES:

1. FOR ALL DROP MANHOLES, INTERIOR SURFACES SHALL BE PROVIDED WITH A PVC OR HDPE LINER.
2. FILL ANULAR SPACE WITH AASHTO NO. 8 (PENNDOT 1B) STONE

S-7 / 25 — ESWDT007

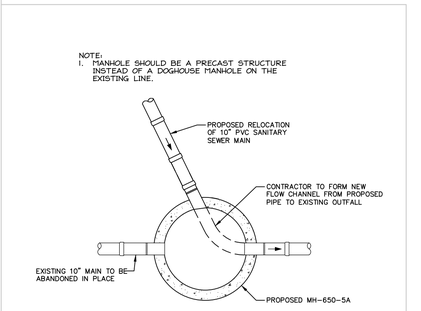
EAST COCALICO TOWNSHIP AUTHORITY DROP MANHOLE DETAIL

NO SCALE



NOTES:

1. ALL PRE CAST REINFORCED CONCRETE MANHOLE SECTIONS SHALL COMPLY WITH ASTM C-478.
2. CEMENT SHALL BE TYPE II OR III, AIR ENTRAINED, WITH f'c=3,000 psi AT 28 DAYS.
3. REINFORCEMENT SHALL BE GRADE 60 PER ASTM A-615.
4. ALL JOINTS SHALL BE SEALED WITH PRE FORMED PLASTIC SEALING COMPOUND.
5. COAT MANHOLE INTERIOR WITH PRO GUARD PROPOXY 3009 COAL TAR EPOXY.
6. COAT MANHOLE EXTERIOR WITH PROMASTIC 900 COAL TAR WATER PROOFING COMPOUND.



S-8 / 25

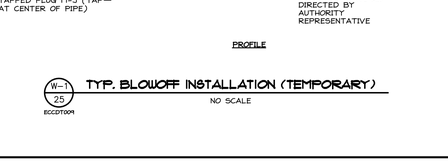
DETAIL FOR NEW MANHOLE CHANNEL

NO SCALE

S-9 / 25 — ESWDT008

EAST COCALICO TOWNSHIP AUTHORITY CAST-IN-PLACE BASE DETAIL NEW MANHOLE OVER EXISTING SEWER

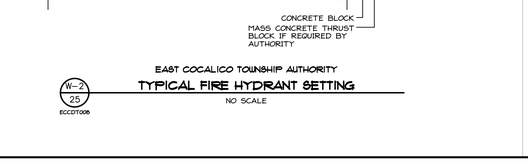
NO SCALE



W-1 / 25 — ECCDT004

TYP. BLOWOFF INSTALLATION (TEMPORARY)

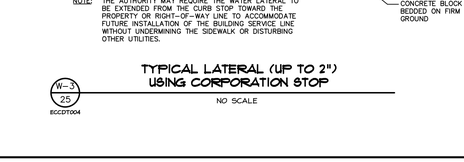
NO SCALE



W-2 / 25 — ECCDT006

EAST COCALICO TOWNSHIP AUTHORITY TYPICAL FIRE HYDRANT SETTING

NO SCALE

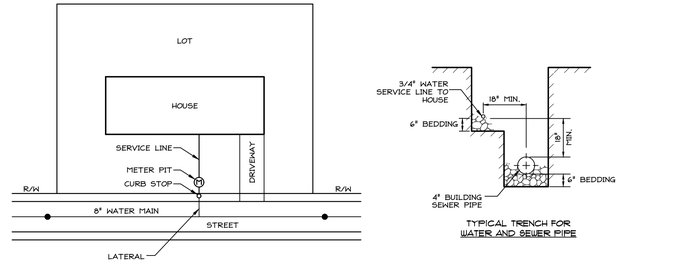


NOTE: THE AUTHORITY MAY REQUIRE THE WATER LATERAL TO BE EXTENDED FROM THE CURB STOP TOWARD THE PROPERTY OR RIGHT-OF-WAY LINE TO ACCOMMODATE FUTURE INSTALLATION OF THE BUILDING SERVICE LINE WITHOUT UNDERMINING THE SIDEWALK OR DISTURBING OTHER UTILITIES.

W-3 / 25 — ECCDT004

TYPICAL LATERAL (UP TO 2") USING CORPORATION STOP

NO SCALE



NOTES:

1. CURB STOP SHALL BE LOCATED AT THE RIGHT-OF-WAY LINE.
2. ALL METERS SHALL BE LOCATED IN BELOW GRADE PITS JUST BEYOND THE CURB STOP.
3. A SINGLE LATERAL SHALL BE PROVIDED PER TOWNHOUSE, AND THE LATERAL AND SERVICE LINE SHALL BE SIZED TO SUPPORT FIRE SPRINKLERS, IF REQUIRED. FIRE SPRINKLER LINES SHALL HAVE SEPARATE BACKFLOW PREVENTERS.
4. IF 18" VERTICAL SEPARATION CANNOT BE MAINTAINED BETWEEN WATER AND SEWER SERVICES, PROVIDE 5' HORIZONTAL SEPARATION WITH WATER ABOVE SEWER.

W-4 / 25 — ESWDT012

EAST COCALICO TOWNSHIP AUTHORITY TYPICAL SERVICE LINE DETAIL

NO SCALE

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REVISIONS
1 DMC 7/12/21 PER LCCD JEROM LETTER DATED 8/29/21
2 TCV 11/10/21 PER LCCD JEROM LETTER DATED 10/25/21
3 TCV 11/10/21 PER BECKER ENGINEERING REVIEW LETTER DATED 10/20/21
PER BECKER ENGINEERING REVIEW LETTER DATED 11/2/21
4 TCV 2/14/23 PER BECKER ENGINEERING REVIEW LETTER DATED 1/27/23
5 TCV 4/20/23 PER BECKER ENG. REVIEW LETTER DATED 4/17/23
PER LCCD JEROM REVIEW LETTER DATED 4/17/23
LETTER DATED 7/26/23 (WHAT TO BE 2023)
6 TCV 3/20/24 PER BECKER ENG. REVIEW LETTER DATED 3/13/24
FOR CONNECTION TO SOUTH MOODY CREEK ROAD

SEAL

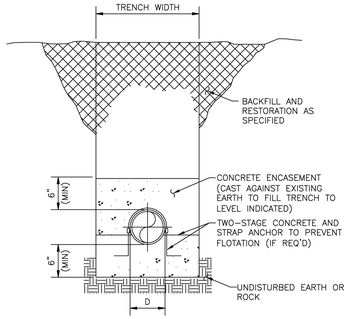
CLIENT / OWNER / APPLICANT:
EAST COCALICO ASSOCIATES
1377-C SPENCER AVENUE
LANCASTER, PA 17603
(717) 393-0463

WATER AND SANITARY SEWER DETAILS

VILLAGE AT EAST COCALICO

EAST COCALICO TOWNSHIP, LANCASTER COUNTY, PENNSYLVANIA

PRINCIPAL	PROJECT MANAGER
J. BOYER	T. VAUGHN
DRAWN BY	CHECKED BY
M. WAPLES	J. BOYER
JOB NO.	DRAWING NO.
02-172.2	02-172.27
FILE NO.	
0217227DETWATER1	
DATE	SCALE
5/14/21	AS SHOWN
SHEET NO.	
25 OF 34	



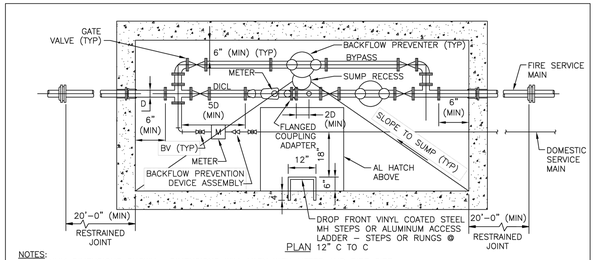
NOTE:
TRENCH SIDE SLOPES SHALL BE IN ACCORDANCE WITH OSHA REQUIREMENTS. BEGIN SIDE SLOPES, IF USED, APPROXIMATELY 18" ABOVE TOP OF PIPE (TYPICAL ALL BEDDING TYPES).

CONCRETE ENCASEMENT

DETAIL

NO SCALE

2



PLAN

NOTES:
1. MINIMUM DIMENSIONS SHOWN. DIMENSIONS WILL VARY WITH METER AND PIPE SIZE.
2. VAULT AND HATCH SHALL BE DESIGNED FOR H-20 WHEEL LOADING IN TRAVELED AREAS.
3. ONLY A DOUBLE CHECK VALVE ASSEMBLY BACKFLOW PREVENTER CAN BE INSTALLED IN THE METER PIT. IF A REDUCED PRESSURE ZONE BACKFLOW PREVENTER IS REQUIRED IT MUST BE INSTALLED IN A STRUCTURE ABOVE GRADE PROVIDED WITH ADEQUATE SPACE TO FACILITATE MAINTENANCE AND TESTING AND MUST BE PROTECTED FROM FREEZING.
4. PREVENT FLOTATION WITH GROUND WATER LEVEL AT FINISHED GROUND SURFACE BY DEAD WEIGHT OF STRUCTURE ONLY.
5. BYPASS PIPING IS RECOMMENDED, BUT MAY BE OMITTED AT THE DISCRETION OF THE AUTHORITY.
6. LADDER MAY BE ROTATED 90-DEG W/ 18-IN CLEARANCE AT THE BASE.

TYPICAL METER PIT FOR LARGE METERS

DETAIL

NO SCALE

14

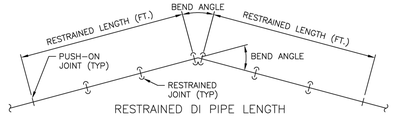
MINIMUM RESTRAINED PIPE LENGTH (FT) FOR VERTICAL BENDS (WITHOUT POLYETHYLENE ENCASEMENT)				
DIAMETER (IN)	VERTICAL BEND ANGLE (DEGREES)			
	45	22½	11¼	
6	20	1	5	
8	26	12	6	
10	32	15	8	
12	37	18	9	
14	43	21	10	
16	48	23	12	
18	54	26	13	
20	59	28	14	
24	70	34	17	

MINIMUM RESTRAINED PIPE LENGTH (FT) FOR HORIZONTAL BENDS (WITHOUT POLYETHYLENE ENCASEMENT)				
DIAMETER (IN)	HORIZONTAL BEND ANGLE (DEGREES)			
	90	45	22½	11¼
6	15	6	3	1
8	19	8	4	2
10	23	10	5	2
12	28	11	5	3
14	32	13	6	3
16	36	15	7	4
18	40	16	8	4
20	43	18	9	4
24	51	21	10	5

MINIMUM RESTRAINED PIPE LENGTH (FT) FOR VERTICAL BENDS (WITH POLYETHYLENE ENCASEMENT)			
DIAMETER (IN)	VERTICAL BEND ANGLE (DEGREES)		
	45	22½	11¼
6	29	14	7
8	37	18	9
10	45	22	11
12	53	26	13
14	61	29	15
16	69	33	16
18	77	37	18
20	85	41	20
24	100	48	24

MINIMUM RESTRAINED PIPE LENGTH (FT) FOR HORIZONTAL BENDS (WITH POLYETHYLENE ENCASEMENT)				
DIAMETER (IN)	HORIZONTAL BEND ANGLE (DEGREES)			
	90	45	22½	11¼
6	16	7	3	2
8	21	9	4	2
10	26	11	5	3
12	30	13	6	3
14	35	14	7	3
16	39	16	8	4
18	44	18	9	4
20	48	20	9	5
24	56	23	11	6

NOTES:
1 DESIGN PRESSURE = 150 PSI
2 DEPTH OF COVER = 4 FEET
3 SAFETY FACTOR = 1.5
4 SOIL TYPE = COHESIVE ANGULAR
5 SOIL INTERNAL FRICTION ANGLE = 20 DEGREES
6 SOIL COHESION = 200 PSF
7 SOIL DENSITY = 90 PCF

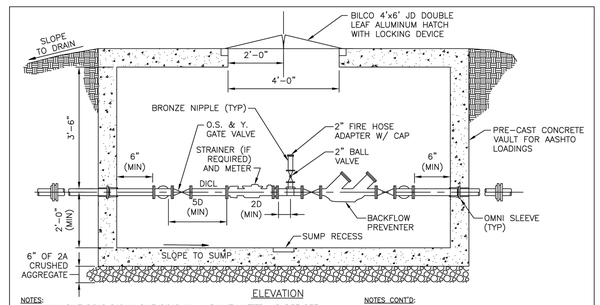


RESTRAINED DI PIPE LENGTH

DETAIL

NO SCALE

18



ELEVATION

NOTES:
1. MINIMUM DIMENSIONS SHOWN. DIMENSIONS WILL VARY WITH METER AND PIPE SIZE.
2. VAULT AND HATCH SHALL BE DESIGNED FOR H-20 WHEEL LOADING IN TRAVELED AREAS.
3. ONLY A DOUBLE CHECK VALVE ASSEMBLY BACKFLOW PREVENTER CAN BE INSTALLED IN THE METER PIT. IF A REDUCED PRESSURE ZONE BACKFLOW PREVENTER IS REQUIRED IT MUST BE INSTALLED IN A STRUCTURE ABOVE GRADE PROVIDED WITH ADEQUATE SPACE TO FACILITATE MAINTENANCE AND TESTING AND MUST BE PROTECTED FROM FREEZING.

NOTES CONT'D:
4. PREVENT FLOTATION WITH GROUND WATER LEVEL AT FINISHED GROUND SURFACE BY DEAD WEIGHT OF STRUCTURE ONLY.
5. BYPASS PIPING IS RECOMMENDED, BUT MAY BE OMITTED AT THE DISCRETION OF THE AUTHORITY.
6. HATCH TO BE 4'x6' UNLESS BYPASS IS OMITTED AT WHICH TIME IT MAY BE 4'x4'.

