Butler County
Lot Erosion and Sediment Control (ESC) Permit Application

New Construction Only **This is not an NPDES permit ***

Subdivision Lots: A $30.00 per lot fee will be assessed at issuance of permit.
Commercial Lots: A $100.00 per lot fee will be assessed at issuance of permit.
(Payable to Butler County Building Department)

RECEIVED NOV 24 2015 BH

Subdivision Name: N/A

Lot Location: HeritageSpring Drive, Liberty Township - Parcel# D2010-009-000-019

Applicant Information: **(Circle One) Owner, Contractor, Other**

Name: Heritage Development Partners, LLC

Address: 2865 Hampton cove Way SE City: Hampton Cove, AL Zip: 35763

Phone: 256.509.3554 Fax:

Email Address: roland@claritypointe.com

Builder Information:

Name: Miller-Valentine Group

Address: 9349 WaterStone Blvd. City: Cincinnati, Ohio Zip: 45249

Phone: 513.774.8400 Fax:

Email Address: thomas.stinger@mvg.com

Primary Site Contact Information:

Name: Heritage Development Partners, LLC

Address: 2865 Hampton Cove Way SE City: Hampton Cove, AL Zip: 35763

Phone: 256.509.3554 Fax:

Email Address: roland@claritypointe.com

Applicant Signature:

LC15-01228

Return application and fee to: **Butler County Department of Development**
Building and Zoning Division
Butler County Administrative Center
130 High Street, 1st floor, Hamilton, Ohio 45011

Permit issued upon review and approval of lot ESC permit Application

For more information contact:
Storm Water District
1921 fairgrove Avenue, Hamilton, Ohio 45011
Telephone: 513.785.4119 Fax: 513.867.5849
Www.stormwaterdistrict.org

* A separate permit which authorizes discharges of storm water from construction sites may be required by the Ohio EPA for projects which disturb more than one acre of ground but is not apart of a larger development. Contact Chris Cotton at OEPA's Southwest District office at 937.285.6442 or via email at chris.cotton@epa.state.oh.us for more information.

RE: Clarity Pointe

Teresa Barnes to: Jeff Chen

Cc: Steve Korte

12/02/2015 02:39 PM

Jeff

I have reviewed the drawings and calculations submitted for Clarity Pointe and can issue the ESC permit once I receive the $100 check and the following comment is addressed:

1. I previously mentioned that the flood route at the northwest corner of the site, per the grading plan, directs the flood water onto the neighboring property (the golf course). Structure 101 is a manhole and therefore, does not accept any surface water from this area. Should be get a large storm, the surface water has no where to go except between the proposed landscaping mounds and onto the neighboring golf course. Either modify the landscaping mounds somewhat to allow this water to stay on this property and still get to the drainage way; OR change structure 101 to a catch basin and upsize the pipe to account for the flood route; OR ensure that the neighboring property is aware of the situation and what will happen and supplies a letter of understanding (or easement) for this.

I also have a few other comments that will need to be addressed prior to the approval of the building permit.

1. I will need copies of the drawings that show the storm drain system under the building - and the info will have to also be included on the as-builts.
2. Sheet C141, the information for structures 209 and 210 need clarification; 209 has 4 inverts out? 210 has one invert in and 2 out - which are at a higher invert than the invert in. Note - the proposed roof drain connections into the structures should be shown as in "Inv IN" as the water is coming INTO the structure (not flowing out of the structure) - please correct this on most of the structures on sheet C141.
3. Why has the storm drain pipe around the outside of the building (200-214) been sized for the 100-year? This system does not pass under a building (from a courtyard) and has an open flood route that takes water to the basin. Therefore, this pipe run can meet the requirement of the 10-year within the pipe capacity.
4. The pipe run between 300-500-301 is required to be sized to carry the 100-year storm. The provided calculations are somewhat confusing. If structures 307-310 are clean outs and not accepting any water from the courtyard (but are roof drains only) then area 20 can go directly into structure 301. It appears that area 19 would go into structure 302; therefore, the provided calculations should account for water into 302, then into 301, then account for water into 500 and from 500 to 300. Please revise accordingly.

Let me know if you have any questions.
THANKS

Teresa

Teresa Barnes, P.E., CPESC
Design Engineer
Butler County Storm Water District
1921 Fairgrove Avenue
Hamilton, Ohio 45011

513-785-4142 Office
513-867-5849 Fax

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STORM SEWER COMPUTATIONS

Clarity Pointe Memory Care Facility

LOCATION			BASIN DATA							PIPE DATA							
Inlet	Area	Outlet	Incre. Area (acres)	Total Area (acres)	Coeff. "C" Value	Incre. C x A (acres)	Sum C x A (acres)	Total Tc (min)	Intensity "I" (in/hr)	Flow Req. (cfs)	Pipe Size (in)	"n" Value	Pipe Length (ft)	Pipe Slope (ft/ft)	US Invert (ft)	DS Invert (ft)	Mean Velocity (ft/sec)	Flow Capacity (cfs)
											-----Existing Pipe-----							
EXISTING AREA (from report)		CB-214	1.400	1.400	0.60	0.840	0.840	11.67	4.90	4.12								
CO-216	1	YD-215	0.046	0.046	0.95	0.044	0.044	10	5.15	0.23	8	0.010	54	0.0200	867.57	866.49	6.38	2.23
YD-215	2	CB-214	0.054	0.100	0.85	0.046	0.090	10	5.15	0.46	12	0.013	75	0.0197	866.39	864.91	6.39	5.02
CB-214	3	CB-213	0.334	1.834	0.75	0.251	1.180	10	7.32	8.63	24	0.013	80	0.0032	862.75	862.49	4.12	12.93
CB-213	4	CB-211	0.662	2.496	0.75	0.497	1.677	10	7.32	12.27	24	0.013	83	0.0033	862.44	862.17	4.12	12.94
YD-212	6	CB-211	0.129	0.129	0.72	0.093	0.093	10	5.15	0.48	12	0.013	60	0.0198	867.47	866.28	6.41	5.03
CB-211	5	MH-207	0.200	2.825	0.75	0.150	1.919	10	7.32	14.04	24	0.013	85	0.0033	862.12	861.84	4.14	13.02
YD-210	9	YD-209	0.040	0.040	0.82	0.033	0.033	10	5.15	0.17	12	0.013	40	0.0197	867.73	866.94	6.39	5.02
YD-209	8	MH-207	0.054	0.094	0.56	0.030	0.063	10	5.15	0.32	12	0.013	28	0.0196	866.94	866.39	6.37	5.01
MH-208	16	MH-207	2.974	2.974	0.75	2.231	2.231	10	5.15	11.49	30	0.013	74	0.0277	866.86	864.81	13.94	68.45
MH-207	7	CB-203	0.235	6.128	0.75	0.176	4.389	10	7.32	32.12	36	0.013	87	0.0032	861.79	861.51	5.37	37.94
MH-204	15	CB-203	0.586	0.586	0.85	0.498	0.498	10	5.15	2.57	12	0.013	48	0.0198	867.7	866.75	6.40	5.03
YD-206	11	YD-205	0.054	0.054	0.83	0.045	0.045	10	5.15	0.23	12	0.013	41	0.0198	867.3	866.49	6.39	5.02
YD-205	10	CB-203	0.055	0.109	0.82	0.045	0.090	10	5.15	0.46	12	0.013	42	0.0352	866.49	865.01	8.54	6.71
CB-203	12	CB-202	0.365	7.188	0.75	0.274	5.251	10	7.32	38.42	42	0.013	82	0.0033	861.46	861.19	6.02	57.89
CB-202	13	MH-201	0.136	7.324	0.75	0.102	5.353	10	7.32	39.17	42	0.013	71	0.0032	861.14	860.91	5.97	57.42
MH-201	14	HW-200	0.019	7.343	0.95	0.018	5.371	10	7.32	39.30	42	0.013	22	0.0032	860.86	860.79	5.91	56.90
CO-310	20	YD-301	0.411	0.411	0.75	0.308	0.308	10	5.15	1.59	8	0.010	131	0.0198	868.43	865.83	6.36	2.22
YD-302	19	YD-301	0.334	0.334	0.75	0.251	0.251	10	5.15	1.29	12	0.013	33	0.0194	866.61	865.97	6.33	4.97
YD-301	17	HW-300	0.135	0.880	0.95	0.128	0.687	10	7.32	5.03	12	0.013	117	0.0199	865.73	863.40	6.42	5.04
CO-406	18	HW-400	0.139	0.139	0.95	0.132	0.132	10	5.15	0.68	8	0.010	277	0.0364	868.01	857.92	8.61	3.01

but has the acre of drainage area

if have drainage area coming from existing pipe or runoff

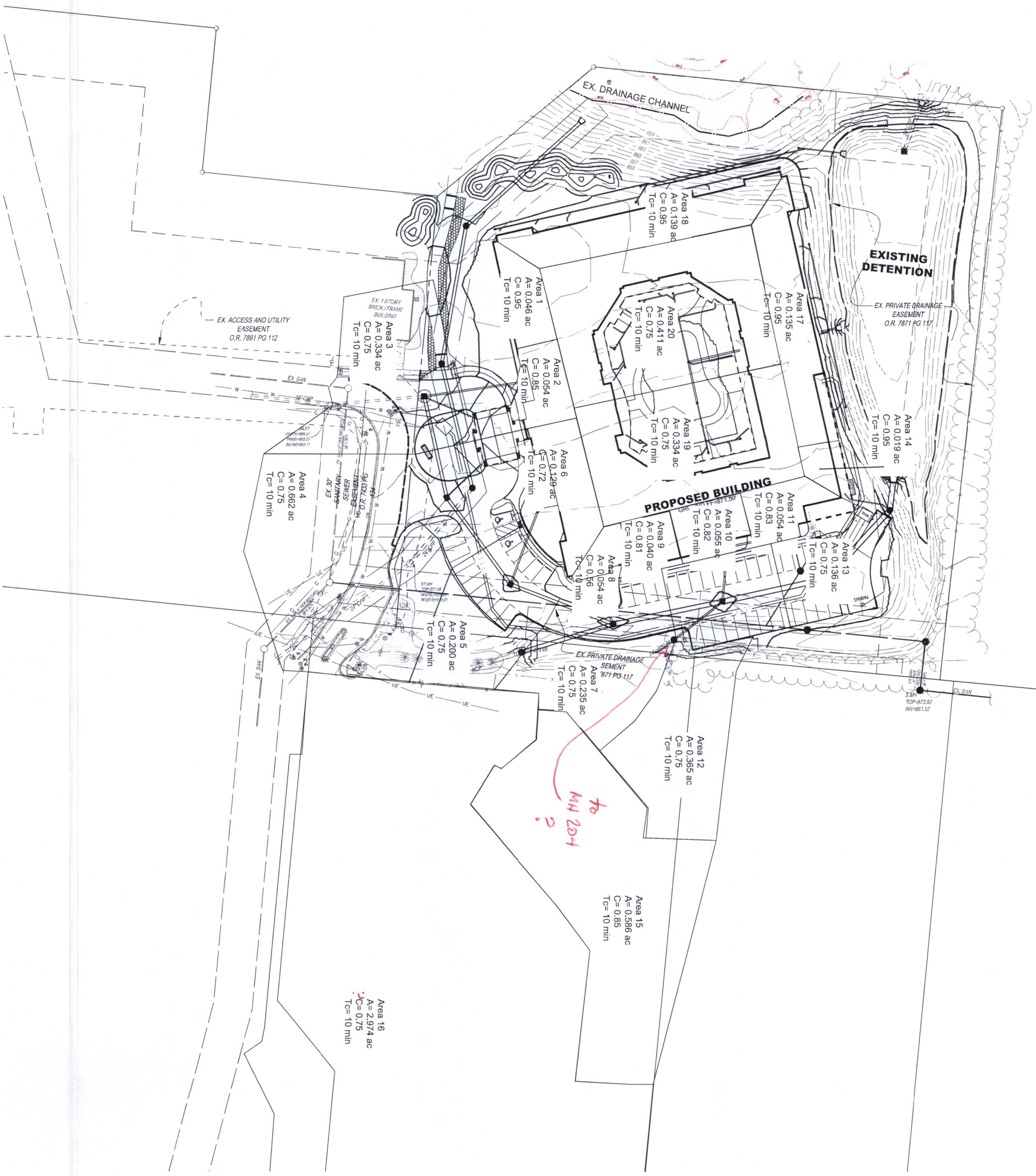
area 17 goes into structure 500
as long as 310-307 & 303-306 are all roof ...
area 19 goes into 302
area 20 goes into 301
area 17 goes into 500
-outlets thru 300...

301-500-300 needs to be 100 yr

DESIGNED: KCK
REVIEWED:
File: 150275STM000 LOCAL STM NETWORK.xlsx

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INSPIRED PEOPLE ▸ CREATIVE DESIGN ▸ TRANSFORMING COMMUNITIES



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THE KLEINGERS GROUP
CIVIL ENGINEERING | www.kleingers.com
SURVEYING | 6305 Centre Park Dr.
LANDSCAPE ARCHITECTURE | West Chester, OH 45069 | 513.779.7851

SEAL:

NO.	DATE	DESCRIPTION
1	6/12/2015	PRELIMINARY P.U.D. - MAJOR MOD.
2	8/14/2015	FINAL P.U.D.

FINAL P.U.D.
CLARITY POINTE MEMORY CARE
SECTION 7, TOWN 3, RANGE 3
LIBERTY TOWNSHIP
BUTLER COUNTY, OHIO
FOR: HERITAGE DEVELOPMENT PARTNERS, LLC

PROJECT NO: 150275.000
DATE: 8/14/15
SCALE: 1" = 40' (0 20 40 80)

SHEET NAME: **LOCAL STORM DRAINAGE AREAS**

SHEET NO. **1 OF 1**

INSPIRED PEOPLE ▲ CREATIVE DESIGN ▲ TRANSFORMING COMMUNITIES

FINAL PLANNED UNIT DEVELOPMENT (P.U.D.)