TYPICAL METER PIT FOR LARGE METERS

DETAIL

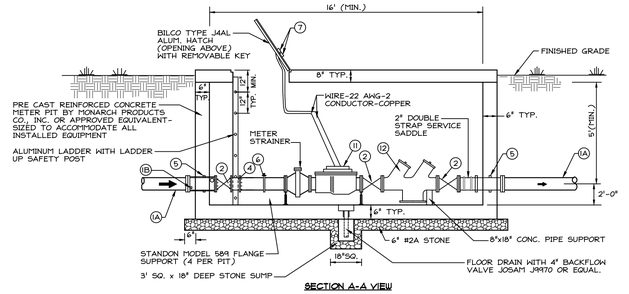
NO SCALE

15

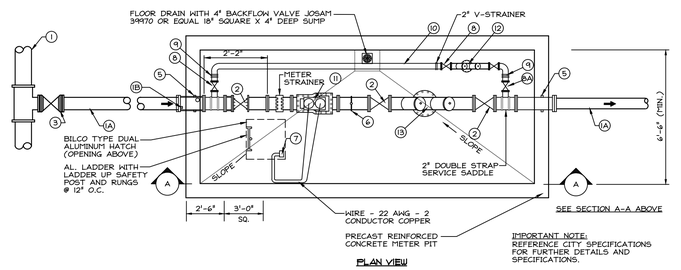
NOTE: THE FOLLOWING NUMBERS REFER TO COMPONENTS ON THE METER PIT DETAIL SHOWN ABOVE.

1 8" WATER MAIN
1A 6" WATER SERVICE (CLASS 52-C.L.D.I.), 90'S AND 45'S WITH THRUST BLOCKING.
1B CLASS 53 OR 54 C.L.D.I.
2 6" GATE VALVE & WHEEL OPER., O.S.&Y.
3 6" MJ GATE VALVE AND C.I. BOX
5 RODDED THRU WALL OR OPNI SLEEVE WITH MEG-A-LUG JOINT RESTRAINT.
6 SERVICE SADDLE, GATE VALVE & TEST CONNECTION WITH FIRE HOSE ADAPTER OR PLUG.
7 PIT PADS MOUNTED ON LID.
9 2" BALL VALVE
9A 2" LOCKABLE BALL VALVE
9 2" COMPRESSION COUPLING
10 2" K-COPPER MANDATORY BYPASS, COMPRESSION OR BRASS THREADED FITTINGS ONLY (NO SOLDERED, GALVANIZED OR PVC FITTINGS ALLOWED)
11 COMPOUND METER NEPTUNE ARS 6 W/PITPAD OR SENSUS ECR-GALLON-6WHEEL W/HOUSE PAD OR TRPL.
12 2" DOUBLE CHECK BACKFLOW PREVENTER LOW HAZARD ASSEMBLY (W/OUT METER)
13 6" DOUBLE CHECK BACKFLOW PREVENTER LOW HAZARD ASSEMBLY (W/OUT METER)

TESTING REQUIRED, FIRE LINE:
- VISUAL INSPECTION OF UNDERGROUND PIPING, THRUST BLOCKING ETC.
- HYDROSTATIC TESTING OF LINE FROM TAP ON MAIN TO VALVE IN PIT AT 200 PSI FOR 2 HOURS, NO VISIBLE LEAKS.
- BACTERIOLOGICAL TESTING: CONTACT WATER LAB AT 717-291-4618 TO SET UP A TIME TO TEST. CUSTOMER DOES ALL FLUSHING AND RELATED DUTIES. COST PER TEST IS $25.00.



SECTION A-A VIEW



PLAN VIEW

IMPORTANT NOTE:
REFERENCE CITY SPECIFICATIONS FOR FURTHER DETAILS AND SPECIFICATIONS.

6" METER PIT DETAIL (RESIDENTIAL USE)

NO SCALE

H-25A H-OM

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REVISIONS
1 DMC 7/12/21 PER LCCD JEROM LETTER DATED 6/29/21
2 DMC 7/26/21 PER LCCD JEROM LETTER DATED 7/23/21
3 TCV 11/19/21 PER BECKER ENGINEERING REVIEW LETTER DATED 11/15/21
4 TCV 2/14/23 PER BECKER INC. REVIEW LETTER DATED 12/20/21
PER BECKER INC. REVIEW LETTER DATED 1/27/22
PER BECKER ENG. REVIEW LETTER DATED 4/17/23
5 TCV 4/21/23 PER LCCD JEROM LETTER DATED 4/19/23
LETTER DATED 7/26/23 (MEAN TO BE 2023)
6 TCV 2/20/24 PER LCCD JEROM LETTER DATED 2/15/24
FOR CONNECTION TO SOUTH MOOR CREEK ROAD

SEAL

CLIENT / OWNER / APPLICANT
EAST COCALICO ASSOCIATES
1577-C SPENCER AVENUE
LANCASTER, PA 17603
(717) 393-0463

WATER DETAILS

VILLAGE AT EAST COCALICO

EAST COCALICO TOWNSHIP, LANCASTER COUNTY, PENNSYLVANIA

PRINCIPAL J. BOYER	PROJECT MANAGER T. VAUGHN
DRAWN BY M. WAPLES	CHECKED BY J. BOYER
JOB NO. 02-172.2	DRAWING NO. 02-172.27
FILE NO. 0217227DETWATER2	
DATE 5/14/21	SCALE AS SHOWN
SHEET NO. 25A OF 34	

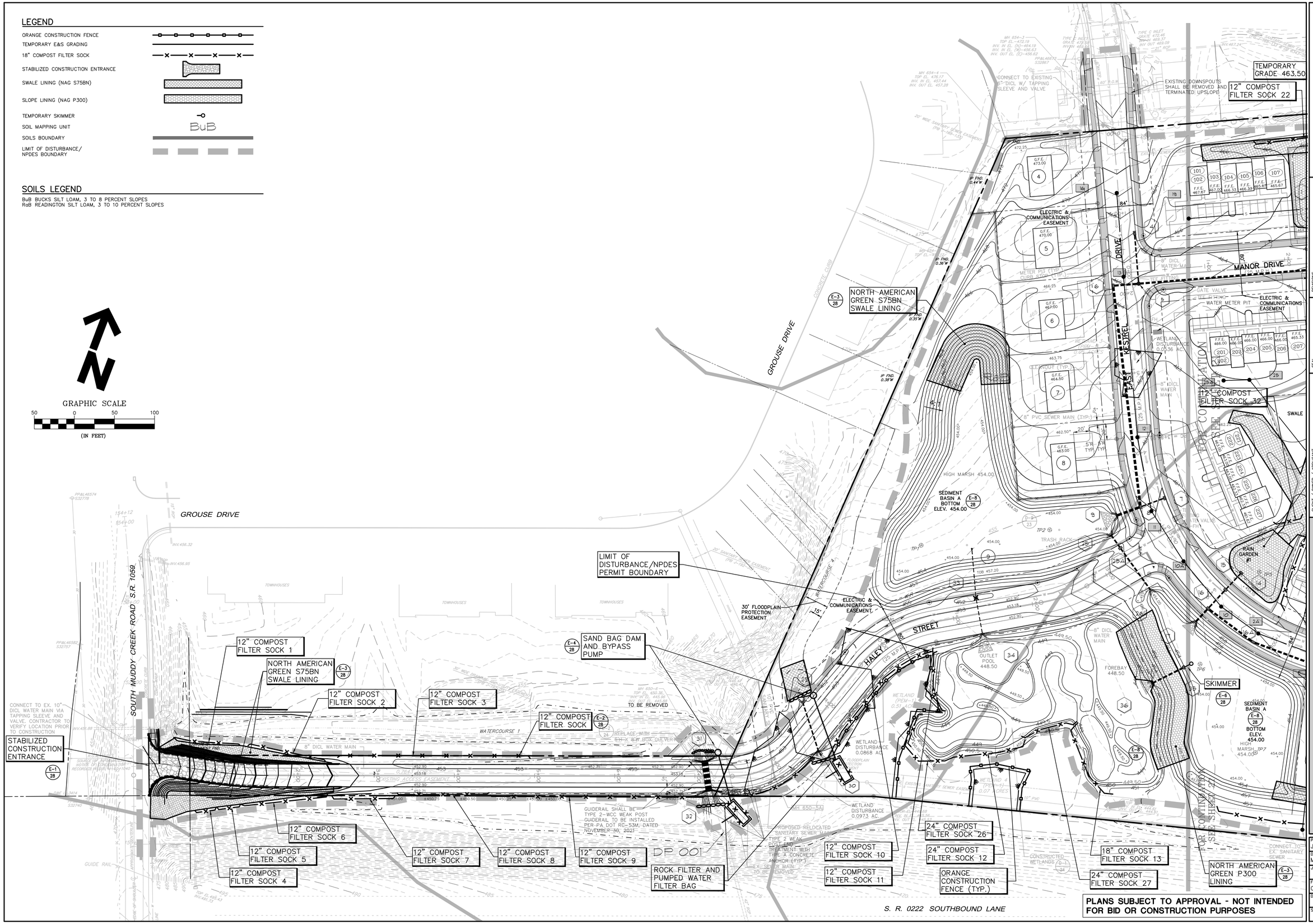
LEGEND

- ORANGE CONSTRUCTION FENCE
- TEMPORARY E&S GRADING
- 18" COMPOST FILTER SOCK
- STABILIZED CONSTRUCTION ENTRANCE
- SWALE LINING (NAG S75BN)
- SLOPE LINING (NAG P300)
- TEMPORARY SKIMMER
- SOIL MAPPING UNIT — BuB
- SOILS BOUNDARY
- LIMIT OF DISTURBANCE/ NPDES BOUNDARY

SOILS LEGEND

BuB BUCKS SILT LOAM, 3 TO 8 PERCENT SLOPES
RoB READINGTON SILT LOAM, 3 TO 10 PERCENT SLOPES

GRAPHIC SCALE
50 0 50 100
(IN FEET)



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REVISIONS
1 DMC 7/02/21 PER LCCD JEROM LETTER DATED 6/29/21
2 DMC 10/25/21 PER BECKER ENGINEERING REVIEW LETTER DATED 10/22/21
3 TCV 11/19/21 PER BECKER ENGINEERING REVIEW LETTER DATED 11/17/21
4 TCV 2/14/23 PER BECKER ENG. REVIEW LETTER DATED 12/20/21 AND LCCD JEROM REVIEW LETTER DATED 1/27/22
5 TCV 4/21/23 PER BECKER ENG. REVIEW LETTER DATED 4/17/23, LETTER DATED 3/28/23 AND LCCD JEROM LETTER DATED 3/27/23
6 TCV 3/20/24 PER BECKER ENG. REVIEW LETTER DATED 3/18/24 FOR CONNECTION TO SOUTH MUDDY CREEK ROAD

SEAL

CLIENT / OWNER / APPLICANT
EAST COCALICO ASSOCIATES
1377-C SPENCER AVENUE
LANCASTER, PA 17603
(717) 393-0463

EROSION AND SEDIMENT POLLUTION CONTROL PLAN

VILLAGE AT EAST COCALICO

EAST COCALICO TOWNSHIP, LANCASTER COUNTY, PENNSYLVANIA

PRINCIPAL J. BOYER	PROJECT MANAGER T. VAUGHN
DRAWN BY M. WAPLES	CHECKED BY J. BOYER
JOB NO. 02-172.2	DRAWING NO. 02-172.27
FILE NO. 0217227EROSION	
DATE 5/14/21	SCALE 1"=50'
SHEET NO. 26 OF 34	

GRAPHIC SCALE
50 0 50 100
(IN FEET)

LEGEND

- ORANGE CONSTRUCTION FENCE
- TEMPORARY E&S GRADING
- 18" COMPOST FILTER SOCK
- STABILIZED CONSTRUCTION ENTRANCE
- SWALE LINING (NAG S75BN)
- SLOPE LINING (NAG P300)
- TEMPORARY SKIMMER
- SOIL MAPPING UNIT — BuB
- SOILS BOUNDARY
- LIMIT OF DISTURBANCE/ NPDES BOUNDARY

SOILS LEGEND

BuB BUCKS SILT LOAM, 3 TO 8 PERCENT SLOPES
RoB READINGTON SILT LOAM, 3 TO 10 PERCENT SLOPES

NORTH AMERICAN GREEN S75BN SWALE LINING (TYP.) E-3 28
TEMPORARY GRADE 463.50
12" COMPOST FILTER SOCK 22
EXISTING DOWNSPOUTS SHALL BE REMOVED AND TERMINATED UPSLOPE
RAY DRIVE
MANOR DRIVE
EAST KESTREL DRIVE
8" DICL WATER MAIN
WATER METER PIT
ELECTRIC & COMMUNICATIONS EASEMENT
GATE VALVE
WETLAND DISTURBANCE 0.56 AC.
12" COMPOST FILTER SOCK 32
SWALE A
COMMUNITY BUILDING F.F.E. 464.50
TOPSOIL STOCKPILE
TEMPORARY GRADE 458.50
12" COMPOST FILTER SOCK 33
12" COMPOST FILTER SOCK 21
SWALE B
SWALE C
TEMPORARY GRADE 460.50
RAIN GARDEN #1
RAIN GARDEN #2
RAIN GARDEN #3
12" COMPOST FILTER SOCK 23
12" COMPOST FILTER SOCK 24
12" COMPOST FILTER SOCK 25
12" COMPOST FILTER SOCK 31
12" COMPOST FILTER SOCK 30
12" COMPOST FILTER SOCK 29
12" COMPOST FILTER SOCK 28
LIMIT OF DISTURBANCE/NPDES PERMIT BOUNDARY
CAP EX. FORCE MAIN AND ABANDON IN PLACE
GATE VALVE W/ TEMPORARY BLOW-OFF
CONNECT TO EX. SANITARY SEWER
REMOVE EX. FORCE MAIN BETWEEN CAPS
EXISTING 100 YEAR FLOODPLAIN
12" COMPOST FILTER SOCK 18
12" COMPOST FILTER SOCK 19
12" COMPOST FILTER SOCK 20
NORTH AMERICAN GREEN P300 LINING (TYP.) E-3 28
DISTURBED PLANTING AREA
DP 002
WATERCOURSE 'C'
CONSTRUCTED WETLANDS
12" COMPOST FILTER SOCK E-2 28
WATERCOURSE 3
ORANGE CONSTRUCTION FENCE (TYP.)
12" COMPOST FILTER SOCK 17
SEDIMENT BASIN B E-7 28
HIGH MARSH 452.75
LOW MARSH 450.60
SKIMMER E-6 28
SEDIMENT BASIN A E-8 28 BOTTOM ELEV. 454.00
HIGH MARSH 454.00
SKIMMER E-6 28
FOREBAY 448.50
18" COMPOST FILTER SOCK 13
24" COMPOST FILTER SOCK 27
NORTH AMERICAN GREEN P300 LINING E-3 28
12" COMPOST FILTER SOCK 14
12" COMPOST FILTER SOCK 15
12" COMPOST FILTER SOCK 16
NORTH AMERICAN GREEN S75BN SWALE LINING (TYP.) E-3 28
NORTH AMERICAN GREEN P300 LINING E-3 28
IP FND. 1.22'E
IP FND. 2.0'E
IP FND. EL.445.04
CONNECT TO EX. SANITARY SEWER
SEE SHEET 26 FOR CONTINUATION

PLANS SUBJECT TO APPROVAL - NOT INTENDED FOR BID OR CONSTRUCTION PURPOSES

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REVISIONS
1 DMC 7/12/21 PER LCCD JEROM LETTER DATED 6/29/21
2 DMC 7/12/21 PER LCCD JEROM LETTER DATED 6/29/21 (PLAN SETS)
3 TCV 11/10/21 PER BECKER ENGINEERING REVIEW LETTER DATED 10/20/21
PER LCCD JEROM LETTER DATED 10/20/21 (PLAN SETS)
4 TCV 2/14/23 PER BECKER ENGINEERING REVIEW LETTER DATED 12/22/21
PER LCCD JEROM LETTER DATED 12/22/21 (PLAN SETS)
5 TCV 4/21/23 PER BECKER ENGINEERING REVIEW LETTER DATED 4/17/23
PER LCCD JEROM LETTER DATED 4/17/23 (PLAN SETS)
6 TCV 2/20/24 PER LCCD JEROM LETTER DATED 2/13/24 (PLAN SETS)
PER BECKER ENGINEERING REVIEW LETTER DATED 2/16/24
FOR CONNECTION TO SOUTH MOODY CREEK ROAD

SEAL

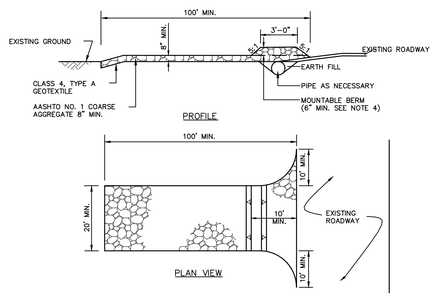
CLIENT / OWNER / APPLICANT
EAST COCALICO ASSOCIATES
1577-C SPENCER AVENUE
LANCASTER, PA 17603
(717) 368-0463

EROSION AND SEDIMENT POLLUTION CONTROL PLAN

VILLAGE AT EAST COCALICO

EAST COCALICO TOWNSHIP, LANCASTER COUNTY, PENNSYLVANIA

PRINCIPAL J. BOYER	PROJECT MANAGER T. VAUGHN
DRAWN BY M. WAPLES	CHECKED BY J. BOYER
JOB NO. 02-172.2	DRAWING NO. 02-172.27
FILE NO. 0217227EROSION	
DATE 5/14/21	SCALE 1"=50'
SHEET NO. 27 OF 34	



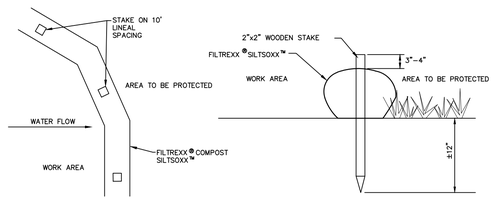
NOTES:

1. INSPECT THE ENTRANCE DAILY. REMOVE ALL SEDIMENT DEPOSITED ON THE PUBLIC ROADWAYS AND RETURN TO THE CONSTRUCTION SITE. WASHING OF THE ROADWAY WILL NOT BE PERMITTED.
2. MAINTAIN THE SPECIFIED ROCK CONSTRUCTION ENTRANCE THICKNESS. PLACE ADDITIONAL ROCK WHENEVER ROCK BECOMES CLOGGED WITH SEDIMENT.
3. MAINTAIN STOCKPILE OF AASHTO NO. 1 COARSE AGGREGATE.
4. CONSTRUCT A MOUNTABLE BERM ONLY WHEN 6" MIN. COVER CANNOT BE PROVIDED OVER THE PIPE.
5. SATISFACTORILY REMOVE MATERIALS AS PER SPECIFICATION IN SECTION 849 WHEN ROCK CONSTRUCTION ENTRANCE IS NO LONGER NEEDED.
6. PROVIDE GEOTEXTILE MATERIAL MEETING THE REQUIREMENTS OF PA D.O.T. PUBLICATION 408, SECTION 735. FURNISH AND INSTALL IN ACCORDANCE WITH SECTION 212. PROVIDE GEOTEXTILE ALONG ALL INTERFACE AREAS WITH GROUND CONTACT.

E-1 / 28 / ES-001

STABILIZED CONSTRUCTION ENTRANCE

NO SCALE



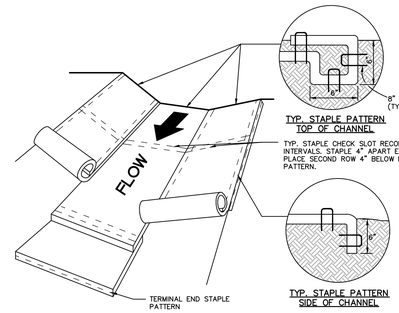
NOTES:

1. ALL MATERIAL TO MEET FILTREXX® SPECIFICATIONS.
2. SILTSOXX™ COMPOST/JSOIL/ROCK/SEED FILL TO MEET APPLICATION REQUIREMENTS.
3. SILTSOXX™ DEPICTED IS FOR MINIMUM SLOPES. GREATER SLOPES MAY REQUIRE LARGER SOCKS PER THE ENGINEER.
4. COMPOST MATERIAL TO BE DISPERSED ON SITE, AS DETERMINED BY ENGINEER.

E-2 / 28 / ES-064

COMPOST FILTER SOCK DETAIL

NO SCALE



NOTE: THESE INSTRUCTIONS ARE GENERAL INSTALLATION GUIDELINES. CONTRACTOR SHOULD CONFIRM SPECIFIC INSTRUCTIONS AND INSTALLATION RECOMMENDATIONS WITH EACH SPECIFIC LINING MANUFACTURER.

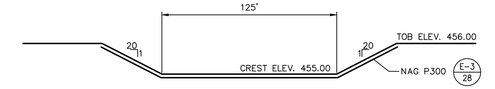
1. PREPARE SOIL BEFORE INSTALLING BLANKETS INCLUDING APPLICATION OF LIME, FERTILIZER, AND SEED.
2. BEGIN AT THE TOP OF THE CHANNEL BY ANCHORING THE BLANKET IN A 6" DEEP x 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
3. ROLL CENTER BLANKET IN DIRECTION OF WATER FLOW ON BOTTOM OF CHANNEL.
4. PLACE BLANKETS END OVER END (SHINGLE STYLE) WITH A 6" OVERLAP. USE A DOUBLE ROW OF STAGGERED STAPLES 4" APART TO SECURE BLANKETS.
5. FULL LENGTH EDGE OF BLANKETS AT TOP OF SIDE SLOPES MUST BE ANCHORED IN 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.
6. BLANKETS ON SIDE SLOPES MUST BE OVERLAPPED 4" OVER THE CENTER BLANKET AND STAPLED.
7. THE TERMINAL END OF THE BLANKETS MUST BE ANCHORED IN A 6" DEEP X 6" WIDE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING.

E-3 / 28 / ES-007

TYP. SWALE LINING INSTALLATION

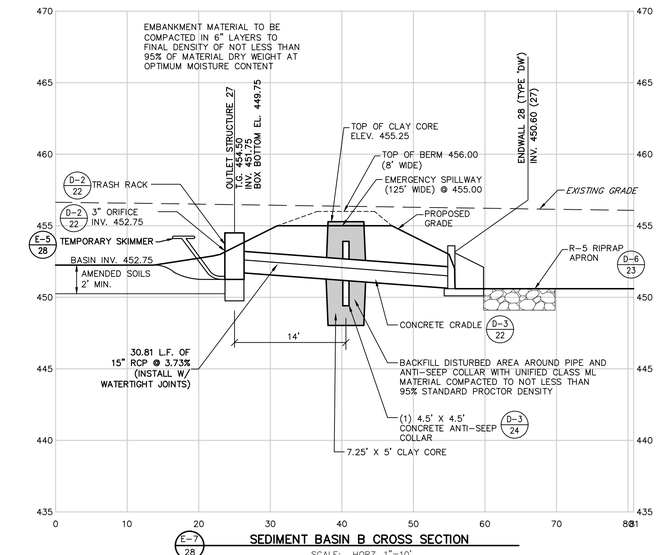
NO SCALE

NOTE: ALL CONSTRUCTION TRAFFIC SHALL BE PROHIBITED FROM THE INFILTRATION AREAS, INCLUDING THE SEDIMENT BASINS.



BASIN B SPILLWAY DETAIL

NO SCALE

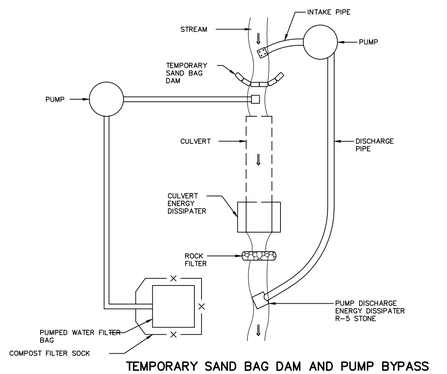


SEDIMENT BASIN B CROSS SECTION

SCALE: HORZ. 1"=10'
VERT. 1"=5'

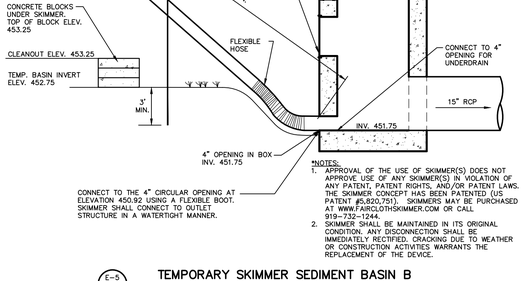
NOTES:

1. PUMP INTAKE SHALL BE MAINTAINED A SUFFICIENT DISTANCE FROM BOTTOM TO PREVENT SEDIMENT FROM ENTERING THE SYSTEM.
2. SANDBAGS, JERSEY BARRIERS OR OTHER NON EROSIVE MATERIAL, NO EARTH FILL. DO NOT EXCAVATE A SUMP FOR THE PUMP INTAKE.



TEMPORARY SAND BAG DAM AND PUMP BYPASS AROUND IN-CHANNEL WORK AREAS

NO SCALE



*NOTES:

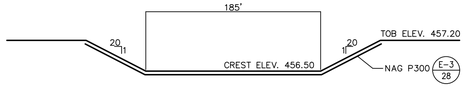
1. APPROVAL OF THE USE OF SKIMMER(S) DOES NOT APPROVE USE OF ANY SKIMMER(S) IN VIOLATION OF ANY PATENT, PATENT RIGHTS, AND/OR PATENT LAWS. THE SKIMMER CONCEPT HAS BEEN PATENTED (US PATENT #5,820,751). SKIMMERS MAY BE PURCHASED AT WWW.FAIRCLOTHSKIMMER.COM OR CALL 919-732-1244.
2. SKIMMER SHALL BE MAINTAINED IN ITS ORIGINAL CONDITION. ANY DISCONNECTION SHALL BE IMMEDIATELY RECTIFIED. CRACKING DUE TO WEATHER OR CONSTRUCTION ACTIVITIES WARRANTS THE REPLACEMENT OF THE DEVICE.