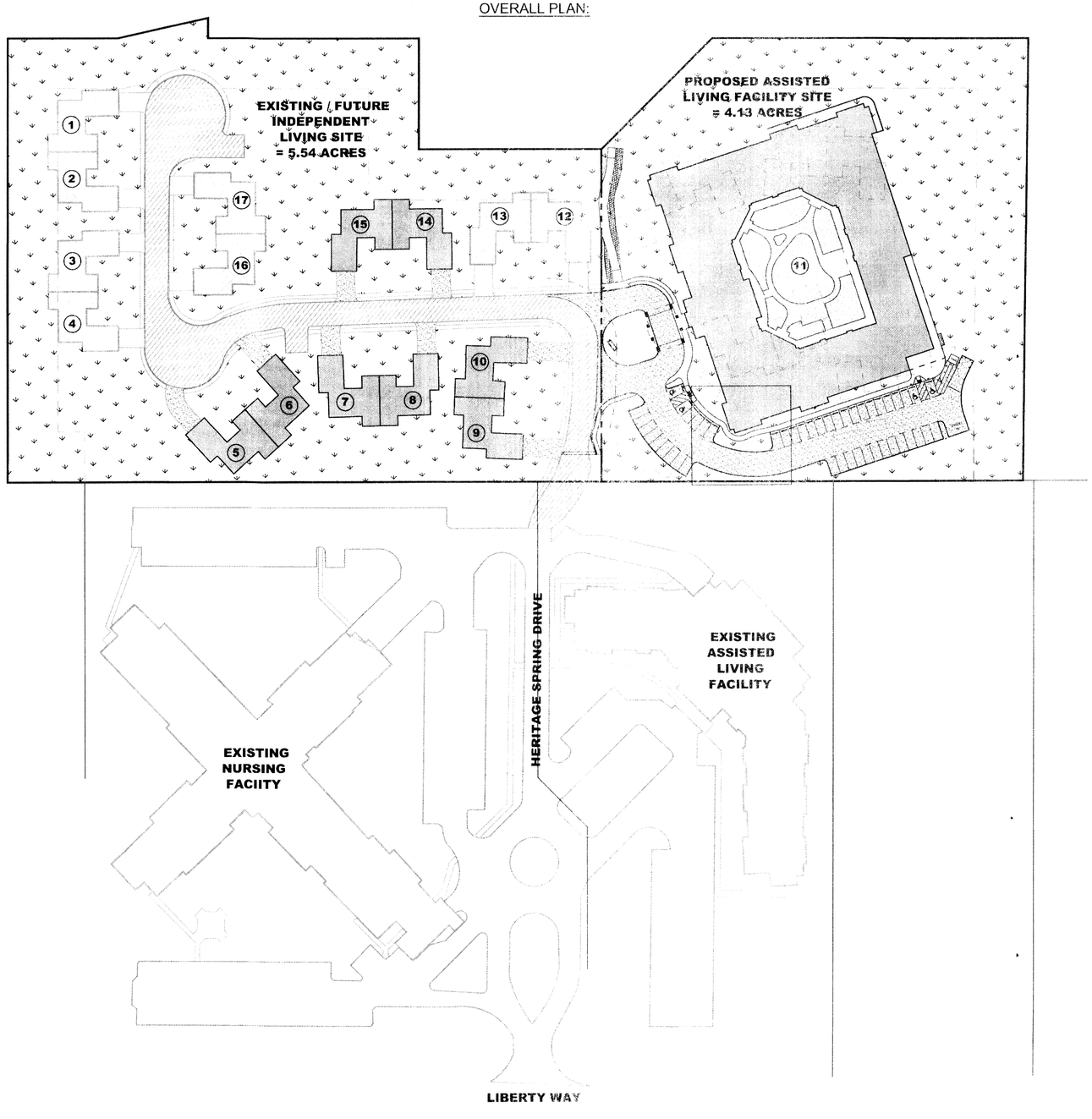
CLARITY POINTE MEMORY CARE

ASSISTED LIVING FACILITY & IMPROVEMENTS

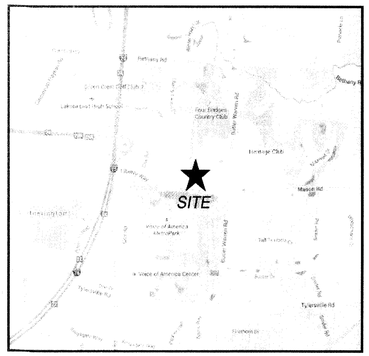
SECTION 7, TOWN 3, RANGE 3, LIBERTY TOWNSHIP

BUTLER COUNTY, OHIO 45044

OVERALL PLAN:



P.U.D. VICINITY MAP:



(N.T.S)

P.U.D. BUILDING LEGEND:

- EXISTING BUILDING
- PROPOSED BUILDING
- EXISTING PAVEMENT AREA
- PROPOSED PAVEMENT AREA
- EXISTING 50' BUFFER
- GREEN SPACE AND LANDSCAPE AREA
- PROPOSED PARCEL SPLIT
- COURTYARD AREA (SEE SHEET L-3)

SHEET INDEX

PAGE	TITLE
C000	TITLE SHEET
C100	GENERAL NOTES AND DETAILS
C101	GENERAL NOTES AND DETAILS
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C120	DEMOLITION PLAN
C130	LOCATION PLAN
C140	UTILITY PLAN
C141	STORM SEWER PROFILES
C142	STORM SEWER PROFILES
C143	SANITARY SEWER PROFILES
C150	GRADING AND EROSION CONTROL PLAN
C160	EROSION CONTROL NOTES AND DETAILS
C161	EROSION CONTROL NOTES AND DETAILS
L100	LANDSCAPE PLAN
L101	LANDSCAPE ENLARGEMENT PLAN
L200	LANDSCAPE DETAILS
L300	IRRIGATION ZONE PLAN
A201A	EXTERIOR ELEVATIONS
A201B	BUILDING ELEVATIONS & SIGNAGE
A201C	RENDERINGS
A201D	DUMPSTER ENCLOSURE DETAILS
1 OF 1	PHOTOMETRIC LIGHTING PLAN
L-3	COURTYARD LANDSCAPE PLAN

PUD MODIFICATION DATA:

APPROVED: CONSISTED OF 13 - TWO FAMILY BUILDINGS WITH CONCRETE DRIVEWAYS, ASPHALT DRIVES, CONCRETE WALK, AND ASSOCIATED UTILITIES TO SERVE.

MODIFICATION: 5 - TWO FAMILY BUILDINGS, CONCRETE DRIVEWAYS, AND THE DRIVES AND UTILITIES ASSOCIATED HAVE BEEN REMOVED FROM THE UNIT DEVELOPMENT. THIS HAS BEEN REPLACED BY 1 - ONE STORY MEMORY CARE FACILITY, AND ASSOCIATED PARKING, DRIVES, WALK, AND UTILITIES TO SERVE.

ZONING INFORMATION:

ZONE: R-PUD - RESIDENTIAL PLANNED UNIT DEVELOPMENT DISTRICT

EXISTING USE: TWO-FAMILY RESIDENTIAL.

FUTURE USE: TWO-FAMILY & ADULT GROUP HOME (LARGE RESIDENTIAL)

PARKING CALCULATION INFORMATION:

REQUIRED:	66 BEDS x 1 SPACE PER 3 BEDS =	22 SPACES REQUIRED
PROVIDED:	PROPOSED SPACES PROVIDED =	42 SPACES
	HANDICAP SPACES PROVIDED =	04 SPACES
		46 SPACES PROVIDED

AREA CALCULATION DATA:

BUILDING AREA:	8 - TWO FAMILY BUILDINGS	42,520 SF
	1 - PROP. MEMORY CARE BLDG	41,394 SF
	TOTAL BUILDING AREA =	86,810 SF (20.6% SITE)
PAVED AREAS:	16 - CONCRETE DRIVES	9,379 SF
	ASPHALT DRIVES	34,160 SF
	46 PARKING SPACES	7,978 SF
	SIDEWALK COVERAGE	14,386 SF
	TOTAL PAVED AREA =	65,903 SF (15.6% SITE)
PERVIOUS AREAS:	GRASS & LANDSCAPE AREA =	268,592 SF (63.8% SITE)

DEVELOPER & DESIGN TEAM INFORMATION:

OWNER: BARRINGTON COTTAGES REALTY, LTD
390 WARDS CORNER ROAD
LOVELAND, OHIO 45140

CONTACT: DAVID EPPERS
PHONE: (513) 943-4000

DEVELOPER: HERITAGE DEVELOPMENT PARTNERS, LLC
2865 HAMPTON COVE WAY
HAMPTON COVE, ALABAMA 35763

CONTACT: ROLAND G. WINTZINGER
PHONE: (256) 509-3554

ARCHITECT: WAKEFIELD BEASLEY & ASSOCIATES
5200 AVALON BOULEVARD
BUILDING 5
ATLANTA, GEORGIA 30009

PHONE: (770) 209-9393

SITE ENGINEER: THE KLEINGERS GROUP
6305 CENTRE PARK DRIVE
WEST CHESTER, OH 45069

CONTACT: STEVE KORTE, AMEEN BAKARÉ
PHONE: (513) 779-7851

LANDSCAPING: THE KLEINGERS GROUP
652 MAIN STREET
CINCINNATI, OH 45202
CONTACT: LYNNE NISCHWITZ, RYAN YOUNG
PHONE: (513) 779-7851

SURVEYING: THE KLEINGERS GROUP
6305 CENTRE PARK DRIVE
WEST CHESTER, OH 45069

CONTACT: RANDY WOLFE
PHONE: (513) 779-7851

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6305 Centre Park Dr.
West Chester, OH 45069
513.779.7851

9/22/15

SEAL:

STATE OF OHIO
STEVEN R. KORTE
E-61033
REGISTERED
PROFESSIONAL ENGINEER

NO.	DATE	DESCRIPTION
1	8/12/2015	PRELIMINARY P.U.D. - MAJOR MOD
2	8/14/2015	FINAL P.U.D.

FINAL P.U.D.
CLARITY POINTE MEMORY CARE
SECTION 7, TOWN 3, RANGE 3
LIBERTY TOWNSHIP
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FOR: HERITAGE DEVELOPMENT PARTNERS, LLC

PROJECT NO: 150275.000

DATE: 8/14/15

SCALE: 1" = 60'