E-5 / 28 / ES-065

TEMPORARY SKIMMER SEDIMENT BASIN B

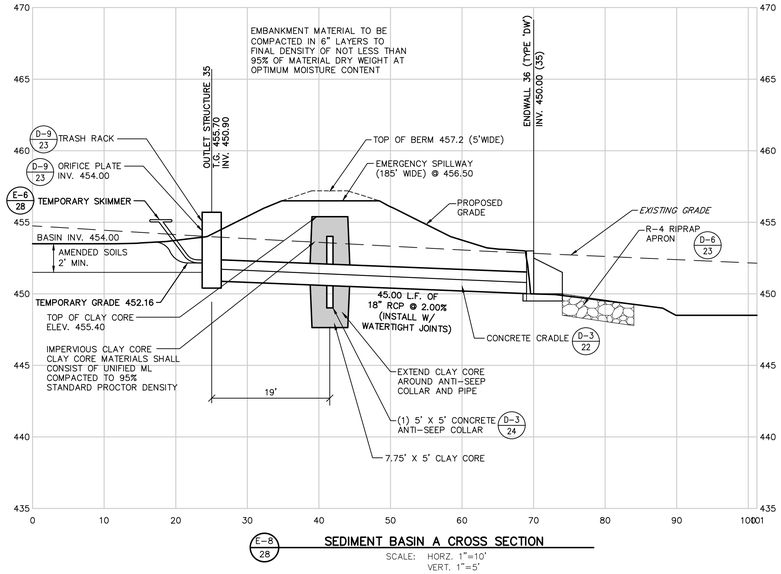
NO SCALE

NOTE: ALL CONSTRUCTION TRAFFIC SHALL BE PROHIBITED FROM THE INFILTRATION AREAS, INCLUDING THE SEDIMENT BASINS.



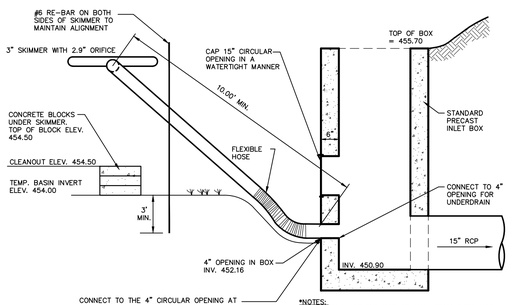
BASIN A SPILLWAY DETAIL

NO SCALE



SEDIMENT BASIN A CROSS SECTION

SCALE: HORZ. 1"=10'
VERT. 1"=5'



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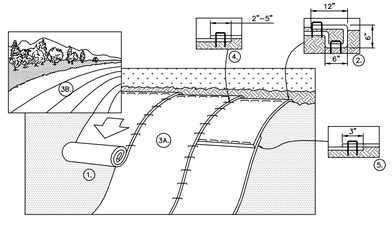
2. SKIMMER SHALL BE MAINTAINED IN ITS ORIGINAL CONDITION. ANY DISCONNECTION SHALL BE IMMEDIATELY RECTIFIED. CRACKING DUE TO WEATHER OR CONSTRUCTION ACTIVITIES WARRANTS THE REPLACEMENT OF THE DEVICE.

E-6 / 28 / ES-065

TEMPORARY SKIMMER SEDIMENT BASIN A

NO SCALE

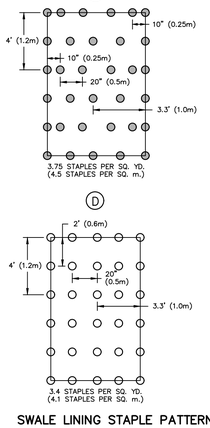


1. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
   NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE RECP IN A 6" DEEP X 6" WIDE TRENCH WITH APPROXIMATELY 12" OF RECP EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE RECP WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" PORTION OF RECP BACK OVER SEED AND COMPACTED SOIL. SECURE RECP OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE RECP.
3. ROLL THE RECP (A) DOWN OR (B) HORIZONTALLY ACROSS THE SLOPE. RECP WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECP MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE. WHEN USING THE DOT SYSTEM, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
4. THE EDGES OF PARALLEL RECP MUST BE STAPLED WITH APPROXIMATELY 2" - 5" OVERLAP DEPENDING ON RECP TYPE.
5. CONSECUTIVE RECP SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART ACROSS ENTIRE RECP WIDTH.
   NOTE: *IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY SECURE THE RECP.

E-9 / 28 / ES-066

TYPICAL SLOPE LINING INSTALLATION

NO SCALE



SWALE LINING STAPLE PATTERN

NO SCALE

E-10 / 28 / ES-067

PLANS SUBJECT TO APPROVAL - NOT INTENDED FOR BID OR CONSTRUCTION PURPOSES

DM/A
DAVID MILLER/ASSOCIATES, INC.
LANDSCAPE ARCHITECTURE • CIVIL ENGINEERING • PLANNING • SURVEYING • GEOLOGIC SERVICES
1076 Centerville Road • Lancaster, PA 17601 • (717) 898-3402 • www.dmai.com

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REVISIONS
1 DMC 7/02/21 PER LCCD JEROM LETTER DATED 6/29/21
2 TCV 11/01/21 PER LCCD JEROM LETTER DATED 10/25/21
3 TCV 11/16/21 PER BECKER ENG. REVIEW LETTER DATED 11/02/21
4 TCV 2/14/23 PER BECKER ENG. REVIEW LETTER DATED 1/27/23
5 TCV 4/20/23 PER LCCD JEROM LETTER DATED 4/17/23
6 TCV 3/20/24 PER BECKER ENG. REVIEW LETTER DATED 3/12/24
FOR CONNECTION TO SOUTH MOODY CREEK ROAD

SEAL

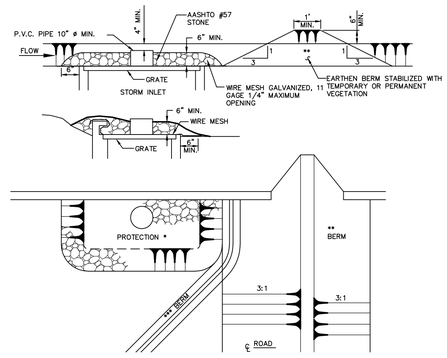
CLIENT / OWNER / APPLICANT
EAST COCALICO ASSOCIATES
1377-C SPENCER AVENUE
LANCASTER, PA 17603
(717) 393-0463

EROSION AND SEDIMENT POLLUTION CONTROL DETAILS

VILLAGE AT EAST COCALICO

EAST COCALICO TOWNSHIP, LANCASTER COUNTY, PENNSYLVANIA

PRINCIPAL	PROJECT MANAGER
J. BOYER	T. VAUGHN
DRAWN BY	CHECKED BY
M. WAPLES	J. BOYER
JOB NO.	DRAWING NO.
02-172.2	02-172.27
FILE NO.	
0217227DETEROSION1	
DATE	SCALE
5/14/21	AS SHOWN
SHEET NO.	
28 OF 34	



* STONE PROTECTION IS NOT REQUIRED FOR INLETS TRIBUTARY TO SEDIMENTATION BASINS AND SEDIMENT TRAPS. BERMS ARE REQUIRED FOR ALL INSTALLATIONS.

** EARTHEN BERM TO BE MAINTAINED UNTIL ROADWAY IS STONED. ROAD SUBBASE BERM TO BE MAINTAINED UNTIL ROADWAY IS PAVED.

*** SIX INCH MINIMUM HEIGHT ASPHALT BERM TO BE MAINTAINED UNTIL ROADWAY SURFACE RECEIVES FINAL COAT.

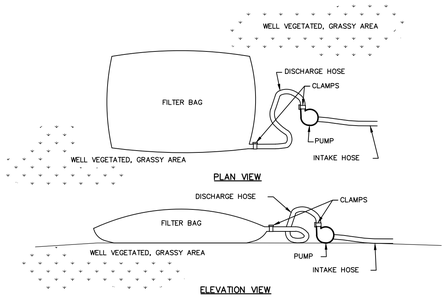
CURBED ROADWAY STORM INLET PROTECTION BERM(S)

E-1 / 29 — ES-041

NO SCALE

MAINTENANCE NOTES:

1. FILTER BAGS SHALL BE MADE FROM NON-WOVEN GEOTEXTILE MATERIAL SEWN WITH HIGH STRENGTH, DOUBLE STITCHED "J" TYPE SEAMS. THEY SHALL BE CAPABLE OF TRAPPING PARTICLES LARGER THAN 150 MICRONS.
2. A SUITABLE MEANS OF ACCESSING THE BAG WITH MACHINERY REQUIRED FOR DISPOSAL PURPOSES MUST BE PROVIDED. FILTER BAGS SHALL BE REPLACED WHEN THEY BECOME HALF FULL. SPARE BAGS SHALL BE KEPT AVAILABLE FOR REPLACEMENT OF THOSE THAT HAVE FAILED OR ARE FILLED.
3. BAGS SHALL BE LOCATED IN WELL-VEGETATED (GRASS) AREA, AND DISCHARGE ONTO STABLE, EROSION RESISTANT AREAS. WHERE THIS IS NOT POSSIBLE, A GEOTEXTILE FLOW PATH SHALL BE PROVIDED. BAGS SHALL NOT BE PLACED ON SLOPES GREATER THAN 5%.
4. THE PUMP DISCHARGE HOSE SHALL BE INSERTED INTO THE BAGS IN THE MANNER SPECIFIED BY THE MANUFACTURER AND SECURELY CLAMPED.
5. THE PUMPING RATE SHALL BE NO GREATER THAN 750 GPM OR HALF THE MAXIMUM SPECIFIED BY THE MANUFACTURER, WHICHEVER IS LESS. PUMP INTAKES SHOULD BE FLOATING AND SCREENED.
6. FILTER BAGS SHALL BE INSPECTED DAILY. IF ANY PROBLEM IS DETECTED, PUMPING SHALL CEASE IMMEDIATELY AND NOT RESUME UNTIL THE PROBLEM IS CORRECTED.



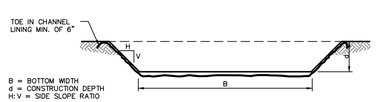
PUMPED WATER FILTER BAG

E-2 / 29 — ES-061

NO SCALE

SWALE NO.	BOTTOM WIDTH (FT.) (B)	SIDE SLOPE (H:V)	SLOPE (%)	CHANNEL LINING (FT.)	CONSTRUCTION DEPTH (FT.) MINIMUM (d)	STAPLE PATTERN
SWALE A	2.5'	10:1, 20:1	2.0%	S75BN	1.0'	D
SWALE B	2.5'	6:1, 6:1	3.0%	S75BN	1.0'	D
SWALE C	2'	20:1, 10:1	2.0%	S75BN	0.75'	D

* NORTH AMERICAN GREEN PRODUCT



TYPICAL TRAPEZOIDAL SWALE CROSS SECTION

E-2 / 29 — SW-037

NO SCALE

EROSION AND SEDIMENT POLLUTION CONTROL NARRATIVE

THIS NARRATIVE IS TO ACCOMPANY THE EROSION AND SEDIMENT POLLUTION CONTROL PLAN FOR THE VILLAGE AT EAST COCALICO, DAVID MILLER/ASSOCIATES, INC. DRAWING NO. 02-172.5, AND SHALL BE CONSIDERED PART OF SAID EROSION AND SEDIMENT POLLUTION CONTROL PLAN. THE PROJECT SITE IS LOCATED ON THE EAST SIDE OF SOUTH MUDDY CREEK ROAD IMMEDIATELY NORTH OF SR 0222 IN EAST COCALICO TOWNSHIP, LANCASTER COUNTY, PENNSYLVANIA.

GENERAL STATEMENT OF THE PROJECT

1. THE PROPOSED IMPROVEMENTS WITHIN THE 27.06 +/- ACRE PROJECT SITE INCLUDE THE CONSTRUCTION OF 5 SINGLE FAMILY DWELLING UNITS AND THREE CONDOMINIUM LOTS CONTAINING 96 CONDOMINIUM UNITS, SUPPORTING ROADWAYS, UTILITIES, AND STORMWATER MANAGEMENT FACILITIES. THE AREA OF EARTH DISTURBANCE IS SHOWN ON THE PLANS AND SHALL TOTAL APPROXIMATELY 25.00 +/- ACRES.
2. THE STORMWATER MANAGEMENT FACILITIES WILL CONSIST OF TWO BIORETENTION/ WETLAND BASINS THAT WILL PROVIDE INFILTRATION AND DETENTION. AN INLET AND PIPING SYSTEM HAS BEEN DESIGNED TO CONVEY ALL FLOWS FROM THE SITE TO THESE FACILITIES. THE STORMWATER CALCULATIONS WERE DEVELOPED BASED ON THE PROVISIONS OF THE EAST COCALICO TOWNSHIP, LANCASTER COUNTY STORMWATER MANAGEMENT ORDINANCE.
3. ACCELERATED EROSION AND SEDIMENTATION SHALL BE LIMITED BY THE STABILIZATION OF DISTURBED AREAS AS SOON AS POSSIBLE (SEE STAGING OF EARTHMOVING ACTIVITIES).
4. CONSTRUCTION SHOULD BEGIN IN THE FALL OF 2021.

TOPOGRAPHIC FEATURES OF THE PROJECT

1. THE LOCATION OF THE SITE, CONTOURS, PROPERTY LINES, ACREAGE AND ALL OTHER PHYSICAL FEATURES ARE SHOWN ON THE PLAN.

SOILS INFORMATION

1. THE TYPES OF SOILS WITHIN THE PROJECT ARE AS FOLLOWS:

   A) BuB - BUCKS SILT LOAM, 3-8% SLOPES
   B) RaB - READINGTON SILT LOAM, 3-10% SLOPES

WATERSHED INFORMATION

1. NEAREST SURFACE WATER TO RECEIVE RUNOFF: LITTLE MUDDY CREEK UNT
2. CHAPTER 93 CLASSIFICATION: WWF
3. DISTANCE FROM PROJECT SITE: ONSITE

PROPOSED ALTERATIONS TO THE AREA

1. ALL PROPOSED ALTERATIONS ARE SHOWN ON THE PLAN. PROPOSED GRADES HAVE BEEN SELECTED KEEPING IN MIND THE EXISTING DRAINAGE PATTERNS.

NPDES PERMIT REQUIREMENTS

1. THE PERMITTEE AND THE CO-PERMITTEE MUST ENSURE THAT VISUAL SITE INSPECTIONS ARE CONDUCTED BI-WEEKLY, AND AFTER EACH PRECIPITATION EVENT BY QUALIFIED PERSONNEL, TRAINED AND EXPERIENCE IN EROSION AND SEDIMENT CONTROL, TO ASCERTAIN THAT THE BMPS ARE OPERATIONAL AND EFFECTIVE IN PREVENTING POLLUTION TO THE WATERS OF THE COMMONWEALTH. A WRITTEN REPORT OF EACH INSPECTION SHALL BE KEPT AND INCLUDE:

   A) A SUMMARY OF SITE CONDITIONS, BMPS AND COMPLIANCE; AND

   B) THE DATE, TIME, AND THE NAME OF THE PERSON CONDUCTING THE INSPECTION.

2. WHERE BMPS ARE FOUND TO BE INOPERATIVE OR INEFFECTIVE DURING AN INSPECTION OR AT ANY OTHER TIME, THE PERMITTEE AND CO-PERMITTEE SHALL IMMEDIATELY CONTACT THE REVIEWING ENTITY, BY PHONE OR PERSONAL CONTACT, FOLLOWED BY THE SUBMISSION OF A WRITTEN REPORT WITHIN FIVE DAYS OF INITIAL CONTACT. NON-COMPLIANCE REPORTS SHALL INCLUDE THE FOLLOWING INFORMATION:

   A) ANY CONDITION ON THE PROJECT SITE WHICH MAY ENDANGER PUBLIC HEALTH, SAFETY, OR THE ENVIRONMENT OR INVOLVE INCIDENTS WHICH CAUSE OR THREATEN POLLUTION;

   B) THE PERIOD OF NON-COMPLIANCE, INCLUDING EXACT DATES AND TIMES AND/OR ANTICIPATED TIME WHEN THE ACTIVITY WILL RETURN TO COMPLIANCE;

   C) STEPS BEING TAKEN TO REDUCE, ELIMINATE, AND PREVENT RECURRENCE OF THE NON-COMPLIANCE; AND

   D) THE DATE OR SCHEDULE OF DATES AND IDENTIFYING REMEDIES FOR CORRECTING NON-COMPLIANCE.

3. THE DEPARTMENT OF ENVIRONMENTAL PROTECTION AND THE LOCAL CONSERVATION DISTRICT, WHEN ACTING AS THE REVIEWING ENTITY, RESERVE THE RIGHT TO REQUIRE ADDITIONAL MONITORING WHERE A DANGER OF WATER POLLUTION IS PRESENT OR WATER POLLUTION IS SUSPECTED TO BE OCCURRING FROM A CONSTRUCTION ACTIVITY SUBJECT TO THIS GENERAL PERMIT. THE PERMITTEE OR CO-PERMITTEE SHALL COMMENCE SUCH MONITORING UPON NOTIFICATION FROM THE DEPARTMENT OR THE LOCAL COUNTY CONSERVATION DISTRICT.
4. THE PERMITTEE AND CO-PERMITTEE SHALL RETAIN RECORDS OF ALL MONITORING INFORMATION INCLUDING COPIES OF ALL MONITORING AND INSPECTION REPORTS REQUIRED BY THIS PERMIT AND RECORDS OF DATA USED TO COMPLETE THE NOTICE OF INTENT FOR THIS PERMIT, FOR A PERIOD OF THREE YEARS FROM THE DATE OF THE TERMINATION OF COVERAGE UNDER THIS PERMIT.
5. MONITORING RESULTS SHALL BE SUBMITTED TO THE REVIEWING ENTITY UPON REQUEST.
6. ALL DISCHARGE AUTHORIZED BY THIS NPDES PERMIT SHALL BE CONSISTENT WITH THE TERMS AND CONDITIONS OF THE PERMIT.
7. THE PERMITTEE AND CO-PERMITTEE SHALL TAKE ALL REASONABLE STEPS TO MINIMIZE OR PREVENT ANY DISCHARGE IN VIOLATION OF THIS PERMIT THAT HAS REASONABLE LIKELIHOOD OF ADVERSELY AFFECTING HUMAN HEALTH OR THE ENVIRONMENT.
8. UPON REDUCTION, LOSS, OR FAILURE OF A BMP, THE PERMITTEE AND CO-PERMITTEE SHALL TAKE IMMEDIATE ACTION TO RESTORE THE BMP OR PROVIDE AN ALTERNATIVE METHOD OF TREATMENT.
9. THE PERMITTEE AND CO-PERMITTEE MUST COMPLY WITH ALL TERMS AND CONDITIONS OF THIS GENERAL PERMIT. ANY PERMIT NON-COMPLIANCE IS GROUNDS FOR ENFORCEMENT ACTION. THE PERMITTEE AND CO-PERMITTEE MAY BE SUBJECT TO CRIMINAL AND/OR CIVIL PENALTIES FOR VIOLATIONS OF THE TERMS AND CONDITIONS OF THIS GENERAL PERMIT.
10. THE OWNER OR OPERATOR OF A FACILITY WITH STORM WATER DISCHARGE COVERED BY THIS PERMIT SHALL MAKE PLANS AVAILABLE TO THE PUBLIC UPON REQUEST. EROSION AND SEDIMENT CONTROL PLANS MUST BE MADE AVAILABLE AT THE SITE OF THE CONSTRUCTION ACTIVITY AT ALL TIMES.
11. THE STAGING OF EARTH DISTURBANCE ACTIVITIES AND MAINTENANCE REQUIREMENTS CONTAINED IN THE E&S PLAN MUST BE FOLLOWED.
12. ALL BUILDING MATERIAL AND WASTES MUST BE REMOVED FROM THE SITE AND RECYCLED OR DISPOSED IN ACCORDANCE WITH SOLID WASTE MANAGEMENT REGULATIONS. NO MATERIALS MAY BE BURIED, DUMPED, OR DISCHARGED AT THE SITE.
13. THE PERMITTEE OR CO-PERMITTEE SHALL CONTACT THE REVIEWING ENTITY AT LEAST SEVEN DAYS PRIOR TO THE BEGINNING OF CONSTRUCTION TO DETERMINE IF A PRE-CONSTRUCTION CONFERENCE IS REQUIRED.
14. AN EROSION AND SEDIMENT POLLUTION CONTROL PLAN SHALL BE DEVELOPED AND IMPLEMENTED FOR ALL OFFSITE SPOIL AND BORROW AREAS.
15. PRIOR TO EARTH DISTURBANCE COMMENCEMENT FOR ADDITIONAL PHASES OF THE PROJECT, THE PERMITTEE OR CO-PERMITTEE SHALL SUBMIT AN EROSION AND SEDIMENT POLLUTION CONTROL PLAN FOR EACH PHASE FOR REVIEW AND AUTHORIZATION.
16. DOCUMENTS REQUIRED, SUBMITTED, OR MAINTAINED UNDER THIS PERMIT SHALL BE SIGNED IN ACCORDANCE WITH NOTICES OF INTENT, TRANSFEREE/CO-PERMITTEE FORMS, AND NOTICES OF TERMINATION.

STAGING OF EARTHMOVING ACTIVITIES

ALL CRITICAL STAGES ARE INDICATED WITH AN ASTERISK "#".

#THE CONTRACTOR SHALL INVITE THE OWNER, MUNICIPAL OFFICIALS, THE SEDIMENT CONTROL PLAN PREPARER, AND LANCASTER COUNTY CONSERVATION DISTRICT (717-299-5361) AT LEAST SEVEN (7) DAYS PRIOR TO THE START OF EARTHMOVING ACTIVITY TO SET AN ON-SITE PRE-CONSTRUCTION MEETING.

THE CONTRACTOR SHALL CALL THE PA ONE CALL SYSTEM INCORPORATED AT 1-800-242-1776 TO LOCATE BURIED UTILITIES AT LEAST THREE (3) DAYS PRIOR TO THE START OF EARTH MOVING.

ALL EARTH DISTURBANCE ACTIVITIES SHALL PROCEED IN ACCORDANCE WITH THE FOLLOWING SEQUENCE. EACH STAGE SHALL BE COMPLETED AND STABILIZED BEFORE ANY FOLLOWING STAGE IS INITIATED. CLEARING AND GRUBBING SHALL BE LIMITED TO ONLY THOSE AREAS DESCRIBED IN EACH STAGE.

THE CONTRACTOR IS RESPONSIBLE FOR THE CONSTRUCTION AND IMPLEMENTATION OF THIS EROSION AND SEDIMENT CONTROL PLAN.

IN THE EVENT THAT EARTH DISTURBANCE IS EXPECTED TO OCCUR OUTSIDE OF THE AREA SHOWN ON THIS PLAN, THE RESPONSIBLE PARTY SHALL CONTACT THE LANCASTER COUNTY CONSERVATION DISTRICT PRIOR TO BEGINNING ANY EARTHMOVING ACTIVITY.

AT THE END OF EACH WORKING DAY, ANY SEDIMENT TRACKED OR CONVEYED ONTO A PUBLIC ROADWAY WILL BE REMOVED AND REDEPOSITED ONTO THE CONSTRUCTION SITE. SEDIMENT REMOVAL MAY BE COMPLETED THROUGH THE USE OF MECHANICAL OR HAND TOOLS BUT NEVER WASHED OFF THE ROAD BY USE OF WATER.

ALL CONSTRUCTION WASTE MATERIALS SHALL BE DISPOSED IN AN APPROPRIATE MANNER. ALL BUILDING MATERIALS AND WASTE SHALL BE REMOVED FROM SITE AND RECYCLED OR DISPOSED IN ACCORDANCE WITH DEP SOLID WASTE MANAGEMENT ORDINANCES AND LOCAL MUNICIPAL REGULATIONS.

1. FIELD-MARK ALL ASSOCIATED WETLAND AREAS IN PROXIMITY TO THE SITE LIMIT OF DISTURBANCE IN ORDER TO PREVENT ANY POTENTIAL ACCIDENTAL ENCROACHMENT TO WETLANDS.
2. #INSTALL COMPOST FILTER SOCK BELOW AREAS TO BE DISTURBED AS SHOWN ON THE PLAN WITH THE EXCEPTION OF FILTER SOCKS SURROUNDING RAIN GARDEN BMPS. COMPOST FILTER SOCK SHALL BE INSPECTED REGULARLY AND AFTER STORM EVENTS TO ENSURE THAT IT IS FUNCTIONING AS DESIGNED.
3. #INSTALL A STABILIZED CONSTRUCTION ENTRANCE AT THE PROPOSED STREET ENTRANCE OFF OF SOUTH MUDDY CREEK ROAD AS SHOWN ON PLAN. ALL CONSTRUCTION VEHICLES SHALL ENTER AND LEAVE THE SITE AT THIS POINT.
4. WITH THE ABOVE E&S FACILITIES IN PLACE, CONSTRUCT THE HALEY STREET STONE BASE FROM SOUTH MUDDY CREEK ROAD UP TO THE FIRST WATERCOURSE WITHOUT ENCROACHING ON THE CHANNEL.
5. THE CULVERT CONSTRUCTION ON HALEY STREET CONTAINING WATERCOURSE 1 SHALL OCCUR DURING PERIODS OF LOW FLOW. THE FLOW SHALL BE BYPASSED AROUND THE WORK AREA USING SANDBAG DAMS AND BYPASS PUMPS. ANY SEDIMENT LADEN WATER SHALL BE FILTERED THROUGH A PUMPED WATER FILTER BAG PRIOR TO DISCHARGING TO THE STREAM. WITH THE CHANNEL BYPASS IN PLACE AND FUNCTIONING, THE PROPOSED STREAM CROSSING MAY BE CONSTRUCTED AS SHOWN ON THE PLANS.
6. THE CONSTRUCTION OF THE CONVEYANCE PIPE CONTAINING WATERCOURSE 4 SHALL OCCUR DURING PERIODS OF LOW FLOW. THE FLOW SHALL BE BYPASSED AROUND THE WORK AREA USING SANDBAG DAMS AND BYPASS PUMPS. ANY SEDIMENT LADEN WATER SHALL BE FILTERED THROUGH A PUMPED WATER FILTER BAG PRIOR TO DISCHARGING TO THE STREAM. WITH THE CHANNEL BYPASS IN PLACE AND FUNCTIONING, THE PROPOSED STREAM CROSSING MAY BE CONSTRUCTED AS SHOWN ON THE PLANS.
7. #WITH THE ABOVE CROSSINGS IN PLACE AND FUNCTIONING, CONSTRUCTION OF THE PROPOSED SEDIMENT BASINS A AND B MAY COMMENCE. UNDERDRAIN SHALL NOT BE INSTALLED AT THIS TIME.
8. THE PIPE SYSTEM BETWEEN HEADWALL 25 AND ENDWALL 26 SHALL OCCUR CONCURRENTLY WITH THE CONSTRUCTION OF SEDIMENT BASIN A.
9. #THE CONSTRUCTED WETLANDS SHALL NOT BE CONSTRUCTED UNTIL THE UPSTREAM AREAS CONTRIBUTING FLOW TO THE WETLANDS HAS BEEN COMPLETELY STABILIZED.
10. WITH THE ABOVE E&S CONTROLS IN PLACE AND FUNCTIONING, BULK SITE GRADING INCLUDING STREET AND UTILITY CONSTRUCTION MAY OCCUR.
11. CONSTRUCTION OF THE PROPOSED DWELLINGS AND CONDOMINIUM BUILDINGS MAY OCCUR CONCURRENTLY WITH THE BULK SITE GRADING.
12. #ONCE ALL AREAS CONTRIBUTING FLOWS TO THE RAIN GARDENS HAVE BEEN STABILIZED, THE RAIN GARDENS CAN BE GRADED TO FINAL ELEVATIONS AND STABILIZED WITH THE PERMANENT ROHRER'S SEED MIX. ALL BUILT UP SEDIMENTS WITHIN THE BMP AREAS SHALL BE REMOVED, CORRESPONDING FILTER SOCKS INSTALLED, RAIN GARDEN BOTTOMS SCARIFIED AND UNDERDRAINS INSTALLED.
13. #ONCE ALL AREAS ON THE SITE HAVE BEEN STABILIZED, THE TEMPORARY SEDIMENT BASINS SHALL BE CONVERTED TO THEIR PERMANENT CONDITIONS. THE CONVERSION SHALL INCLUDE THE REMOVAL OF ALL BUILT UP SEDIMENTS, GRADING TO FINAL GRADES WITHIN THE BASIN AREAS, INSTALLATION OF THE UNDERDRAIN SYSTEMS, SEEDING IN ACCORDANCE WITH THE PERMANENT SEED MIXTURE AS SPECIFIED AND CONVERSION OF THE FINAL OUTLET STRUCTURE.
14. ALL AREAS TO BE PAVED SHALL BE STABILIZED WITH STONE IMMEDIATELY UPON ATTAINING FINAL GRADE.
15. ALL AREAS TO BE GRASS SHALL BE SEEDED AND MULCHED UPON REACHING FINAL GRADE. SPECIALIZED MEASURE SHALL BE USED TO PROMPTLY ESTABLISH A FULL VEGETATED CONDITION, SUCH AS TOP DRESSING AND SEEDING THROUGH THE TOP OF THE MATTING AND UTILIZING A SECONDARY MATTING OR MULCH OVER THE PERMANENT MATTING.
16. #UPON STABILIZATION OF ALL AREAS, ALL TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED.
17. STABILIZATION SHALL BE DEFINED AS A MINIMUM OF 70% UNIFORM PERENNIAL VEGETATIVE COVER AND SHALL BE VERIFIED BY INSPECTION BY THE LANCASTER COUNTY CONSERVATION DISTRICT.