0 30 60 120

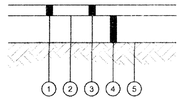
SHEET NAME: TITLE SHEET

SHEET NO. C000

INSPIRED PEOPLE CREATIVE DESIGN TRANSFORMING COMMUNITIES

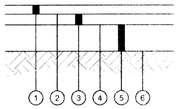
GENERAL NOTES

1. ALL PLANS & CONSTRUCTION SHALL BE IN ACCORDANCE WITH CURRENT "RULES AND REGULATIONS" OF BUTLER COUNTY AND APPLICABLE OHIO DEPARTMENT OF TRANSPORTATION STANDARDS.
2. CONTRACTOR SHALL OBTAIN A PERMIT FOR ALL CONSTRUCTION ACTIVITIES IN ACCORDANCE WITH LOCAL, STATE, & FEDERAL REGULATIONS.
3. THE CONTRACTOR IS TO PERFORM ALL INSPECTIONS AS REQUIRED BY THE OHIO EPA FOR THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT AND FURNISH OWNERS REPRESENTATIVE WITH WRITTEN REPORTS. CONTRACTOR WILL OBTAIN NPDES PERMIT.
4. ITEM NUMBERS REFER TO THE OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS, AND ALL CONSTRUCTION WORK SHALL BE DONE ACCORDING TO SAID SPECIFICATIONS AND IN ACCORDANCE WITH APPLICABLE STANDARDS OF LIBERTY TOWNSHIP AND BUTLER COUNTY. WHEN IN CONFLICT, THE TOWNSHIP REQUIREMENTS SHALL PREVAIL.
5. CONTRACTOR TO REMOVE TREES AND CLEAR AREAS AS NECESSARY TO PERFORM ALL SITE WORK INCLUDING GRADING AND UTILITY WORK.
6. PROTECTION OF EXISTING TREES AND VEGETATION: PROTECT EXISTING TREES AND OTHER VEGETATION INDICATED TO REMAIN IN PLACE AGAINST UNNECESSARY CUTTING, BREAKING OR SKINNING OF ROOTS, SKINNING OR BRUISING OF BARK, SMOTHERING OF TREES BY STOCKPILING CONSTRUCTION MATERIALS OR EXCAVATED MATERIALS WITHIN DRIP LINE, EXCESS FOOT OR VEHICULAR TRAFFIC, OR PARKING OF VEHICLES WITHIN DRIP LINE. PROVIDE TEMPORARY GUARDS TO PROTECT TREES AND VEGETATION TO BE LEFT STANDING.
7. ALL ELEVATIONS SHOWN ARE FINISHED GRADE ELEVATIONS.
8. SITE BUILDING PAD EXCAVATION AND CONSTRUCTION TO BE PER GEOTECHNICAL ENGINEER'S RECOMMENDATIONS. BUILDING PAD PREPARATION SHALL BEGIN BY CLEARING & STRIPPING UNSUITABLE MATERIAL FROM PAD SITE. THEN PLACE & COMPACT BACKFILL MATERIAL AT GEOTECHNICAL ENGINEER'S AND ARCHITECT'S RECOMMENDATIONS. ALL BACKFILL MATERIAL MUST BE ACCEPTABLE TO THE GEOTECHNICAL ENGINEER.
9. ALL FILL UNDER PAVEMENT SHALL BE COMPACTED TO THE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS.
10. THE CONTRACTOR IS RESPONSIBLE FOR BALANCING THE SITE EARTHWORK BY IMPORTING OR EXPORTING AS NECESSARY TO ACHIEVE DESIGN GRADES AND SPECIFICATIONS.
11. COMPACTED FILLS ARE TO BE MADE TO A MINIMUM OF THREE FEET ABOVE THE CROWN OF ANY PROPOSED SEWER PRIOR TO CUTTING OF TRENCHES FOR PLACEMENT OF SAID SEWERS. ALL FILLS SHALL BE CONTROLLED, COMPACTED, AND INSPECTED BY AN APPROVED TESTING LABORATORY OR AN INSPECTOR FROM THE APPROPRIATE GOVERNMENTAL AGENCY.
12. ADJUST ALL EXISTING CASTINGS, CLEANOUTS, ETC. WITHIN PROJECT AREA TO GRADE AS REQUIRED.
13. CONTRACTOR SHALL IMPLEMENT ALL SOIL AND EROSION CONTROL PRACTICES REQUIRED BY BUTLER COUNTY AND THE OHIO EPA.
14. ALL GROUND SURFACE AREAS THAT HAVE BEEN EXPOSED OR LEFT BARE AS A RESULT OF CONSTRUCTION AND ARE TO FINAL GRADE AND ARE TO REMAIN SO, SHALL BE SEEDED AND MULCHED AS SOON AS PRACTICAL IN ACCORDANCE WITH SPECIFICATIONS. IF NO SPECIFICATIONS ARE SUPPLIED USE STATE OF OHIO SPECIFICATIONS ITEM 659.
15. ALL PROPOSED STORM SEWERS, SURFACE OR OTHER DRAINAGE FACILITIES ARE TO BE PRIVATE AND MAINTAINED BY THE OWNER.
16. THE CONTRACTOR IS TO CONSTRUCT CURBS, CATCH BASINS, DOWNSPOUTS, PIPING AND CONNECTION ETC. AS REQUIRED TO CONVEY THE ROOF AND PAVED SURFACE DRAINAGE TO THE DETENTION BASIN.
17. ALL STORM STRUCTURES ARE ODOT TYPES UNLESS OTHERWISE INDICATED.
18. STORM SEWER PIPE LABELED "STM" SHALL BE ONE OF THE FOLLOWING: PVC SDR-35, PVC PROFILE PIPE PER ODOT ITEM 707.42, HIGH DENSITY POLYETHYLENE PER ODOT ITEM 707.33 OR CONTECH ULTRA FLO ALUMINIZED CORRUGATED METAL, ODOT ITEM 707.01, 707.02. STORM SEWER PIPE LABELED "RCP" SHALL BE REINFORCED CONCRETE PIPE, ODOT ITEM 706.02 CLASS IV. ALL STORM IS TO BE INSTALLED PER ODOT ITEM 611, TYPE A.
19. WHERE CURB IS PRESENT, DIMENSIONS ARE SHOWN TO THE FACE OF CURB, OTHERWISE DIMENSIONS ARE SHOWN TO THE EDGE OF PAVEMENT.
20. ALL CATCH BASINS IN THE PAVEMENT OR CURB ARE TO HAVE A MINIMUM OF 1, 4" PERFORATED UNDERDRAIN EXTENDING 10 LF FROM THE CATCH BASIN IN THE UPHILL DIRECTION. SEE DETAIL THIS PAGE.
21. ANY FIELD TILE CUT IN EXCAVATION WHICH DRAINS AN OFFSITE AREA MUST BE TIED INTO THE STORM DRAINAGE SYSTEM.
22. FOR EXACT LOCATION OF DOWN SPOUTS & ROOF DRAINS, COORDINATE WITH ARCHITECTURAL AND PLUMBING DRAWINGS. ALL ROOF DRAINS ARE TO BE 8" UNLESS OTHERWISE NOTED.
23. SANITARY SERVICE SHALL BE 8" PVC-SDR 35 OR APPROVED EQUAL (CONFORMING TO BUTLER COUNTY WATER & SEWER DEPARTMENT RULES AND REGULATIONS) INSTALLED AT A MINIMUM SLOPE OF ONE PERCENT (1.00%) UNLESS OTHERWISE NOTED SANITARY SERVICE SHALL BE INSTALLED AT A MINIMUM DEPTH OF FOUR FEET (4') UNLESS OTHERWISE NOTED. A MINIMUM OF 18" CLEARANCE SHALL BE MAINTAINED AT ALL WATERLINE CROSSINGS. SANITARY SERVICE JOINTS ALL CONFORM TO ASTM D-321
24. SANITARY SEWER IS TO BE BEDDED WITH CLEAN GRANULAR MATERIAL-AGGREGATES NOT TO BE LARGER THAN 3/4" AND NOT SMALLER THAN NO. 8 SIEVE, FREE OF SILT AND FINES, AASHTO M43 SIZE #67, 7 OR 8. BEDDING TO BE MINIMUM OF 6" BELOW & 12" ABOVE THE PIPE.
25. DISTANCES SHOWN FOR BOTH SANITARY AND STORM SEWER PIPES ARE MEASURED FROM CENTER OF STRUCTURE. CONTRACTOR RESPONSIBLE FOR ACTUAL FIELD CUT LENGTH. COORDINATES FOR STORM & SANITARY STRUCTURES ARE SHOWN TO THE CENTER STRUCTURE, UNLESS OTHERWISE NOTED.
26. ROOF DRAINS, FOUNDATION DRAINS AND ALL OTHER CLEAN WATER CONNECTIONS TO THE SANITARY SEWER SYSTEMS ARE PROHIBITED.
27. THE CONTRACTOR SHALL VERIFY LOCATION AND ELEVATION OF ALL EXISTING UTILITIES (INCLUDING THOSE LABELED PER RECORD DATA) PRIOR TO THE BEGINNING OF CONSTRUCTION OR EARTH MOVING OPERATIONS. INFORM ENGINEER OF ANY CONFLICTS DETRIMENTAL TO THE DESIGN INTENT.
28. FORTY-EIGHT HOURS BEFORE DIGGING IS TO COMMENCE, THE CONTRACTOR SHALL NOTIFY THE FOLLOWING AGENCIES: THE OHIO UTILITY PROTECTION SERVICES (OUPS), AND ALL OTHER AGENCIES WHICH MAY HAVE UNDERGROUND UTILITIES INVOLVING THIS PROJECT AND ARE NON-MEMBERS OF OHIO UNDERGROUND PROTECTION, INC.
29. MECHANICAL/ELECTRICAL CONTRACTORS SHALL BRING ALL UTILITIES 5' OUTSIDE BUILDING WALL. COORDINATE WITH CONSTRUCTION MANAGER.
30. CONTRACTOR TO REMOVE & REPLACE PAVEMENT AS SPECIFIED.
31. ALL STANDARD PARKING PLACES ARE 9' BY 18'.
32. SITE SIGNAGE AND STRIPING SHALL BE IN ACCORDANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
33. CONCRETE WALKS SHALL BE 5" THICK OVER 5" COMPACTED GRAVEL WITH CONTROL JOINTS EQUALLY SPACED AT NO MORE THAN 6' ON CENTER, EXPANSION JOINTS AT NO MORE THAN 30' ON CENTER. ALL SIDEWALKS ARE TO BE BROOM FINISHED.
34. ALL WATERMAIN CROSSINGS SHALL MAINTAIN A VERTICAL SEPARATION OF 18" MINIMUM. SANITARY SEWER SHALL BE LOCATED 18" BELOW WATERMAIN AT ALL CROSSINGS. WATERMAIN SHALL BE LOCATED A MINIMUM OF 10' HORIZONTALLY FROM ANY SANITARY SEWER. ALL MEASUREMENTS SHALL BE TAKEN FROM OUTSIDE OF SEWER PIPE TO THE OUTSIDE OF WATERMAIN PIPE. ONE FULL LENGTH OF WATERMAIN PIPE SHALL BE LOCATED AT ALL CROSSINGS TO ENABLE BOTH JOINTS TO BE LOCATED AS FAR FROM SEWER AS POSSIBLE.
35. ALL CATCH BASINS AND MANHOLES WITH A DEPTH GREATER THAN 4' SHALL BE PROVIDED WITH STEPS. STEPS SHALL MEET THE REQUIREMENTS OF STATE OF OHIO SPECIFICATION ITEM 611.
36. SANITARY LATERALS SHALL BE EXTENDED TO AT LEAST TEN (10) FEET BEYOND THE PROPERTY / RIGHT-OF-WAY LIEN OR TO THE EDGE OF THE EASEMENT WHICHEVER IS GREATER.
37. SANITARY SEWER MATERIALS AND INSTALLATION AS PER BUTLER COUNTY ENVIRONMENTAL SERVICES SPECIFICATIONS, USING SECTION 3110 FOR PVC, SDR-35 & 26 PIPE; SECTION 3140 FOR ABS OR PVC COMPOSITE PIPE. SECTION 3410 FOR MANHOLES.
38. ALL BUILDINGS TO BE SERVED BY THE PUBLIC SEWER SYSTEM SHALL BE CONSTRUCTED SO AS TO PROVIDE A MINIMUM OF FOUR FEET OF VERTICAL SEPARATION BETWEEN THE PUBLIC SANITARY SEWER, AT THE POINT OF CONNECTION AND THE LOWEST BUILDING LEVEL SERVED BY A GRAVITY SEWER CONNECTION. IN ADDITION SAID BUILDING LEVEL SHALL BE AT LEAST ONE FOOT ABOVE THE LOWEST POINT OF FREE-OVERFLOW (NON-SEATED MANHOLE COVER) UPSTREAM OF ANY TREATMENT FACILITY OF WASTEWATER PUMPING FACILITY THAT RECEIVES THE DISCHARGE FROM SAID BUILDING. SAID MIMUM SERVICE LEVELS SHALL BE RECORDED ON THE "AS-BUILT" PLANS FOR THE DEVELOPMENT, WHICH WILL BE KEPT ON FILE IN THE OFFICE OF THE BUTLER COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES.
39. BUTLER COUNTY DEPARTMENT OF ENVIRONMETAL SERVICES DOES NOT ACCEPT ANY RESPONSIBILITY FOR THE RELOCATION, REPAIR, OR REPLACEMENT OF ANY OTHER UTILITY INSTALLED WITHIN FIVE FEET OF THE CENTER LINE OF ANY SANITARY SEWER MAIN OR WATER MAIN.
40. ALL SANITARY SEWER LATERALS SHALL BE AT LEAST 4 FEET BELOW A PROPOSED BASEMENT FLOOR ELEVATION AT THE POINT OF CONNECTION TO SEWER MAIN , AND SHALL NOT EXCEED A DEPTH OF 12 FEET BELOW FINISH GRADE AT THE END OF THE LATERAL AT THE RIGHT-OF-WAY UNLESS SPECIFICALLY AUTHORIZED BY THE COUNTY.
41. SANITARY SEWER LATERALS, WHICH SHALL INCLUDE ALL PIPE AND APPURTENANCES FROM THE BUILDING TO THE PUBLIC SEWER MAIN AND THE CONNECTION TO THE PUBLIC SEWER MAIN SHALL BE CONSIDERED PRIVATE AND THE RESPONSIBILITY OF THE PROPERTY OWNER TO MAINTAIN THE CONNECTION TO THE SEWER SHALL BE ANY PIPING THAT EXTENDS OUT FROM THE MAIN BARREL OF THE SEWER MAIN.



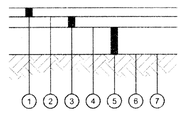
1. 1 1/2" ODOT ITEM 254 PAVEMENT PLANING, ASPHALT CONCRETE
2. ODOT ITEM 407 TACK COAT
3. 1 1/2" ODOT ITEM 441 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22
4. EXISTING PAVEMENT SECTION
5. EXISTING SUBGRADE

2 C100 — ASPHALT PAVEMENT PLANING AND OVERLAY DETAIL
N.T.S.



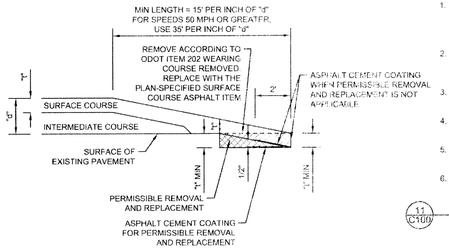
1. 1 1/2" ODOT ITEM 441 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22
2. ODOT ITEM 407 TACK COAT, APPLY IF TIME BETWEEN ASPHALT LIFTS EXCEEDS 30 DAYS
3. 2" ODOT ITEM 441 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22
4. ODOT ITEM 408 PRIME COAT, APPLIED AT 0.10 GAL/SY
5. 8" ODOT ITEM 304 AGGREGATE BASE
6. SUBGRADE COMPACTION, REFERENCE ODOT ITEM 204, EARTHWORK SPECIFICATION 312000 AND SOILS REPORT

3 C100 — STANDARD DUTY ASPHALT PAVEMENT DETAIL
N.T.S.

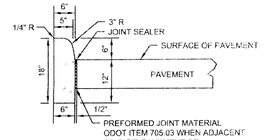


1. 1 1/2" ODOT ITEM 441 ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22
2. ODOT ITEM 407 TACK COAT, APPLY IF TIME BETWEEN ASPHALT LIFTS EXCEEDS 30 DAYS
3. 4" ODOT ITEM 441 ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22
4. ODOT ITEM 408 PRIME COAT, APPLIED AT 0.10 GAL/SY
5. 8" ODOT ITEM 304 AGGREGATE BASE
6. WOVEN GEOTEXTILE FABRIC, ODOT ITEM 712.09 TYPE D
7. SUBGRADE COMPACTION, REFERENCE ODOT ITEM 204, EARTHWORK SPECIFICATION 312000 AND SOILS REPORT

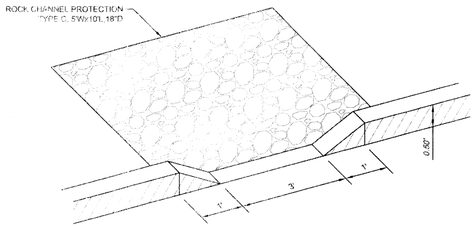
4 C100 — HEAVY DUTY ASPHALT PAVEMENT DETAIL
N.T.S.



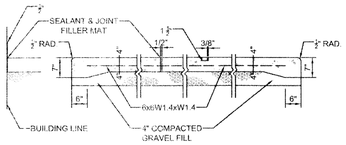
5 C100 — ASPHALT PAVING BUTT JOINT DETAIL
N.T.S.



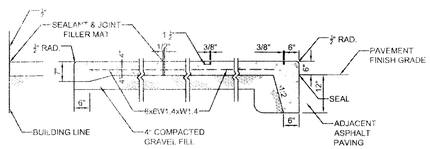
6 C100 — BARRIER CURB DETAIL
N.T.S.



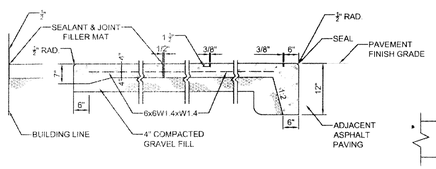
7 C100 — DRAINAGE CURB CUT DETAIL
N.T.S.



8 C100 — EXTERIOR CONCRETE SLAB WALK DETAIL
N.T.S.



9 C100 — EXTERIOR CONCRETE SLAB WALK WITH INTEGRAL CURB DETAIL
N.T.S.

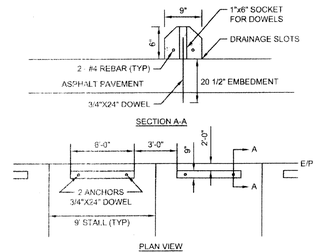


10 C100 — EXTERIOR CONCRETE SLAB WALK WITH FLUSH CURB DETAIL
N.T.S.

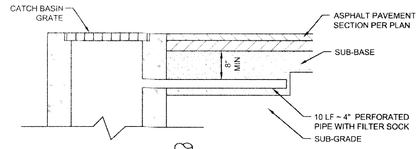
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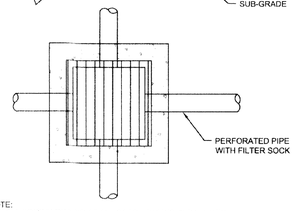
1. INSTALL EXPANSION JOINTS AT 30' OC MAXIMUM AND WHERE SLAB ABUTS STRUCTURES. WHERE NEW WALK ABUTS ADJOINING WALK, SAWCUT EXISTING WALK TO NEAREST JOINT AND INSTALL EXPANSION JOINT. EXPANSION JOINTS SHALL BE 1/2" WIDE BY DEPTH OF SLAB. SEAL ALL EXPANSION JOINTS.
2. INSTALL CONTROL JOINTS AT 6' OC MAXIMUM AND AT 6" BEHIND INTEGRAL CURB. CONTROL JOINTS SHALL BE 3/8" WIDE BY 1 1/2" DEEP AND TOOLED, SAWED JOINTS ARE NOT PERMITTED.
3. WALK SHALL HAVE A MINIMUM CROSS SLOPE OF 1.00%, MAXIMUM CROSS SLOPE OF 2.00%
4. WATER AND UTILITY BOXES IN THE WALK AREA SHALL BE ADJUSTED FLUSH WITH THE FINAL SURFACE.
5. REFER TO ARCHITECTURAL PLANS FOR ADDITIONAL DETAIL AT ALL BUILDING DOORS.
6. JOINTING PLANS MUST BE SUBMITTED FOR APPROVAL.