TEMPORARY CONTROL MEASURES AND FACILITIES

1. SILT FENCE/COMPOST FILTER SOCK

   A) COMPOST FILTER SOCK OR SILT FENCE SHALL BE LOCATED AS SHOWN ON THE PLAN TO PREVENT SEDIMENT FROM FLOWING ONTO ADJACENT PROPERTIES.

2. TEMPORARY SEEDING

   A) TEMPORARY SEEDING SHALL BE APPLIED PER THE FOLLOWING SCHEDULE:

SEED TYPE	% BY WT	SEEDING RATE
ANNUAL RYEGRASS	100%	1 LB. /100 SF 20-40 LB. /AC

3. DURING NON-GERMINATING PERIODS TEMPORARY STABILIZATION SHALL BE ACHIEVED THROUGH MULCHING. SEE MULCHING SPECIFICATIONS BELOW.

PERMANENT CONTROL MEASURES

1. PERMANENT GRASS OR LEGUME COVER

   ALL DISTURBED AREAS THAT ARE NOT TO BE PAVED SHALL BE COVERED WITH GRASS OR A LEGUME IN ORDER TO MINIMIZE EROSION.

   PERMANENT COVER SHALL BE APPLIED PER THE FOLLOWING SEEDING SCHEDULE:

SEED TYPE	% BY WT.	SEEDING RATE	SEEDING DATES
KY BLUEGRASS	40-60%	4 LB/1000 SF	AUG 15-OCT 15
CREEP RED FESC PERENNIAL RYE (LAWN MIX)	30-40% 10-20%		

2. MULCH

   A) STRAW MULCH SHALL BE APPLIED AT A RATE OF 3 TONS PER ACRE TO SEEDING AREAS TO HELP ESTABLISH A PERMANENT GRASS COVER AND TO PREVENT EROSION.

   B) STRAW MULCH SHALL BE ANCHORED IMMEDIATELY AFTER APPLICATION BY ONE OF THE FOLLOWING METHODS:

   (1) A TRACTOR-DRAWN IMPLEMENT DESIGNED TO CRIMP THE STRAW INTO THE SOIL (A TRACKED VEHICLE SHOULD NOT BE USED FOR THIS PURPOSE)

   (2)SYNTHETIC BINDERS APPLIED PER MANUFACTURER RECOMMENDATIONS

   (3)LIGHTWEIGHT PLASTIC, FIBER, OR PAPER NETTING STAPLED OVER MULCH ACCORDING TO MANUFACTURER RECOMMENDATIONS

   (4)OTHER MEANS APPROVED BY THE LANCASTER COUNTY CONSERVATION DISTRICT

   C) FOR SLOPES GREATER THAN 3:1 ROLLED LINING MATERIALS SHALL BE USED INSTEAD OF STRAW MULCH

3. LIME AND FERTILIZER

   A) LIME AND FERTILIZER SHALL BE APPLIED AS REQUIRED TO OBTAIN A UNIFORM EROSION RESISTANT PERENNIAL VEGETATIVE COVERAGE AT A DENSITY OF 70% ACROSS ALL DISTURBED AREAS.

   B) ONE TON OF AGRICULTURAL LIMESTONE PER ACRE WITH A 30-30-30 FERTILIZER MIX PER ACRE IS RECOMMENDED.

4. SOD

   A) IN AREAS WHERE STABILIZATION IS FOUND TO BE DIFFICULT, THE DEVELOPER MAY INSTALL SOD. SOD MATERIAL AND INSTALLATION SHALL CONFORM TO SPECIFICATIONS FOR SODDING BY THE AMERICAN SOD PRODUCER ASSOCIATION.

MAINTENANCE

1. ALL EROSION AND SEDIMENT CONTROL FACILITIES SHALL BE INSPECTED WEEKLY AND AFTER EACH STORM EVENT. ALL FACILITIES THAT ARE DAMAGED, CLOGGED, OR CAN NO LONGER FUNCTION AS DESIGNED SHALL BE REPLACED.
2. ANY PERMANENTLY SEEDED AREAS THAT BECOME ERODED SHALL HAVE THE TOPSOIL REPLACED, THE GRASS SEED RESOWN, AND MULCH REAPPLIED OR, AT THE DIRECTION OF THE DEVELOPER, SOD MAY BE INSTALLED.

EQUITABLE OWNER/DEVELOPER/RESPONSIBLE PARTY

EAST COCALICO ASSOCIATES
1377-C SPENCER AVENUE
LANCASTER, PA 17603

PLAN DESIGNER INFORMATION

NAME: DOUG MATTHEWS, PE
PHONE #: 717-898-3402
EDUCATION: BS AGRICULTURAL AND BIOLOGICAL ENGINEERING, PENN STATE UNIVERSITY, 2000
PREVIOUSLY APPROVED EROSION AND SEDIMENT POLLUTION CONTROL PLANS:
GVC, INC.
SOUTHERN VILLAGE
PARKRIDGE

PLANS SUBJECT TO APPROVAL - NOT INTENDED FOR BID OR CONSTRUCTION PURPOSES

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1 DMC 7/12/21 PER LCCD REVIEW LETTER DATED 6/29/21
2 TCV 11/9/21 PER BECKER ENGINEERING REVIEW LETTER DATED 10/26/21
3 TCV 11/30/21 PER BECKER ENGINEERING REVIEW LETTER DATED 11/29/21
4 TCV 2/14/23 PER BECKER ENGINEERING REVIEW LETTER DATED 2/7/23
5 TCV 4/21/23 PER BECKER ENGINEERING REVIEW LETTER DATED 4/17/23
6 TCV 2/20/24 PER LCCD REVIEW LETTER DATED 2/16/24
LETTER DATED 7/28/22 (WHAT TO BE 2023)
FOR CONNECTION TO SOUTH MUDDY CREEK ROAD

SEAL

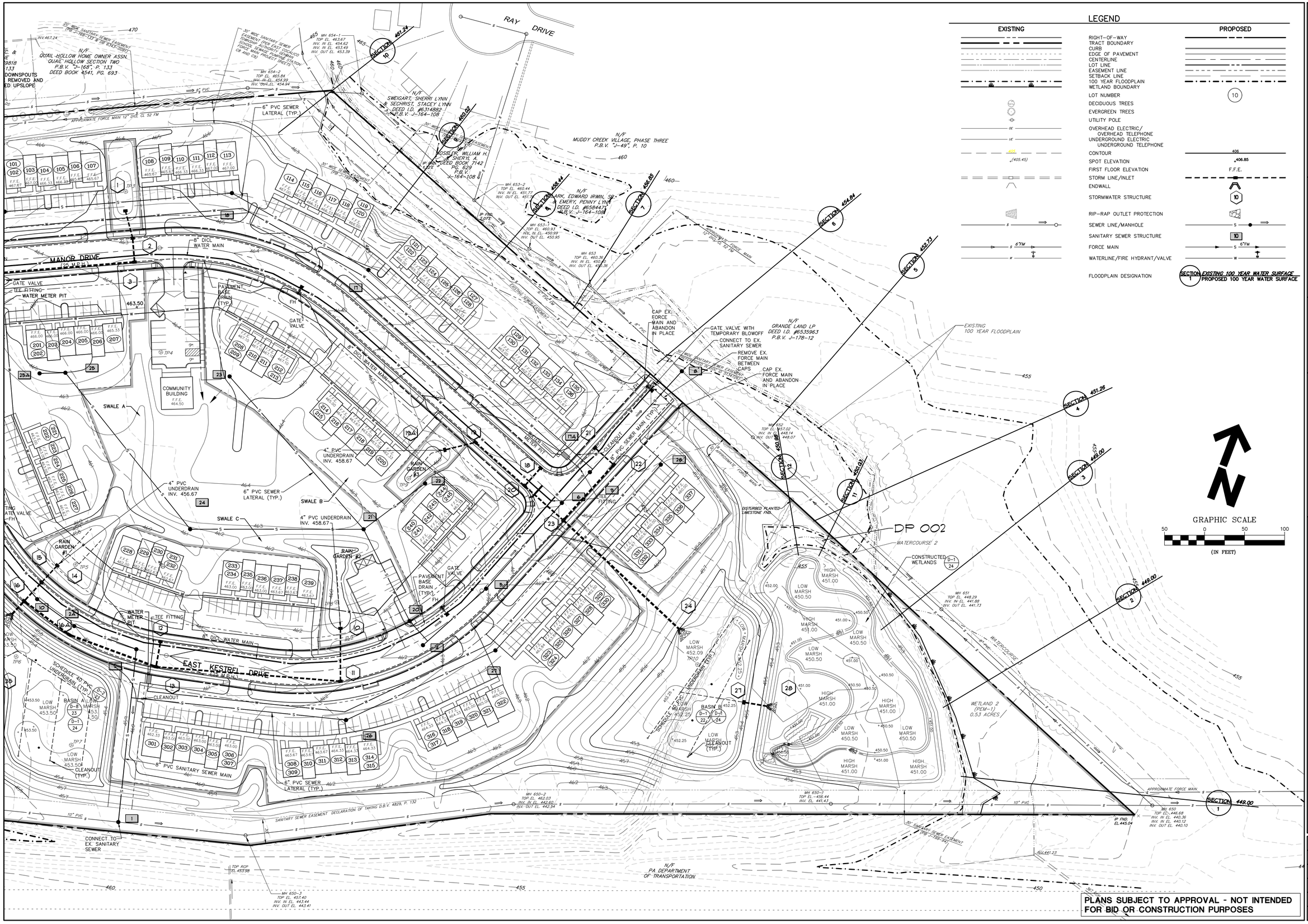
CLIENT / OWNER / APPLICANT
EAST COCALICO ASSOCIATES
1377-C SPENCER AVENUE
LANCASTER, PA 17603
(717) 380-0483

EROSION AND SEDIMENT POLLUTION CONTROL NARRATIVE AND DETAILS

VILLAGE AT EAST COCALICO

EAST COCALICO TOWNSHIP, LANCASTER COUNTY, PENNSYLVANIA

PRINCIPAL	PROJECT MANAGER
J. BOYER	T. VAUGHN
DRAWN BY	CHECKED BY
M. WAPLES	J. BOYER
JOB NO.	DRAWING NO.
02-172.2	02-172.27
FILE NO.	
021722DETEROSION2	
DATE	SCALE
5/14/21	AS SHOWN
SHEET NO.	
29 OF 34	



LEGEND

EXISTING		PROPOSED
	RIGHT-OF-WAY	
	TRACT BOUNDARY	
	CURB	
	EDGE OF PAVEMENT	
	CENTERLINE	
	LOT LINE	
	EASEMENT LINE	
	SETBACK LINE	
	100 YEAR FLOODPLAIN	
	WETLAND BOUNDARY	
	LOT NUMBER	10
	DECIDUOUS TREES	
	EVERGREEN TREES	
	UTILITY POLE	
OE	OVERHEAD ELECTRIC/ OVERHEAD TELEPHONE	
UE	UNDERGROUND ELECTRIC UNDERGROUND TELEPHONE	
460 (465.45)	CONTOUR	460
	SPOT ELEVATION	406.85
	FIRST FLOOR ELEVATION	F.F.E.
	STORM LINE/INLET	
	ENDWALL	
	STORMWATER STRUCTURE	10
	RIP-RAP OUTLET PROTECTION	
S	SEWER LINE/MANHOLE	S
	SANITARY SEWER STRUCTURE	10
S 6"FM	FORCE MAIN	S 6"FM
W	WATERLINE/FIRE HYDRANT/VALVE	W
	FLOODPLAIN DESIGNATION	SECTION 1 EXISTING 100 YEAR WATER SURFACE / PROPOSED 100 YEAR WATER SURFACE