11 C100 — EXTERIOR CONCRETE SLAB WALK NOTES
N.T.S.



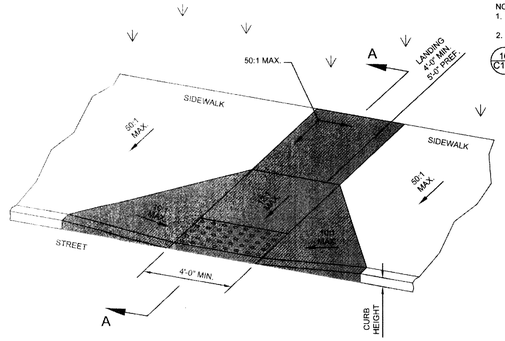
12 C100 — PRECAST CONCRETE WHEEL STOP DETAIL
N.T.S.

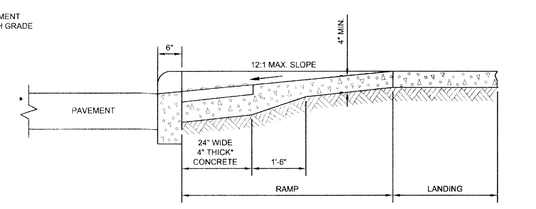




NOTE:
INSTALL FINGER DRAINS AT ALL CATCH BASINS IN PAVEMENT

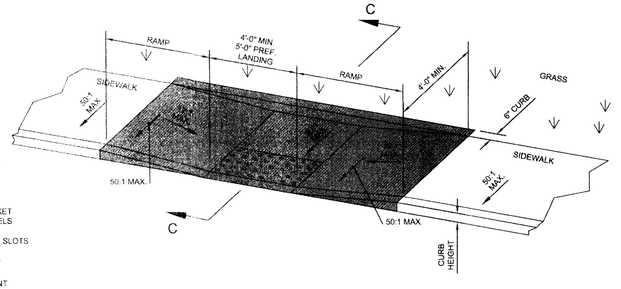
13 C100 — FINGER DRAIN DETAIL
NTS

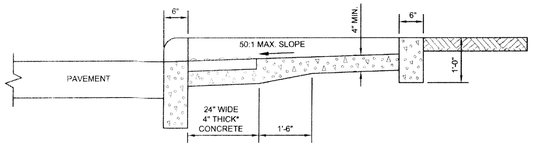




SECTION A-A

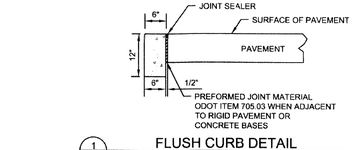
14 C100 — CURB RAMP DETAIL - PERPENDICULAR WITH FLARED SIDES
N.T.S.



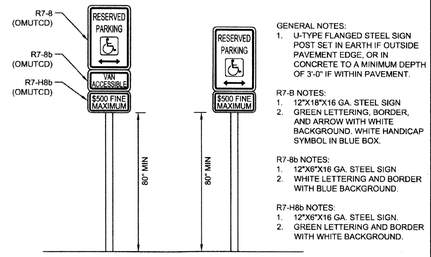


SECTION C-C

15 C100 — CURB RAMP DETAIL - DOUBLE SIDED PARALLEL
N.T.S.



1 C100 — FLUSH CURB DETAIL
N.T.S.



GENERAL NOTES:
1. U-TYPE FLANGED STEEL SIGN POST SET IN EARTH IF OUTSIDE PAVEMENT EDGE, OR IN CONCRETE TO A MINIMUM DEPTH OF 3'-0" IF WITHIN PAVEMENT.

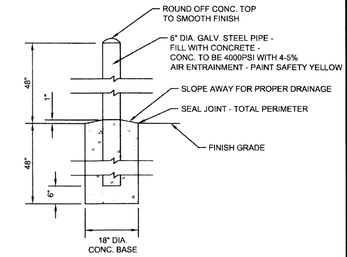
R7-8 NOTES:
1. 12"X18"X16 GA. STEEL SIGN
2. GREEN LETTERING, BORDER, AND ARROW WITH WHITE BACKGROUND. WHITE HANDICAP SYMBOL IN BLUE BOX.

R7-8b NOTES:
1. 12"X6"X16 GA. STEEL SIGN
2. WHITE LETTERING AND BORDER WITH BLUE BACKGROUND.

R7-H8b NOTES:
1. 12"X6"X16 GA. STEEL SIGN.
2. GREEN LETTERING AND BORDER WITH WHITE BACKGROUND.

NOTE:
1. ONE ACCESSIBLE PARKING SPACE FOR EVERY SIX OR FRACTION THERE OF SHALL BE DESIGNATED AS "VAN ACCESSIBLE". LOCATION AS NOTED ON THE DRAWINGS.
2. ONE SIGN TO BE INSTALLED AT EACH ACCESSIBLE PARKING SPACE

16 C100 — ACCESSIBLE PARKING SIGN DETAIL
NTS



17 C100 — PIPE BOLLARD DETAIL
N.T.S.

NOTES:

1. WHILE RAMPS MAY BE SKEWED TO THE CROSSWALK, THE ENTIRE LOWER LANDING AREA MUST FALL WITHIN THE CROSS WALK THAT THE RAMP SERVES AND CANNOT BE LOCATED IN THE TRAVELED LANE OF OPPOSING TRAFFIC.
2. THE COUNTER SLOPE OF THE GUTTER OR STREET AT THE FOOT OF A CURB RAMP, LANDING, OR BLENDED TRANSITIONS SHALL BE 20:1 OR FLATTER.
3. THE BOTTOM EDGE OF THE RAMP SHALL CHANGE PLANES PERPENDICULAR TO THE LANDING.
4. THE EDGE OF THE CURB SHALL BE FLUSH WITH THE EDGE OF THE ADJACENT PAVEMENT AND GUTTER AND SURFACE SLOPES THAT MEET GRADE BREAKS SHALL ALSO BE FLUSH.
5. RAMP LANDINGS SHALL BE 4' MIN. X 4' MIN. WITH A 50:1 OR FLATTER CROSS SLOPE AND RUNNING SLOPE.
6. **DETECTABLE WARNINGS:** INSTALL DETECTABLE WARNINGS ON EACH CURB RAMP WITH APPROVED MATERIALS, AS SHOWN IN SEPARATE DETAIL. INSTALL THESE PROPRIETY PRODUCTS AS PER MANUFACTURER'S WRITTEN INSTRUCTIONS.
7. **DRAINAGE:** CONTRACTOR IS TO ENSURE THE BASE OF EACH CONSTRUCTED CURB RAMP ALLOWS FOR PROPER DRAINAGE, WITHOUT EXCEEDING ALLOWABLE CROSS SLOPE OR RAMP SLOPES. VERTICAL CHANGE IN LEVEL EXCEEDING ¼" BETWEEN THE 1) PAVEMENT AND GUTTER, AND 2) GUTTER AND RAMP, ARE NOT ALLOWED.
8. **SURFACE TEXTURE:** TEXTURE CONCRETE SURFACES BY COARSE BROOMING TRANSVERSE TO THE RAMP SLOPES TO BE ROUGHER THAN THE ADJACENT WALK.
9. **JOINTS:** PROVIDE EXPANSION JOINTS IN THE CURB RAMP AS EXTENSIONS OF WALK JOINTS AND CONSISTENT WITH ITEM 608.03 REQUIREMENTS FOR A NEW CONCRETE WALK. PROVIDE A ½" ITEM 705.03 EXPANSION JOINT FILLER AROUND THE EDGE OF RAMPS BUILT IN EXISTING CONCRETE WALKS. LINES SHOWN ON THIS DRAWING INDICATE THE RAMP EDGES AND SLOPE CHANGES, AND DO NOT NECESSARILY INDICATE JOINT LINES.

*WHERE POSSIBLE, POUR RAMP AREA INTEGRAL WITH THE CURB, OTHERWISE USE 6" THICK WALK.

18 C100 — CURB RAMP DETAIL - GENERAL NOTES

811 Know what's below. Call before you dig.

OHIO Utilities Protection SERVICE 811 or 1-800-362-2764 Call Before You Dig

THE KLEINGERS GROUP
CIVIL ENGINEERING | www.kleingers.com
SURVEYING | 6305 Centre Park Dr. West Chester, OH 45069
LANDSCAPE ARCHITECTURE | 513.779.7851

9/22/15

SEAL:

STATE OF OHIO — STEVEN R. KORTE — E-61033 — REGISTERED PROFESSIONAL ENGINEER

NO.	DATE	DESCRIPTION
1	6/12/2015	PRELIMINARY P.U.D. - MAJOR MOD.
2	8/14/2015	FINAL P.U.D.

FINAL P.U.D.
CLARITY POINTE MEMORY CARE
SECTION 7, TOWN 3, RANGE 3
LIBERTY TOWNSHIP
BUTLER COUNTY, OHIO
FOR: HERITAGE DEVELOPMENT PARTNERS, LLC

PROJECT NO:	150275.000
DATE:	8/14/15
SCALE:	

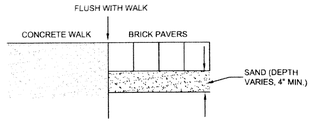
SHEET NAME:

GENERAL NOTES & DETAILS

SHEET NO.

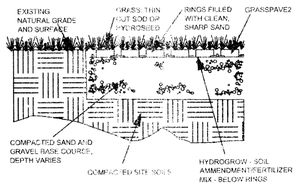
C100

INSPIRED PEOPLE ▲ TRANSFORMING COMMUNITIES ▲ CREATIVE DESIGN

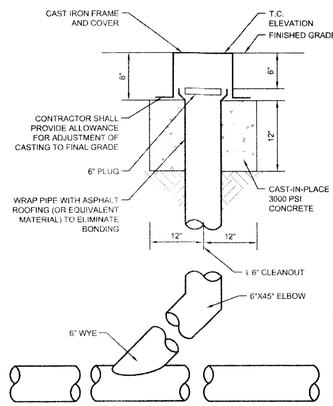


NOTE: CONTRACTOR TO SUBMIT SHOP DRAWING FOR OWNER APPROVAL.

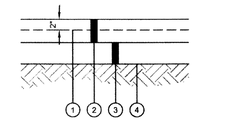
19 C101 BRICK PAVERS
N.T.S.



22 C101 GRASSPAVE2 FLUSH NATURAL EDGING DETAIL
N.T.S.

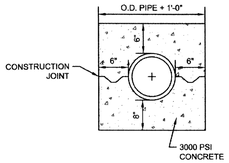


25 C101 CLEANOUT DETAIL
N.T.S.



1. 6X6 W4XW4 WELD WIRE REINFORCEMENT
2. 8" ODOT ITEM 452 NONREINFORCED PORTLAND CEMENT CONCRETE PAVEMENT
3. 6" ODOT ITEM 304 AGGREGATE BASE
4. SUBGRADE COMPACTION, REFERENCE ODOT ITEM 204, EARTHWORK SPECIFICATION 312000 AND SOILS REPORT

26 C101 CONCRETE DUMPSTER PAD DETAIL
N.T.S.



28 C101 CONCRETE ENCASEMENT DETAIL
N.T.S.

NOTES:

GENERAL

1. DETECTABLE WARNINGS ARE A DISTINCTIVE SURFACE PATTERN OF TRUNCATED DOMES WHICH ARE DETECTABLE BY CANE OR UNDERFOOT TO ALERT PEOPLE WITH VISION IMPAIRMENTS OF THEIR APPROACH TO STREETS AND HAZARDOUS DROP-OFFS.

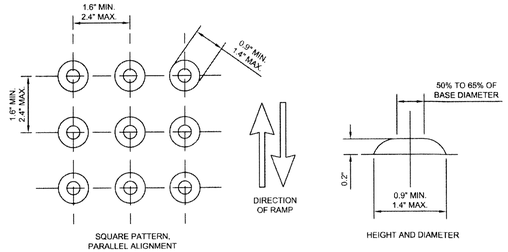
PLACEMENT

2. DETECTABLE WARNINGS ARE TO BE INSTALLED AT ANY LOCATION WHERE PEDESTRIANS MIGHT CROSS PATHS WITH VEHICULAR TRAFFIC LANES, SUCH AS THE BASE OF CURB RAMPS OR AT BLENDED CURBS. A 24" STRIP OF DOMES IS TO BE INSTALLED FOR THE FULL WIDTH OF THE RAMP OR WALK.

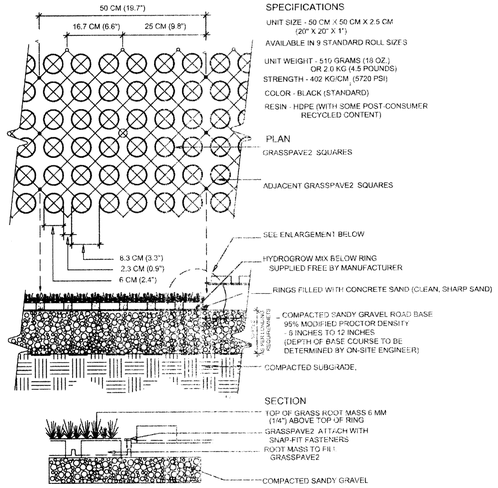
3. THE DEPTH OF CONCRETE UNDERNEATH DETECTABLE WARNING PRODUCTS SHALL BE A MINIMUM OF 4".

PRODUCTS & COLORS

4. COLOR OF THE DETECTABLE WARNINGS SHOULD CONTRAST WITH SURROUNDING CONCRETE WALK AND RAMP. BLACK IS NOT AN ACCEPTABLE COLOR. APPROVED PRODUCTS AND GUIDANCE ON COLOR MAY BE FOUND ON THE ODOT OFFICE OF ROADWAY ENGINEERING SERVICE'S DETECTABLE WARNINGS APPROVED LIST. INSTALL PRODUCTS AS PER MANUFACTURER'S PRINTED INSTRUCTIONS.



20 C101 DETECTABLE WARNINGS DETAIL
N.T.S.



SPECIFICATIONS
UNIT SIZE - 50 CM X 50 CM X 2.5 CM (20" X 20" X 1")
AVAILABLE IN 9 STANDARD ROLL SIZES
UNIT WEIGHT - 510 GRAMS (18 OZ.) OR 2.0 KG (4.5 POUNDS)
STRENGTH - 402 KG/CM (5720 PSI)
COLOR - BLACK (STANDARD)
RESIN - HDPE (WITH SOME POST-CONSUMER RECYCLED CONTENT)

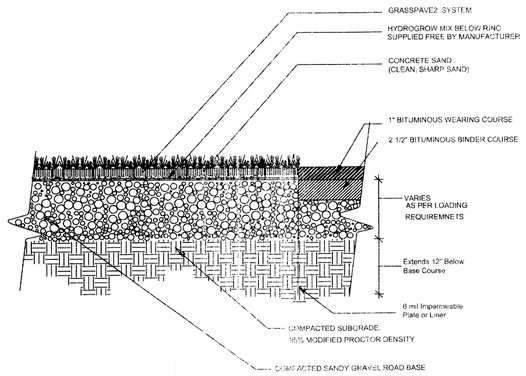
NOTE: GRASS/PLANT TYPES SHALL BE SPECIFIED BY A LANDSCAPE ARCHITECTOR LANDSCAPE DESIGNER.