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3 TCV 11/19/21 PER BECKER ENGINEERING REVIEW LETTER DATED 11/17/21
4 TCV 2/14/23 PER BECKER ENG. REVIEW LETTER DATED 12/20/21
PER BECKER ENG. REVIEW LETTER DATED 1/27/22
PER BECKER ENG. REVIEW LETTER DATED 4/27/22
5 TCV 4/21/23 PER LCCD REVIEW LETTER DATED 3/31/23
LETTER DATED 3/29/23 (MEANT TO BE 2023)
6 TCV 3/20/24 PER LCCD REVIEW LETTER DATED 2/29/24
PER CONSTRUCTION TO SOUTH MINOR PLANS

SEAL

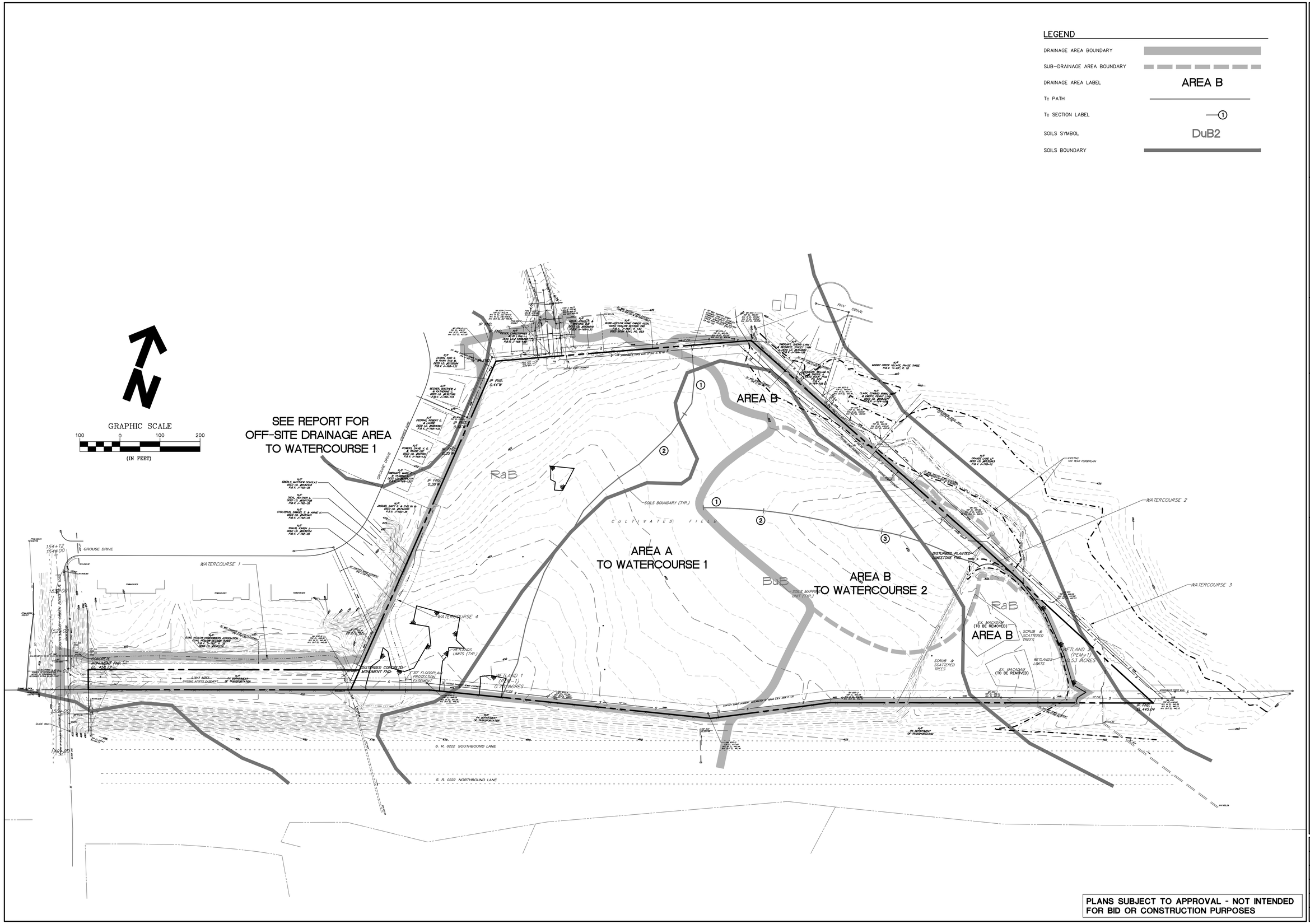
CLIENT / OWNER / APPLICANT
EAST COCALICO ASSOCIATES
1377-C SPENCER AVENUE
LANCASTER, PA 17603
(717) 393-0463

FLOODPLAIN PLAN
WATERCOURSES 2 AND 3

VILLAGE AT EAST COCALICO

EAST COCALICO TOWNSHIP, LANCASTER COUNTY, PENNSYLVANIA

PRINCIPAL J. BOYER	PROJECT MANAGER T. VAUGHN
DRAWN BY M. WAPLES	CHECKED BY J. BOYER
JOB NO. 02-172.2	DRAWING NO. 02-172.27
FILE NO. 0217227FLOODPLAIN	
DATE 5/14/21	SCALE 1"=50'
SHEET NO. 30 OF 34	



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2 TCV 9/23/21 PER BECKER ENG. AND RETEN REVIEW LETTERS
3 TCV 11/19/21 PER BECKER ENGINEERING REVIEW LETTER DATED 10/20/21 AND CDM REVIEW LETTER DATED 9/21/21
4 TCV 2/14/23 PER BECKER ENG. REVIEW LETTER DATED 12/20/21 AND CDM REVIEW LETTER DATED 1/27/22
5 TCV 4/21/23 PER BECKER ENG. REVIEW LETTER DATED 1/27/23, PER RETEN LETTER DATED 4/13/23 AND PER CDM LETTER DATED 1/28/22 (MEANT TO BE 2023)
6 TCV 2/20/24 PER PADOT PLAN COORDINATION WITH PIPE PLANS FOR CONNECTION TO SOUTH MUDDY CREEK ROAD

SEAL

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EAST COCALICO ASSOCIATES
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LANCASTER, PA 17603
(717) 393-0463

PRE DEVELOPMENT DRAINAGE AREA MAP

VILLAGE AT EAST COCALICO

EAST COCALICO TOWNSHIP, LANCASTER COUNTY, PENNSYLVANIA

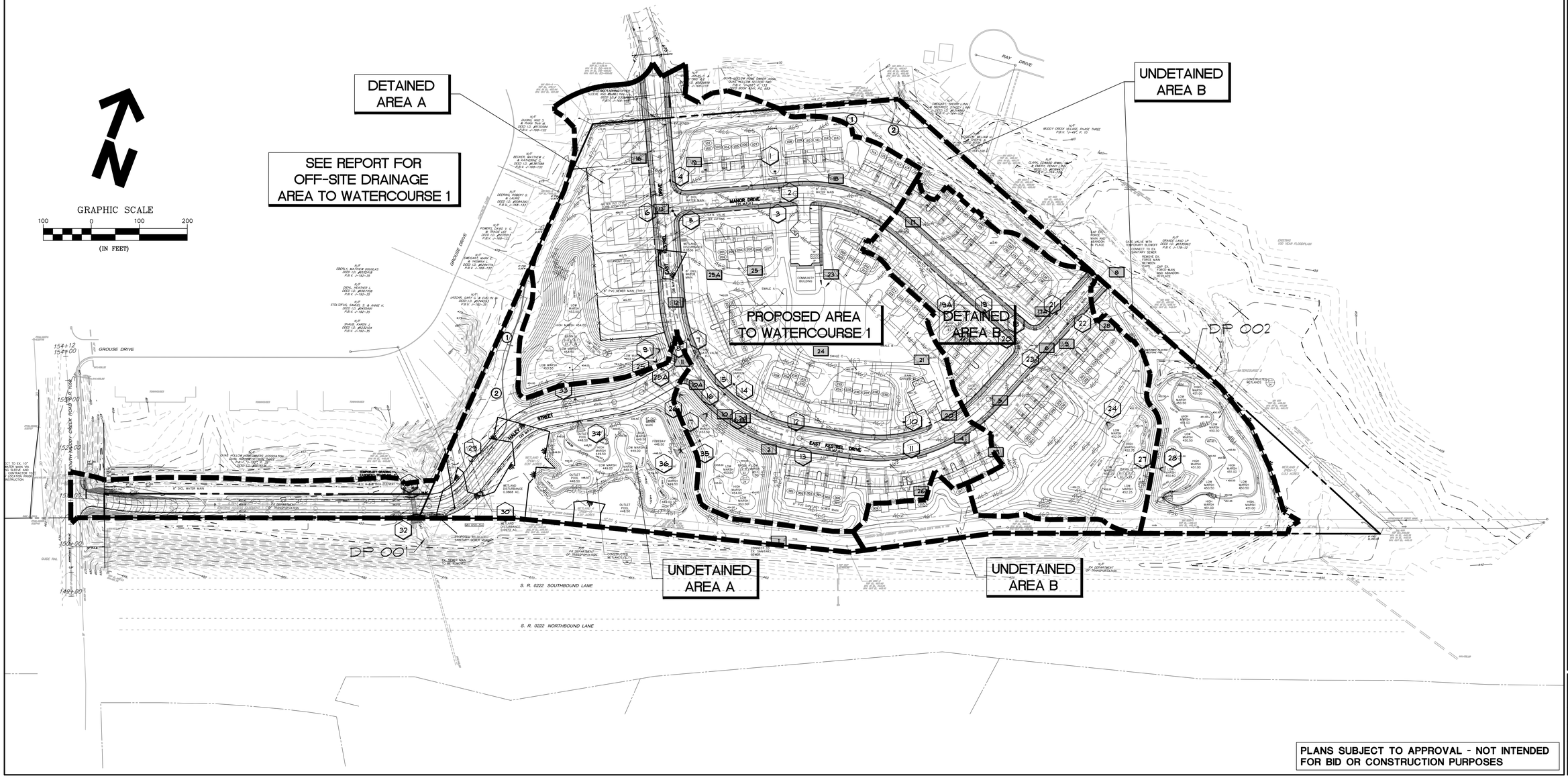
PRINCIPAL J. BOYER	PROJECT MANAGER T. VAUGHN
DRAWN BY M. WAPLES	CHECKED BY J. BOYER
JOB NO. 02-172.2	DRAWING NO. 02-172.27
FILE NO. 0217228PREDEVELOPMENT	
DATE 5/14/21	SCALE 1"=100'
SHEET NO. 31 OF 34	

LEGEND

DRAINAGE AREA BOUNDARY

DRAINAGE AREA LABEL — AREA B

NOTE:
ALL LOT GRADING SHALL BE CONSISTENT WITH THE DRAINAGE PATTERNS AND DIVIDES SHOWN. NO STRUCTURES, FEATURES OR GRADING SHALL BE PERMITTED WHICH IMPACT INTENDED AREAS OF CONCENTRATED FLOW OR THAT RESULTS IN DRAINAGE PATTERNS INCONSISTENT WITH THE APPROVED PLANS.



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4 TCV 2/14/23 PER BECKER ENG. REVIEW LETTER DATED 12/30/21 AND CDM SMITH REVIEW LETTER DATED 1/27/22
5 TCV 4/21/23 PER BECKER ENG. REVIEW LETTER DATED 4/17/23, RETTEW LETTER DATED 4/13/23 AND PER CDM LETTER DATED 3/28/23 (MEANT TO BE 2023)
6 TCV 2/20/24 PER PROOF PLAN CORRESPONDENCE WITH PROOF PLANS FOR CONNECTION TO SOUTH MUDDY CREEK ROAD

SEAL

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LANCASTER, PA 17603
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POST DEVELOPMENT DRAINAGE AREA MAP