23 C101 TYPICAL GRASSPAVE2 DETAIL
N.T.S.

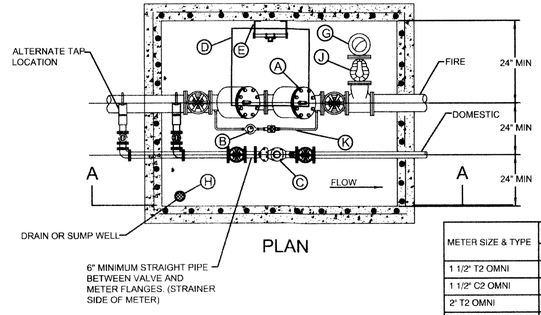
NOTES:

1. REFER TO OSHA REQUIREMENTS FOR MAXIMUM ALLOWABLE TRENCH SLOPES.
2. THIS PORTION OF THE PIPE EMBEDMENT ZONE MUST BE RECOMPACTED TO PROPER DENSITIES AFTER MOVING SUPPORT SYSTEM FORWARD.
3. PROVIDE FILTER FABRIC WHEN VERY FINE OR UNSTABLE MATERIAL IS ENCOUNTERED.
4. APPLY ITEM 407 TACK COAT TO VERTICAL FACE OF SAWCUT PAVEMENT.

21 C101 UTILITY CONDUIT OPEN CUT DETAIL
N.T.S.

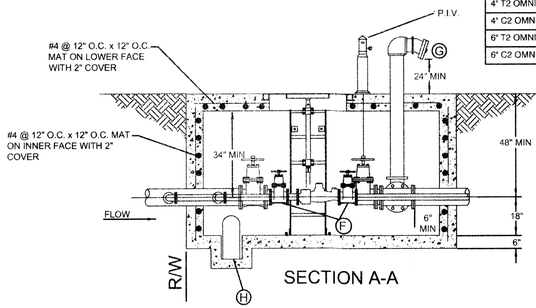


24 C101 GRASSPAVE2 AT ASPHALT EDGE
N.T.S.



METER SIZE & TYPE	MIN. C
1 1/2" T2 OMNI	13"
1 1/2" C2 OMNI	13"
2" T2 OMNI	17"
2" C2 OMNI	15 1/4"
3" T2 OMNI	19"
3" C2 OMNI	17"
4" T2 OMNI	23"
4" C2 OMNI	20"
6" T2 OMNI	27"
6" C2 OMNI	24"

NOTE: SIDES SHALL BE DOWLED TO TOP AND BOTTOM WITH REINFORCING STEEL



OMNI METER INSTALLATION INSTRUCTIONS

1. WHEN INSTALLING SENSUS OMNI METERS WITH THE STRAINER, A MINIMUM OF 2 1/2 PIPE DIAMETERS OF STRAIGHT RUN OF PIPE OR EQUIVALENT FULL OPEN COMPONENTS IS REQUIRED UPSTREAM AND DOWNSTREAM OF THE METER OR STRAINER FLANGES. FULL OPEN FLOW COMPONENTS MAY CONSIST OF: STRAIGHT PIPE, FULL OPEN GATE VALVES, BYPASS TEES AND CONCENTRIC REDUCERS (1 NOMINAL PIPE SIZE REDUCTION ONLY). FOR ALL OTHER INSTALLATION CONFIGURATIONS, A MINIMUM OF 5 PIPE DIAMETERS OF STRAIGHT RUN IS REQUIRED UPSTREAM.

2. GATE VALVES LOCATED IMMEDIATELY UPSTREAM OR DOWNSTREAM ARE ACCEPTABLE, PROVIDED THEY ARE FULLY OPEN DURING METER SERVICE AND ARE NOT USED TO THROTTLE FLOW RATES THROUGH THE METER.

3. INSTALL NONCONCENTRIC REDUCERS, CHECK VALVES, BACKFLOW PREVENTERS, PRV (PRESSURE REDUCING VALVES), THROTTLING DEVICES, ALTITUDE VALVES NO CLOSER THAN 4 PIPE DIAMETERS DOWNSTREAM OF THE METER. ALWAYS AVOID PLACING ANY OF THESE DEVICES UPSTREAM OF ANY METER SINCE THE PLACEMENT WILL PUT THE METER IN A LOW PRESSURE ZONE THUS POSSIBLY CAUSING INCONSISTENT ACCURACY AND REDUCED LONGEVITY.

NOTE: OMNI METERS CAN BE INSTALLED VERTICALLY OR ROTATED ON THE BOLT PATTERN IN ANY ORIENTATION.

A) FIRE SERVICE BACKFLOW PREVENTION DEVICE: WATTS #709-DCDA, AMES #3000 DCDA, OR EQUAL.
B) BY-PASS METER (¾" OR 1" PURCHASED FROM BUTLER CO.). NOTE: BY-PASS LINE REQUIRES A BACKFLOW DEVICE SIMILAR TO THE WATTS #709.
C) DOMESTIC METER FURNISHED BY BUTLER CO. NOTE: 3" AND LARGER METERS SHALL BE INSTALLED WITH FLANGED CLASS 53 DUCTILE IRON PIPE. 2" AND LESS SHALL BE "K" COPPER.
D) LID: BILCO MODEL #J-4AL, OR HALLIDAY MODEL #W1S3636, OR APPROVED EQUAL.
E) ALUMINUM LADDER: OSHA APPROVED HALLIDAY SERIES L-1B WITH SERIES L-1E SAFETY POST, OR APPROVED EQUAL.
F) DOMESTIC INLET AND OUTLET CONNECTIONS SEE CHART ABOVE.
G) 5" LOCKING STORTZ ON 30° ELBOW TURNED DOWN SECURED SIGN INDICATING "FIRE DEPT. CONNECTION" (FDC) WITH ADDRESS IT PROTECTS FIXED TO THE FDC FACING STREET.
H) SUMP PUMP (REQUIRED IF GRAVITY DRAIN IS NOT POSSIBLE). EXTEND DISCHARGE PIPING AWAY FROM TOP OF VAULT.
J) CHECK VALVE WITH AUTOMATIC BALL DRIP.
K) CONTRACTOR/ PLUMBER TO VERIFY LAYING LENGTH OF BACKFLOW DEVICE, VALVES, METERS ETC.

27 C101 BUTLER COUNTY WATER METER PIT (DETAIL 5200)
DUAL SERVICE SETTING WITH BACKFLOW DEVICE
N.T.S.

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9/22/15

SEAL:

STATE OF OHIO STEVEN R KORTE E-61033 REGISTERED PROFESSIONAL ENGINEER

NO.	DATE	DESCRIPTION
1	8/12/2015	PRELIMINARY P.U.D. - MAJOR MOD
2	8/14/2015	FINAL P.U.D.

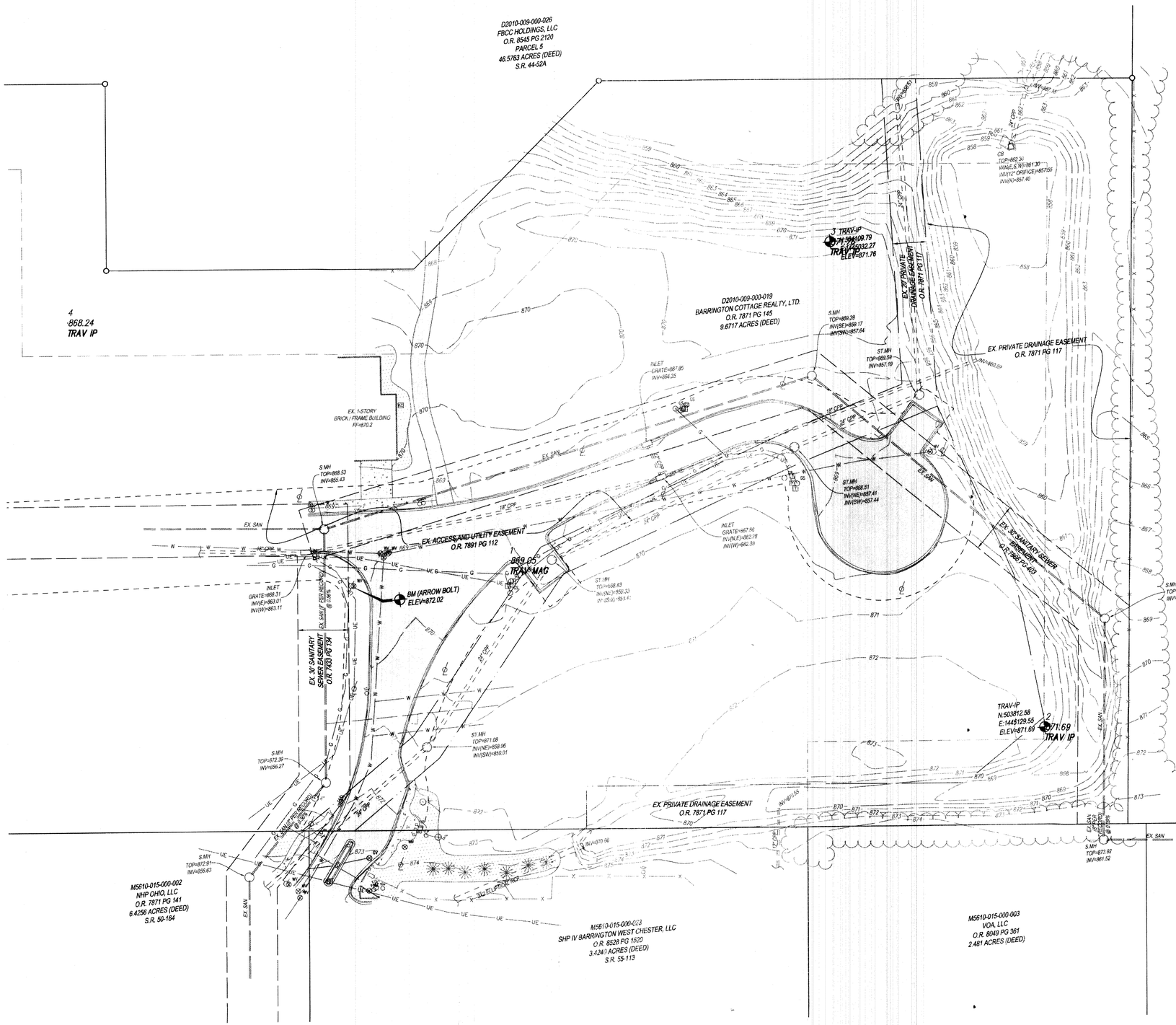
FINAL P.U.D.
CLARITY POINTE MEMORY CARE
SECTION 7, TOWN 3, RANGE 3
LIBERTY TOWNSHIP
BUTLER COUNTY, OHIO
FOR: HERITAGE DEVELOPMENT PARTNERS, LLC

PROJECT NO: 150275.000
DATE: 8/14/15
SCALE:

SHEET NAME:
GENERAL NOTES & DETAILS

SHEET NO.
C101

INSPIRED PEOPLE ▲ TRANSFORMING COMMUNITIES ▲ CREATIVE DESIGN



SURVEY BASEMAP LEGEND:

LEGEND
5/8" IRON PIN SET
IRON PIN FOUND (SIZE AS NOTED)
AIR CONDITIONING UNIT
ELECTRIC BOX
LIGHT POLE
PULL BOX
PHONE BOX
CATCH BASIN
INLET
MANHOLE
CLEANOUT
FIRE DEPARTMENT CONNECTOR
FIRE HYDRANT
IRRIGATION CONTROL VALVE
POST INDICATOR VALVE
WATER METER
WATER VALVE
FENCE POST
MAIL BOX
SIGN - SINGLE POST
GAS SERVICE
GAS VALVE
TREE - DECIDUOUS
TREE - CONIFEROUS
TREE LINE
FENCE LINE
UNDERGROUND ELECTRIC
UNDERGROUND TELEPHONE
GAS LINE
WATER LINE
STORM SEWER
SANITARY SEWER
ASPHALT
CONCRETE
LANDSCAPE

SURVEY BASEMAP NOTES:

NOTE:
UNDERGROUND UTILITIES ARE PLOTTED FROM A COMPILATION OF AVAILABLE RECORD INFORMATION AND SURFACE INDICATIONS OF UNDERGROUND STRUCTURES AND MAY NOT BE INCLUSIVE. PRECISE LOCATIONS AND THE EXISTENCE OR NON EXISTENCE OF UNDERGROUND UTILITIES CANNOT BE VERIFIED. PLEASE NOTIFY THE OHIO UTILITY PROTECTION SERVICE AT 1-800-362-2764 BEFORE ANY PERIOD OF EXCAVATION OR CONSTRUCTION ACTIVITY.

NOTES:

1. SOURCE DOCUMENTS AS NOTED.
2. OCCUPATION IN GENERAL FITS SURVEY.
3. MONUMENTATION IS IN GOOD CONDITION UNLESS OTHERWISE NOTED.
4. HORIZONTAL AND VERTICAL DATUMS ARE BASED ON THE OHIO STATE PLANE COORDINATE SYSTEM-SOUTH ZONE AS DERIVED FROM THE OHIO DEPARTMENT OF TRANSPORTATION'S VIRTUAL REFERENCE STATIONING SYSTEM (VRS) (NAD 83) (NAVD 88)
5. SITE BENCHMARKS AS SHOWN HEREON.

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SEAL:

STATE OF OHIO
MATTHEW D. HABEDANK
8611
REGISTERED PROFESSIONAL SURVEYOR
9/23/15

NO.	DATE	DESCRIPTION
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2	8/14/2015	FINAL P.U.D.

FINAL P.U.D.
CLARITY POINTE MEMORY CARE
SECTION 7, TOWN 3, RANGE 3
LIBERTY TOWNSHIP
BUTLER COUNTY, OHIO
FOR: HERITAGE DEVELOPMENT PARTNERS, LLC

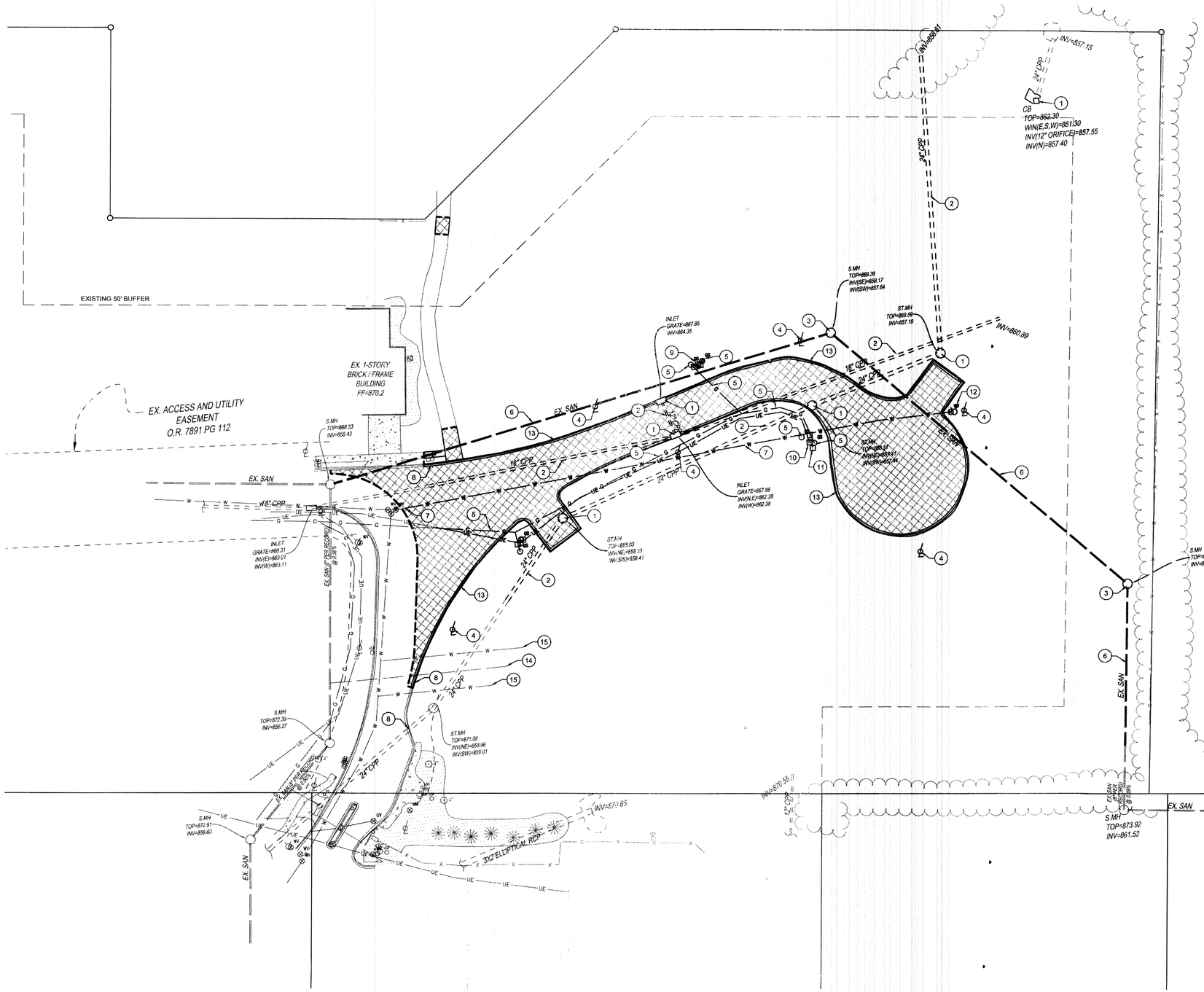
PROJECT NO: 150275.000
DATE: 8/14/15
SCALE: 1" = 30'
0 15 30 60

SHEET NAME:
SURVEY BASEMAP

SHEET NO.
C110

DESIGN ▲ TRANSFORMING COMMUNITIES

INSPIRED PEOPLE ▲ CREATIVE DESIGN



DEMOLITION PLAN LEGEND

- REMOVE EXISTING CONCRETE TO FULL DEPTH
- REMOVE EXISTING ASPHALT PAVEMENT TO FULL DEPTH
- REMOVE EXISTING LANDSCAPING
- SAWCUT PAVEMENT EDGE. CONTRACTOR IS TO SAWCUT EXISTING PAVEMENT IN NEAT, STRAIGHT LINES TO CREATE A CLEAN BUTT JOINT. COAT EDGE OF EXISTING PAVEMENT WITH TACK COAT PRIOR TO PLACING AND COVER JOINT WITH SEALANT.

DEMO KEY NOTES:

1. REMOVE EXISTING STORM STRUCTURE
2. REMOVE EXISTING STORM PIPE TO EXTENTS SHOW.
3. REMOVE EXISTING SANITARY MANHOLE.
4. REMOVE EXISTING LIGHT POLE AND ASSOCIATED FOUNDATION.
5. REMOVE EXISTING GAS SERVICE.
6. REMOVE EXISTING SANITARY PIPE.
7. REMOVE EXISTING WATER SERVICE AND CAP FOR FUTURE USE PER BUTLER COUNTY STANDARDS.
8. REMOVE EXISTING CONCRETE CURB TO NEAREST JOINT.
9. REMOVE EXISTING ELECTRIC SERVICE / BOX.
10. REMOVE EXISTING TRANSFORMER AND EXISTING PAD COMPLETE. COORDINATE WITH DEVELOPER REGARDING DISPOSAL.
11. REMOVE EXISTING TELECOMMUNICATIONS SERVICE / BOX.
12. REMOVE EXISTING FIRE HYDRANT AND STORE FOR REUSE.
13. REMOVE EXISTING CONCRETE CURB AND GUTTER.
14. CAP EXISTING SANITARY SERVICE LINES AND ABANDON IN PLACE PER BUTLER COUNTY STANDARDS.
15. CAP EXISTING WATER SERVICE LINES AND ABANDON IN PLACE PER BUTLER COUNTY STANDARDS.

DEMOLITION NOTES:

1. CONTRACTOR TO COORDINATE ALL ELECTRICAL, CABLE, TELECOMMUNICATION, AND GAS SERVICE REMOVAL WITH PROVIDER/OWNER BEFORE UTILITY DEMOLITION IS TO BEGIN. REMOVE SERVICE PER PROVIDER'S STANDARDS.
2. CONTRACTOR TO COORDINATE DOMESTIC / FIRE WATER REMOVAL WITH BUTLER COUNTY WATER AND SEWER DEPARTMENT BEFORE UTILITY DEMOLITION IS TO BEGIN. REMOVE SERVICE/TAP PER BUTLER COUNTY'S STANDARDS.
3. CONTRACTOR TO COORDINATE SEWER TAP REMOVAL WITH BUTLER COUNTY WATER AND SEWER DEPARTMENT BEFORE UTILITY DEMOLITION IS TO BEGIN. REMOVE TAP PER BUTLER COUNTY'S STANDARDS.
4. ANY EXCAVATIONS COMPLETED FROM THE DEMOLITION OF EXISTING BUILDING, FOUNDATIONS, BASEMENT, DRIVES, AND UTILITIES SHALL BE GRADED TO MEET EXISTING GRADE AT 3:1 MAXIMUM. ANY DEPRESSIONS SHALL BE GRADED TO DRAIN. CONTRACTOR TO COMPACT FILLS WITH APPROVED STRUCTURAL FILL PER GEOTECHNICAL ENGINEER'S REQUIREMENTS.
5. REFER TO EARTHWORK SPECIFICATIONS FOR BACKFILL AND COMPACTION STANDARD.

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NO.	DATE	DESCRIPTION
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FINAL P.U.D.

CLARITY POINTE MEMORY CARE

SECTION 7, TOWN 3, RANGE 3
LIBERTY TOWNSHIP
BUTLER COUNTY, OHIO
FOR: HERITAGE DEVELOPMENT PARTNERS, LLC

PROJECT NO: 150275.000

DATE: 8/14/15

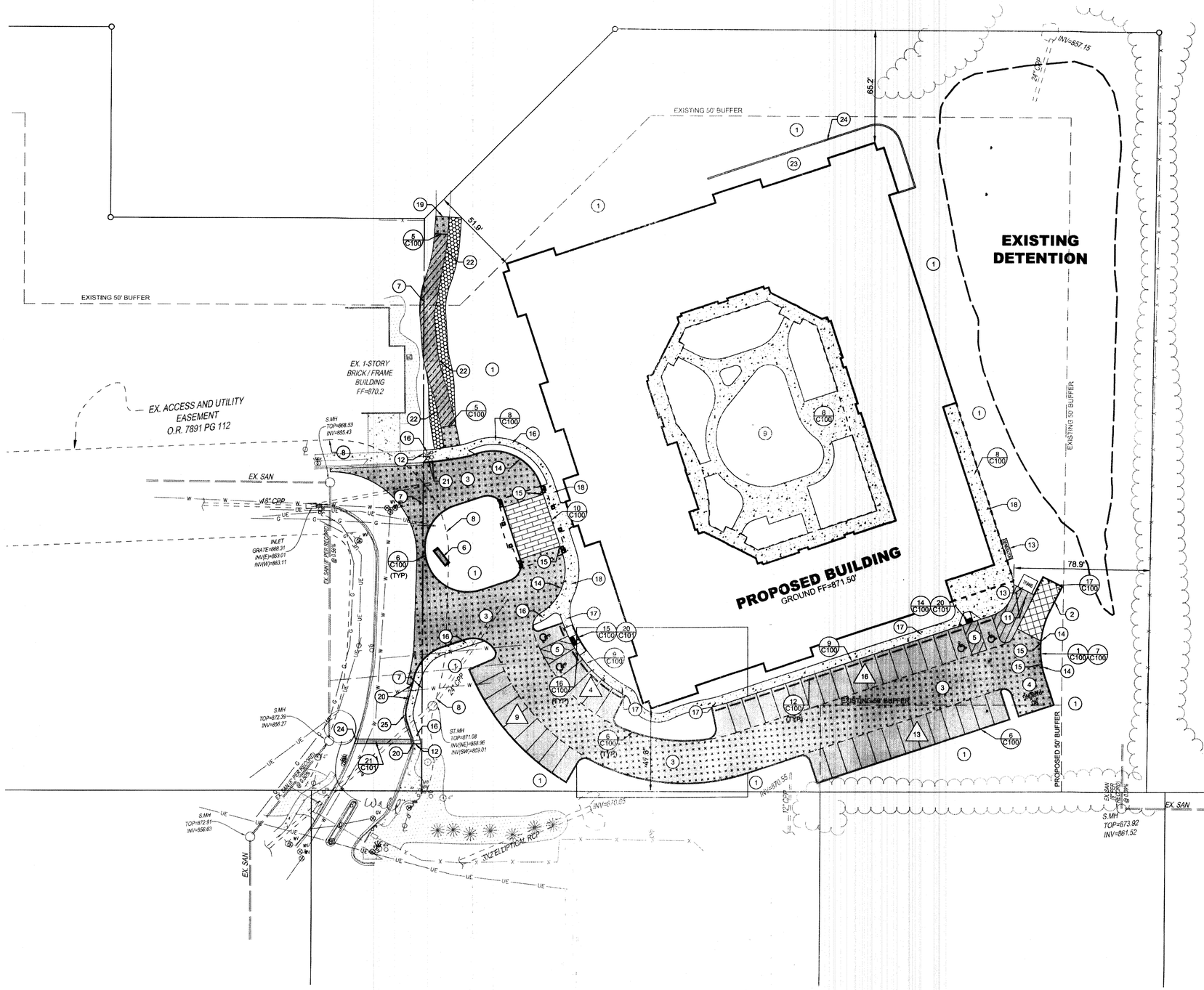
SCALE: 1" = 30'

0 15 30 60

SHEET NAME: **DEMOLITION PLAN**

SHEET NO. **C120**

INSPIRED PEOPLE ▲ CREATIVE DESIGN ▲ TRANSFORMING COMMUNITIES



LOCATION PLAN LEGEND:

- 3/C100 — STANDARD DUTY ASPHALT
- 4/C100 — HEAVY DUTY ASPHALT
- 28/C101 — CONCRETE DUMPSTER PAD
- 8/C100 — CONCRETE WALK
  * WALK WITH INTEGRAL CURB SEE DETAIL 9/C100
  * WALK FLUSH WITH PAVEMENT SEE DETAIL 10/C100
- 19/C101 — BRICK PAVERS
- 23/C101 — GRASSPAVE2 POROUS PAVERS
- 2/C100 — 1-1/2" ASPHALT OVERLAY
- DENOTES TRANSITION BETWEEN ASPHALT PAVEMENT
- 14 — PARKING SPACE TOTAL

LOCATION KEY NOTES:

1. PROPOSED GRASS OR LANDSCAPE AREA. REFER TO LANDSCAPE PLAN SHEETS FOR PLANTING DETAILS.
2. PROPOSED DUMPSTER ENCLOSURE. BOLLARD SPACING SHOWN FOR REFERENCE. SEE ARCHITECTURAL DRAWINGS FOR DETAIL.
3. 24' DRIVE AISLE.
4. 21' WIDE TURNAROUND.
5. TWO HANDICAP SPACES AT 9'x18' WITH 9' WIDE VAN ACCESSIBLE ACCESS AISLE.
6. PROPOSED ENTRANCE SIGN. REFER TO ARCHITECTURAL PLANS FOR SIGN DETAILS.
7. APPROXIMATELY LOCATION OF FUTURE LOT LINE SPLIT.
8. APPROXIMATE LOCATION OF FUTURE ACCESS AND UTILITY EASEMENT ADJUSTMENT.
9. PROPOSED COURTYARD AREA. FOR DETAILS SEE ARCHITECT PLANS.
10. NOT USED.
11. TRANSFORMER BOLLARD SPACING SHOWN FOR REFERENCE. CONTRACTOR TO REFER TO DUKE ENERGY STANDARDS FOR EQUIPMENT PROTECTION AND CONCRETE BOLLARD PLACEMENT.
12. CONNECT PROPOSED WALK TO EXISTING WALK AND MATCH EXISTING ELEVATION.
13. TRANSFORMER / GENERATOR PAD. PAD DIMENSIONS AND CONCRETE SECTION SHALL BE DESIGN TO MEET ELECTRICAL MANUFATURER'S REQUIREMENTS.
14. BEGIN 6" CURB / WALK REVEAL.
15. BEGIN FLUSH CURB / WALK.
16. 4' WIDTH CONCRETE WALK.
17. 5' WIDTH CONCRETE WALK.
18. 8' WIDTH CONCRETE WALK.
19. MATCH PROPOSED ASPHALT TO EXISTING ASPHALT ELEVATION. IF STRAIGHT JOINT DOES NOT EXISTING SAWCUT EXISTING PAVEMENT EDGE WHERE IT MEETS PROPOSED PAVEMENT TO CREATE A STRAIGHT JOINT. APPLY ODOT ITEM 407 TACK COAT TO VERTICAL FACE OF SAWCUT PRIOR TO PLACEMENT OF PROPOSED PAVEMENT AND COVER THE JOINT WITH SEALANT PER ODOT SPECIFICATION 702.13.
20. MATCH PROPOSED CURB TO EXISTING CURB.
21. RAISE EXISTING IRRIGATION CONTROL VALVE COVER TO PROPOSED GRADE. SEE GRADING PLAN SHEET C150 FOR DETAILS.
22. INSTALL POROUS PAVERS TO BE FLUSH WITH PROPOSED ASPHALT PAVEMENT ELEVATION. SEE SHEET C150 FOR DETAILS.
23. PROPOSED EMERGENCY EGRESS.
24. PROPOSED WALL TO BE DESIGNED BY OTHERS. SHOWN FOR REFERENCE ONLY. CONTRACTOR TO INSTALL ALLAN BLOCK WALL WITH RAILING OR APPROVED EQUAL. FOR ELEVATION DETAILS SEE GRADING PLAN SHEET C150.
25. REMOVE CURB TO CLOSEST JOINT AND REPLACE WITH FULL HEIGHT CURB AND GUTTER PER BUTLER COUNTY STANDARDS.