VILLAGE AT EAST COCALICO

EAST COCALICO TOWNSHIP, LANCASTER COUNTY, PENNSYLVANIA

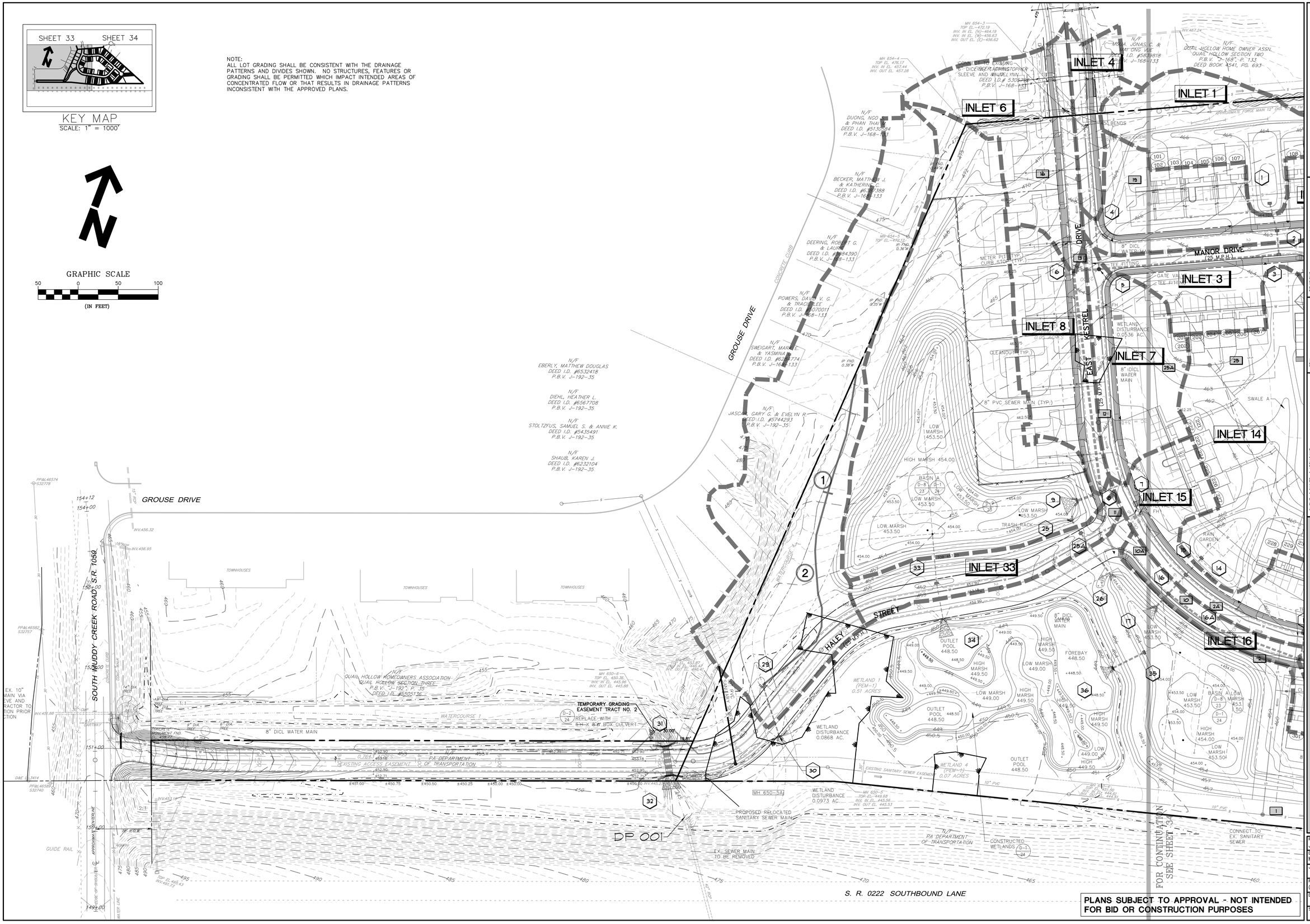
PRINCIPAL: J. BOYER	PROJECT MANAGER: T. VAUGHN
DRAWN BY: M. WAPLES	CHECKED BY: J. BOYER
JOB NO.: 02-172.2	DRAWING NO.: 02-172.27
FILE NO.: 0217228POSTDEVELOPMENT	
DATE: 5/14/21	SCALE: 1"=100'
SHEET NO.: 32 OF 34	

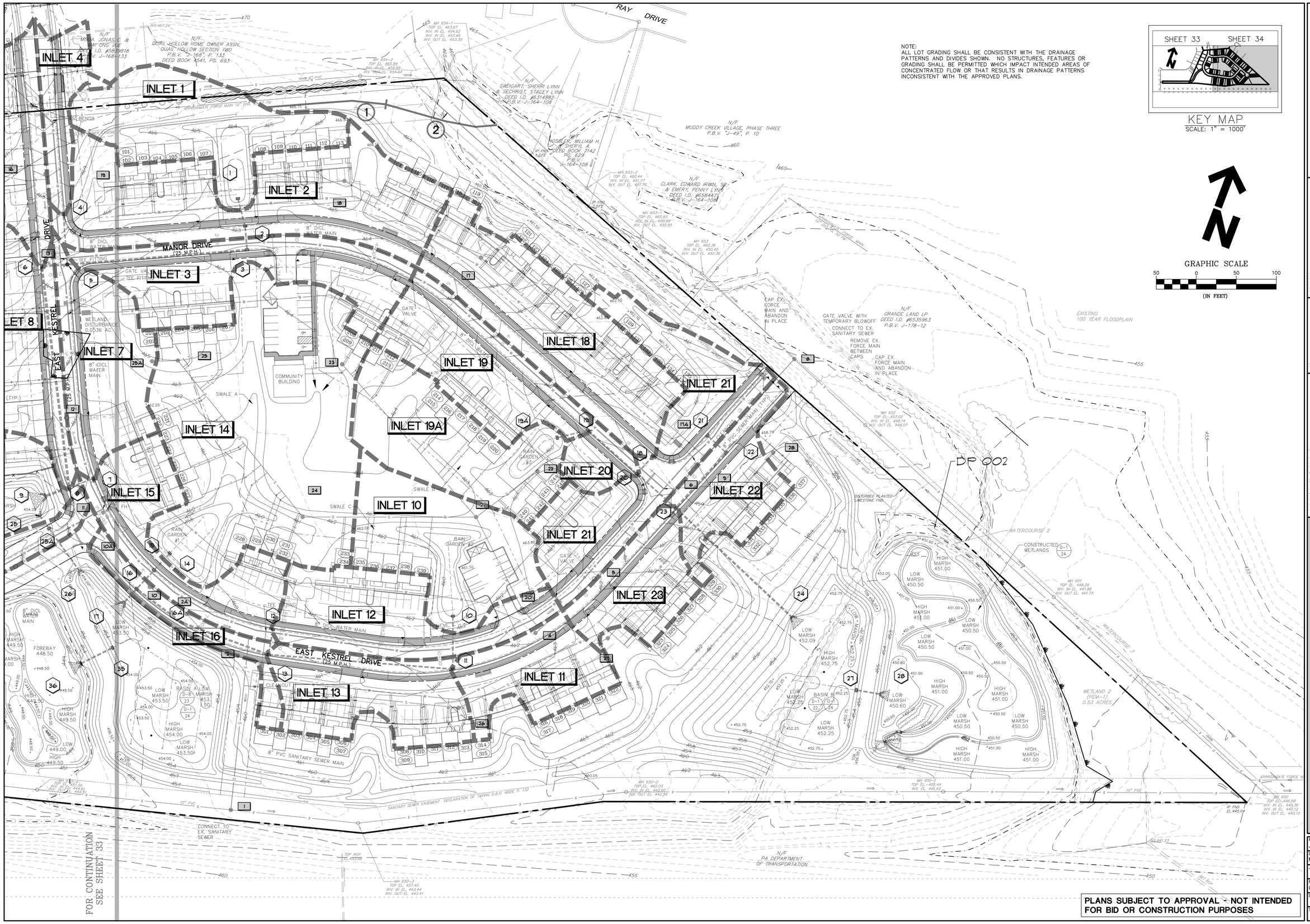
KEY MAP
SCALE: 1" = 1000'

N

GRAPHIC SCALE
50 0 50 100
(IN FEET)

NOTE:
ALL LOT GRADING SHALL BE CONSISTENT WITH THE DRAINAGE PATTERNS AND DIVIDES SHOWN. NO STRUCTURES, FEATURES OR GRADING SHALL BE PERMITTED WHICH IMPACT INTENDED AREAS OF CONCENTRATED FLOW OR THAT RESULTS IN DRAINAGE PATTERNS INCONSISTENT WITH THE APPROVED PLANS.


INLET 4
INLET 1
INLET 6
INLET 3
INLET 8
INLET 7
INLET 14
INLET 15
INLET 33
INLET 16
GROUSE DRIVE
KESTREL DRIVE EAST
MANOR DRIVE (25 M.P.H.)
HALEY STREET
SOUTH MUDDY CREEK ROAD S.R. 1059
S. R. 0222 SOUTHBOUND LANE
TEMPORARY GRADING EASEMENT TRACT NO. 2
REPLACE WITH 6'H. X 8'W. BOX CULVERT
8" DICL WATER MAIN
8" PVC SEWER MAIN (TYP.)
PROPOSED RELOCATED SANITARY SEWER MAIN
EX. SEWER MAIN TO BE REMOVED
WETLAND DISTURBANCE 0.0536 AC.
WETLAND DISTURBANCE 0.0868 AC.
WETLAND DISTURBANCE 0.0973 AC.
WETLAND 1 (PEM-1) 0.51 ACRES
WETLAND 4 (PEM-1) 0.07 ACRES
CONSTRUCTED WETLANDS
RAIN GARDEN #1
SWALE A
TOWNHOUSES
N/F QUAIL HOLLOW HOMEOWNERS ASSOCIATION QUAIL HOLLOW SECTION THREE P.B.V. J-192-35 DEED I.D. #2505136
N/F QUAIL HOLLOW HOME OWNER ASSN. QUAIL HOLLOW SECTION TWO P.B.V. J-168-133 DEED BOOK A541, PG. 693
N/F PA DEPARTMENT OF TRANSPORTATION
0.7643 ACRES EXISTING ACCESS EASEMENT
EXISTING SANITARY SEWER EASEMENT
CONNECT TO EX. SANITARY SEWER
FOR CONTINUATION SEE SHEET 33
DP 001
OUTLET POOL 448.50
HIGH MARSH 449.50
LOW MARSH 449.00
FOREBAY 448.50
HIGH MARSH 453.50
LOW MARSH 453.50
BASIN A
BASIN A LOW MARSH 453.50
HIGH MARSH 454.00
LOW MARSH 454.00
TRASH RACK
METER PIT
CURB STOP (TYP.)
GATE VALVE
TEE FITTING
CLEANOUT (TYP.)
FH
INV.456.32
INV.456.95
INV.459.88
INV.459.75
INV.453.16
INV.467.24
PPBL46574 S38778
PPBL46582 S32757
PPBL46588 S32740
DBE ID 3414
N/F DUONG, NGO T. & PHAN THANH DEED I.D. #5130554 P.B.V. J-168-133
N/F BECKER, MATTHEW J. & KATHERINE C. DEED I.D. #6228388 P.B.V. J-168-133
N/F DEERING, ROBERT G. & LAURA J. DEED I.D. #6239390 P.B.V. J-168-133
N/F POWERS, DAVID V. G. & TRACI LEE DEED I.D. #6207011 P.B.V. J-168-133
N/F SWEIGART, MARK E. & YASMINA DEED I.D. #6228774 P.B.V. J-168-133
N/F JASCAR, GARY G. & EVELYN R. DEED I.D. #5744293 P.B.V. J-192-35
N/F EBERLY, MATTHEW DOUGLAS DEED I.D. #6532418 P.B.V. J-192-35
N/F DIEHL, HEATHER L. DEED I.D. #6567708 P.B.V. J-192-35
N/F STOLTZFUS, SAMUEL S. & ANNIE K. DEED I.D. #5435491 P.B.V. J-192-35
N/F SHAUB, KAREN J. DEED I.D. #6232104 P.B.V. J-192-35
N/F MOSA, JONAS C. & MARTHA W. DEED I.D. #5839818 P.B.V. J-168-133
CONNECT TO EXISTING DICL SEWER AT MH
SLEEVE AND PLUG EXIST. 8" DICL WATER MAIN
DEED I.D.# 5305748 P.B.V. J-168-133
MH 654-1 TOP EL.=472.19 INV. IN EL. (N)=464.19 INV. IN EL. (E)=456.63 INV. OUT EL. (E)=458.62
MH 654-2 TOP EL.=476.17 INV. IN EL. 457.44 INV. OUT EL. 457.28
MH 654-3 TOP EL.=472.10 INV. IN EL. 462.10 INV. OUT EL. 458.10
MH 654-4 TOP EL.=470.00 INV. IN EL. 459.00 INV. OUT EL. 455.00
MH 654-5 TOP EL.=470.10 IP PVC 0.36'W
MH 650-5 TOP EL. 450.36 INV. IN EL. 445.86 INV. OUT EL. 445.88
MH 650-5A
MH 650-6 TOP EL.=448.68 INV. IN EL. 445.68 INV. OUT EL. 445.53
IP END 0.35'W
IP END 0.38'W
IP END 0.39'W
IP PVC 0.39'W
IP PVC 0.36'W
CONCRETE CURB
WATERCOURSE 1
EX. 10" MAIN VIA EVE AND RACTOR TO TION PRIOR CTION
GUIDE RAIL
APPROXIMATE CENTERLINE
TOP EL.465.43
INV.459.75
TOP EL.465.43
INV.459.75
TOP EL.465.43
INV.459.75



NOTE:
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KEY MAP
SCALE: 1" = 1000'

GRAPHIC SCALE
50 0 50 100
(IN FEET)

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2 TCV 9/23/21 PER BECKER ENG. AND RETTEW REVIEW LETTERS
3 TCV 11/19/21 PER BECKER ENGINEERING REVIEW LETTER DATED 10/20/21 AND CDM REVIEW LETTER DATED 9/21/21
4 TCV 2/14/23 PER BECKER ENG. REVIEW LETTER DATED 12/20/21 AND CDM SMITH REVIEW LETTER DATED 1/21/22
5 TCV 4/21/23 PER BECKER ENG. REVIEW LETTER DATED 4/17/23, PER RETTEW LETTER DATED 4/13/23 AND PER CDM LETTER DATED 3/28/22 (MEANT TO BE 2023)
6 TCV 2/20/24 PER PADOT PLAN CORRESPONDENCE WITH TWO PLANS FOR CONNECTION TO SOUTH MUDDY CREEK ROAD

SEAL

CLIENT / OWNER / APPLICANT
EAST COCALICO ASSOCIATES
1377-C SPENCER AVENUE
LANCASTER, PA 17603
(717) 393-0463

POST DEVELOPMENT DRAINAGE AREA MAP

VILLAGE AT EAST COCALICO

EAST COCALICO TOWNSHIP, LANCASTER COUNTY, PENNSYLVANIA

PRINCIPAL: J. BOYER	PROJECT MANAGER: T. VAUGHN
DRAWN BY: M. WAPLES	CHECKED BY: J. BOYER
JOB NO.: 02-172.2	DRAWING NO.: 02-172.27
FILE NO.: 0217228POSTDEVELOPMENT	
DATE: 5/14/21	SCALE: 1"=50'
SHEET NO.: 34 OF 34	