LOCATION GENERAL NOTES:

A. DIMENSIONS TO FACE OF CURB UNLESS OTHERWISE NOTED.

B. ALL STANDARD PARKING SPACES ARE 9' x 18'.

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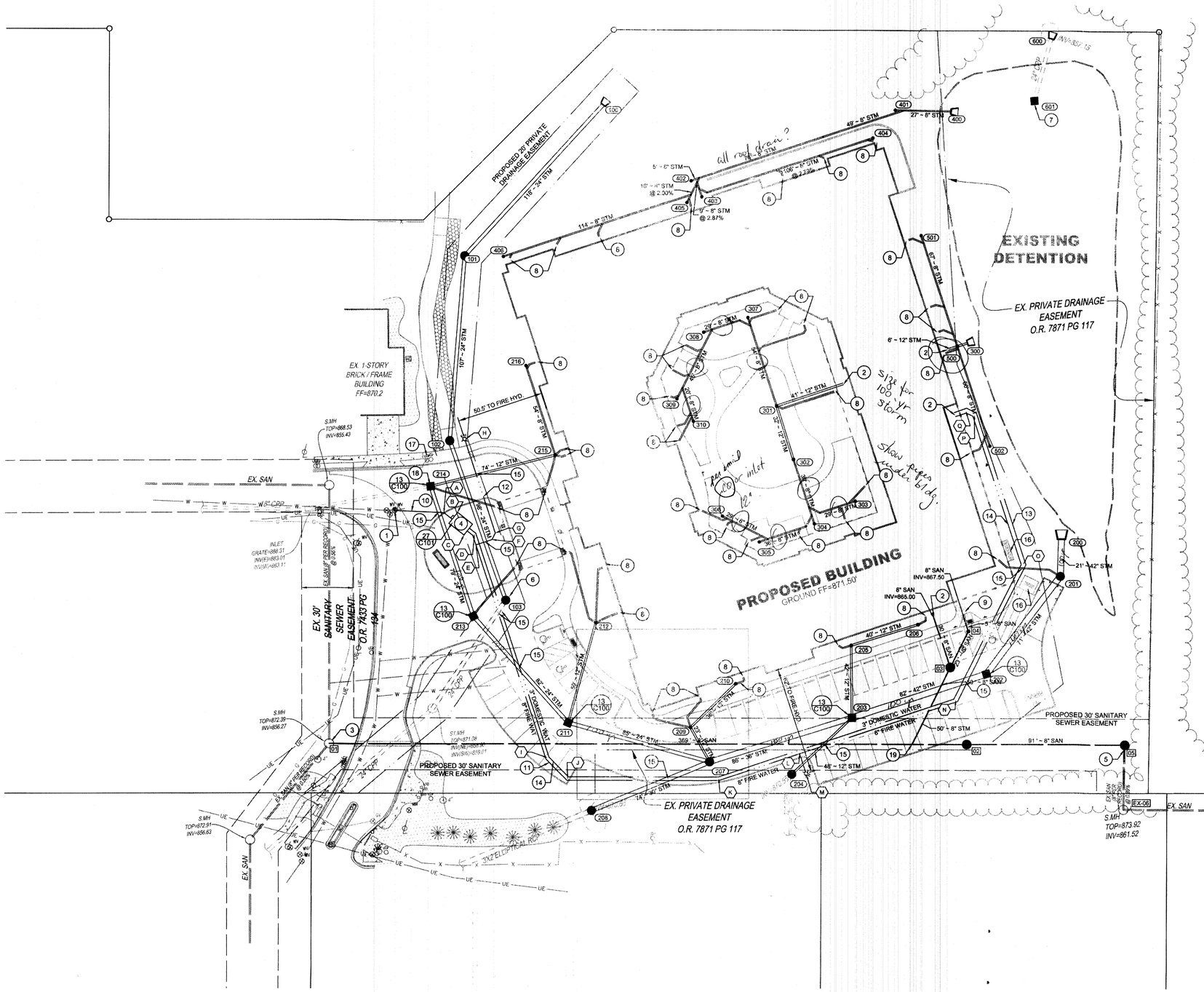
FINAL P.U.D.
CLARITY POINTE MEMORY CARE
SECTION 7, TOWN 3, RANGE 3
LIBERTY TOWNSHIP
BUTLER COUNTY, OHIO
FOR: HERITAGE DEVELOPMENT PARTNERS, LLC

PROJECT NO: 150275.000
DATE: 8/14/15
SCALE: 1" = 30'
0 15 30 60

SHEET NAME: **LOCATION PLAN**

SHEET NO. **C130**

INSPIRED PEOPLE ▲ CREATIVE DESIGN ▲ TRANSFORMING COMMUNITIES



UTILITY PLAN LEGEND:

123	STORM SEWER STRUCTURE
08	SANITARY SEWER STRUCTURE
A	WATER APPURTANCE NOTE
8	UTILITY KEY NOTE

UTILITY KEY NOTES:

1. CONNECT TO PROPOSED WATER WITH NEW TAP, VALVE, AND BRANCH PER BUTLER COUNTY STANDARDS.
2. CONTRACTOR TO STOP PROPOSED UTILITIES 5' OUTSIDE FACE OF PROPOSED BUILDING. FOR BUILDING UTILITY CONNECTION DETAILS REFER TO MECHANICAL PLUMBING PLANS.
3. CONNECT TO EXISTING SANITARY MANHOLE. CORE DRILL PER BUTLER COUNTY STANDARDS.
4. WATER METER PIT PER BUTLER COUNTY STANDARDS.
5. CONNECT TO EXISTING SANITARY WITH NEW MANHOLE PER BUTLER COUNTY STANDARDS.
6. CONNECT TO EXISTING STORM WITH NEW STORM MANHOLE.
7. INSTALL NEW CB OUTLET STRUCTURE TO EX 24" STORM.
8. CONNECT ROOF STORM TO 8" DOWNSPOUT LEADER AS SHOWN. 8" STM INV = 867.50'. REFER TO ARCHITECTURAL & MECHANICAL PLANS FOR DOWNSPOUT AND ROOF DRAIN DETAILS.
9. SEE MECHANICAL PLANS FOR GREASE INTERCEPTOR DETAILS.
10. 51 LF OF 8" DUCTILE IRON PIPE WATER LINE TO WATER METER.
11. 294 LF OF 8" DUCTILE IRON PIPE FIRE SERVICE.
12. 70 LF OF 6" DUCTILE IRON PIPE FIRE SERVICE.
13. 291 LF OF 6" DUCTILE IRON PIPE FIRE SERVICE.
14. 575 LF OF 3" DUCTILE IRON PIPE DOMESTIC SERVICE.
15. CONTRACTOR TO DIP PROPOSED WATERLINE UNDERNEATH STORM SEWER AND MAINTAIN 18" OF CLEARANCE FROM BOTTOM OF STORM PIPE TO TOP OF WATER PIPE.
16. REFER TO ELECTRICAL PLANS FOR GENERATOR AND TRANSFORMER DETAILS.
17. ADJUST IRRIGATION CONTROL VALVE LIDS TO PROPOSED GRADE. SEE GRADING PLAN SHEET C150 FOR PROPOSED ELEVATION DETAIL.
18. CONNECT TO EXISTING STORM SEWER WITH NEW CATCH BASIN.
19. CONNECT TO PROPOSED SANITARY MAIN WITH WYE PER BUTLER COUNTY STANDARDS.

WATER APPURTENANCE NOTES:

A.	8" 45.0° BEND
B.	WATER METER PIT NORTH CORNER
C.	WATER METER PIT NORTH CORNER
D.	3" 33.75° BEND
	8" 33.75° BEND
E.	8" x 8" x 6" TEE
F.	6" 45.00° BEND
G.	6" 45.00° BEND
H.	FIRE HYDRANT & W.V. ASSEMBLY
I.	3" 22.50° TOTAL BEND
	8" 22.50° TOTAL BEND
J.	3" 45.00° TOTAL BEND
	8" 45.00° TOTAL BEND
K.	3" 22.50° BEND
	8" 22.50° BEND
L.	8" x 6" x 6" TEE
M.	FIRE HYDRANT & W.V. ASSEMBLY
N.	3" 45.00° BEND
	6" 45.00° BEND
O.	3" 45.00° BEND
	6" 45.00° BEND
P.	3" 45.00° BEND
	6" 45.00° BEND
Q.	3" 45.00° BEND
	6" 45.00° BEND

UTILITY GENERAL NOTES:

1. CONTRACTOR TO FIELD VERIFY ALL EXISTING UTILITIES BEFORE CONSTRUCTION.

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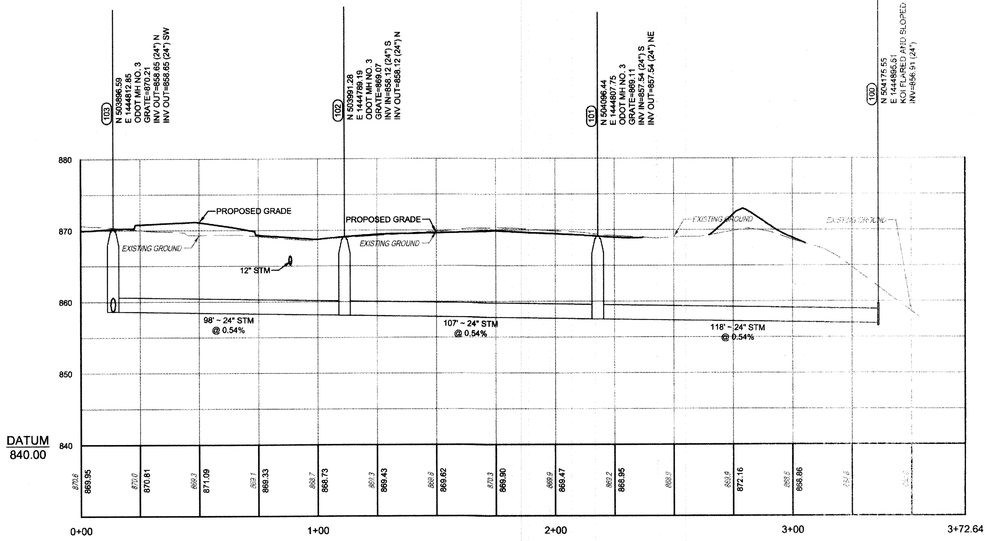
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CLARITY POINTE MEMORY CARE
SECTION 7, TOWN 3, RANGE 3
LIBERTY TOWNSHIP
BUTLER COUNTY, OHIO
FOR: HERITAGE DEVELOPMENT PARTNERS, LLC

PROJECT NO: 150275.000
DATE: 8/14/15
SCALE: 1" = 30'
0 15 30 60

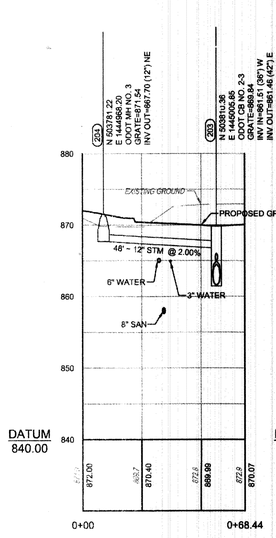
SHEET NAME: **UTILITY PLAN**

SHEET NO. **C140**

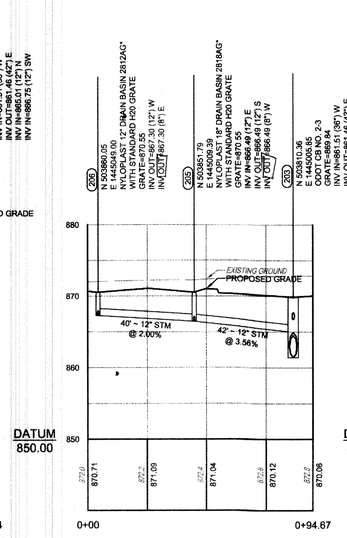
INSPIRED PEOPLE ▲ CREATIVE DESIGN ▲ TRANSFORMING COMMUNITIES



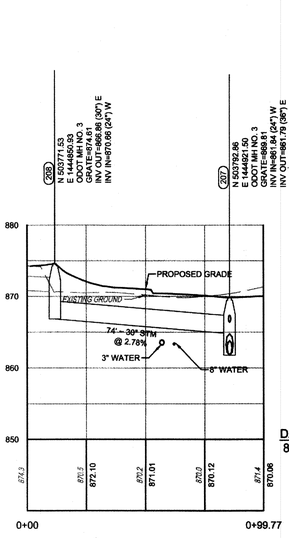
1 C141 MH-103 TO MH-100



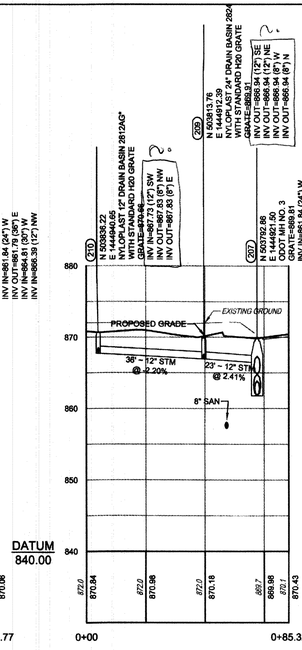
2 C141 CB-204 TO CB-203



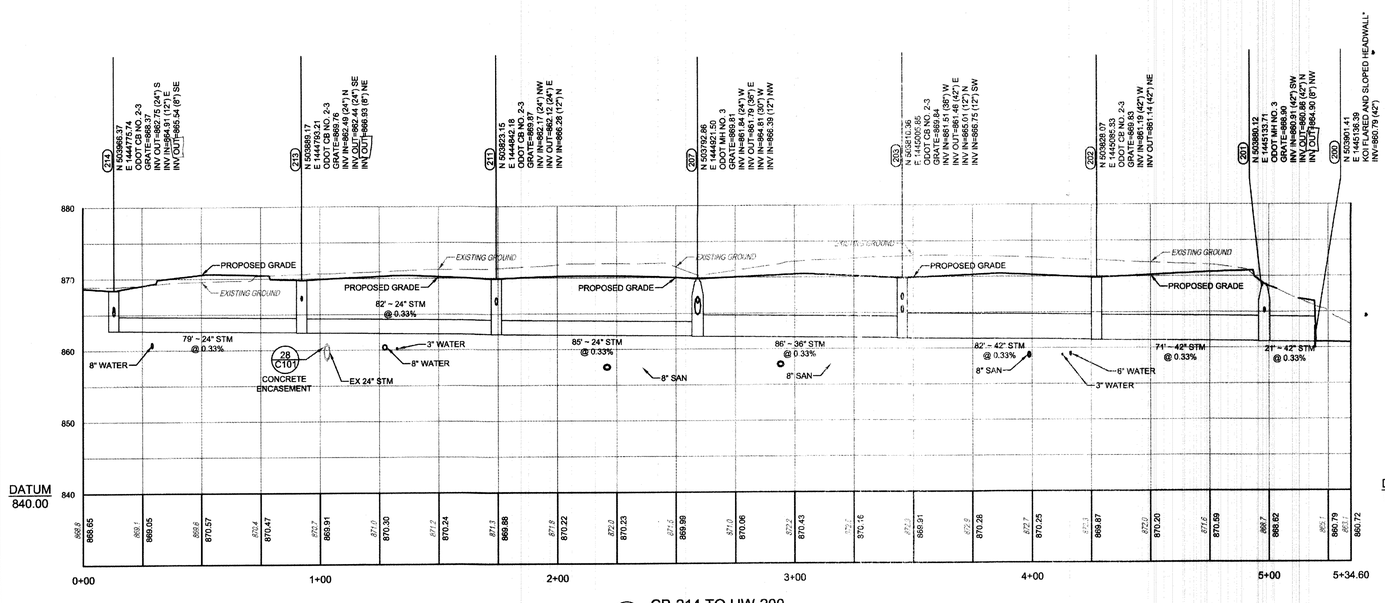
3 C141 YD-206 TO CB-203



4 C141 MH 208 TO MH-207



5 C141 YD-210 TO MH-207



6 C141 CB-214 TO HW-200

7 C141 YD-212 TO CB-211

8 C141 CO-216 TO CB-214

Structure 209. 2/D need clarification
- roof drain connections to a structure should be labeled as IN (as written above it's the structure)

all roof drains (conf. w/ A.)

N ref

If drainage area accounted for in YD unless all roof drains tied to ground map

*OR APPROVED EQUAL

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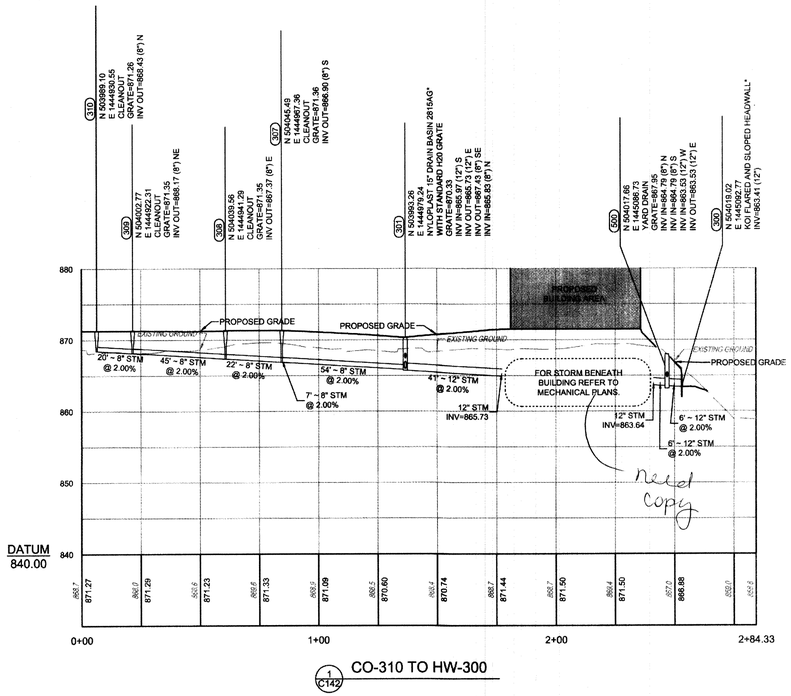
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PROJECT NO: 150275.000
DATE: 8/14/15
SCALE: H: 1" = 30' V: 1" = 10'
V 0 5 10 20
H 0 15 30 60

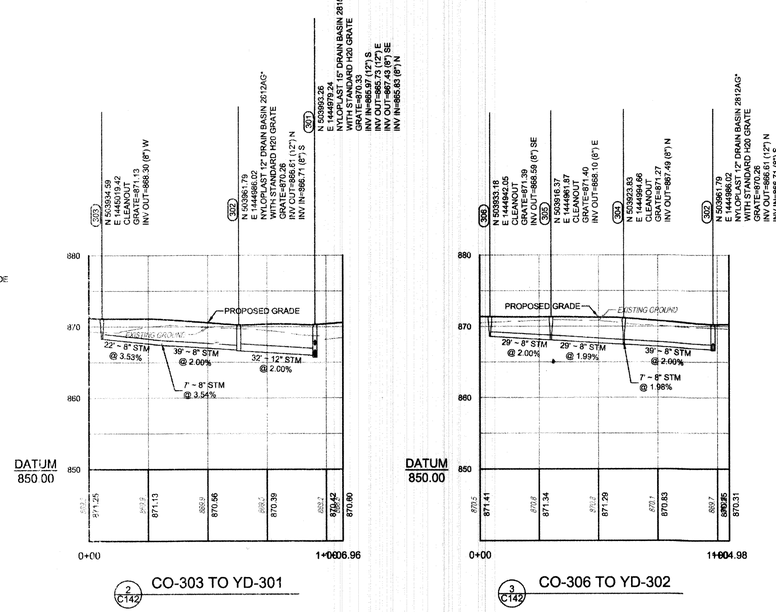
SHEET NAME: **STORM SEWER PROFILES**

SHEET NO. **C141**

INSPIRED PEOPLE ▶ CREATIVE DESIGN ▶ TRANSFORMING COMMUNITIES

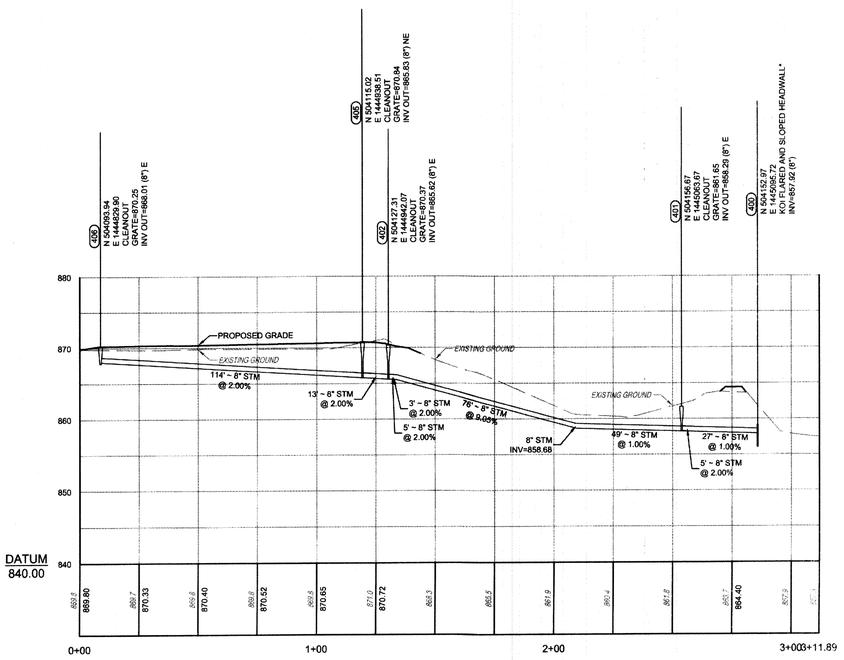


1 C142 CO-310 TO HW-300

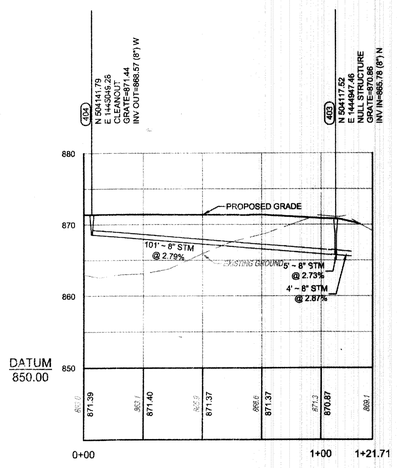


2 C142 CO-303 TO YD-301

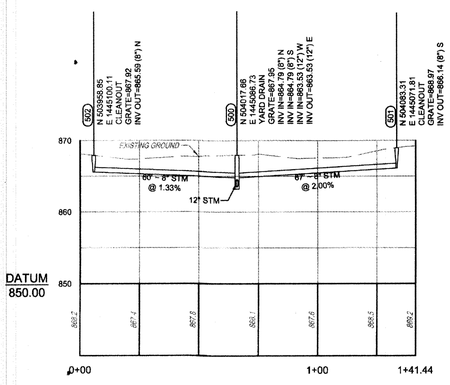
3 C142 CO-306 TO YD-302



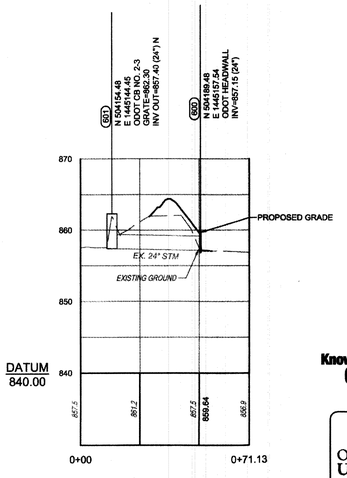
4 C142 CO-407 TO HW-400



5 C142 CO-404 TO CO-402



6 C142 CO-502 AND CO-501 TO CO-500



7 C142 CB-601 TO HW-600

*OR APPROVED EQUAL

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9/22/15

SEAL: STATE OF OHIO STEVEN M. KORTE E-61033 REGISTERED PROFESSIONAL ENGINEER

NO.	DATE	DESCRIPTION
1	6/12/2015	PRELIMINARY P.U.D. - MAJOR MOD.
2	8/14/2015	FINAL P.U.D.

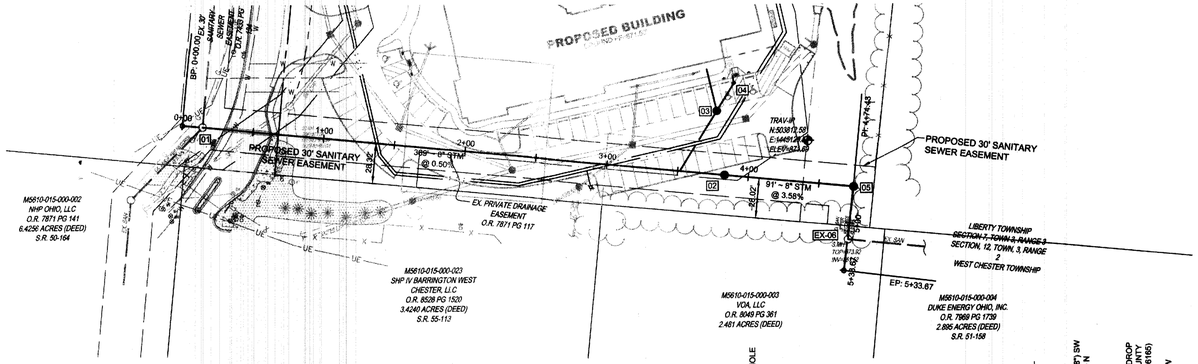
FINAL P.U.D.
CLARITY POINTE MEMORY CARE
SECTION 7, TOWN 3, RANGE 3
LIBERTY TOWNSHIP
BUTLER COUNTY, OHIO
FOR: HERITAGE DEVELOPMENT PARTNERS, LLC

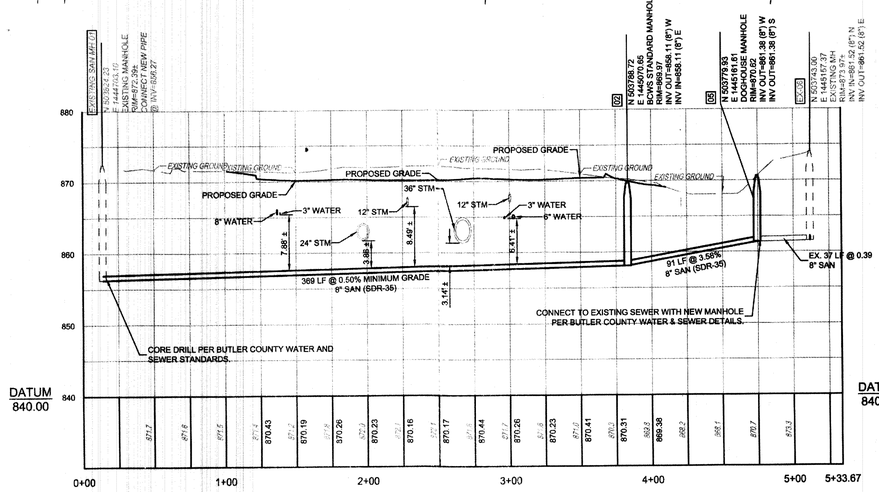
PROJECT NO: 150275.000
DATE: 8/14/15
SCALE: H: 1" = 30' V: 1" = 10'
V 0 5 10 20
H 0 15 30 60

SHEET NAME: **STORM SEWER PROFILES**

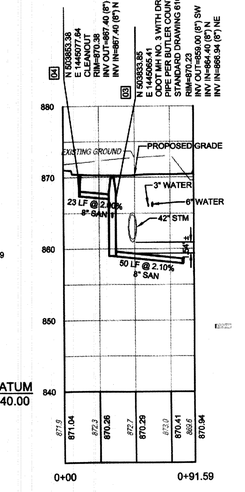
SHEET NO. **C142**

INSPIRED PEOPLE ▲ CREATIVE DESIGN ▲ TRANSFORMING COMMUNITIES

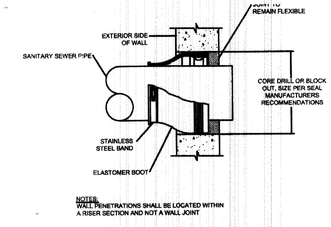




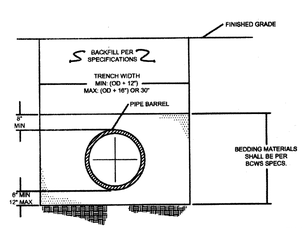
1 C143 SAN MH-5 TO SAN MH-1



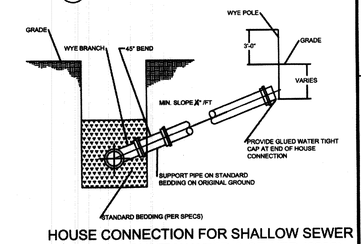
2 C143 SAN CO-4 TO SAN MH-2



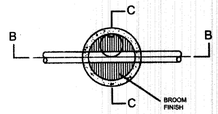
CONNECTION TO EXISTING MANHOLE
BUTLER COUNTY WATER & SEWER (6150)
N.T.S.
3 C143



TYPICAL TRENCH DETAIL SEWER INSTALLATION
BUTLER COUNTY WATER & SEWER (6270)
N.T.S.
4 C143

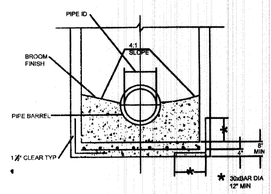


HOUSE CONNECTION FOR SHALLOW SEWER
BUTLER COUNTY WATER & SEWER (6290)
N.T.S.
5 C143

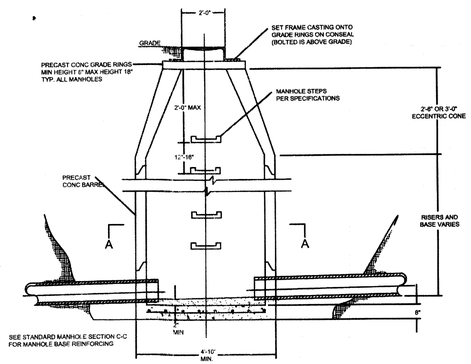


SECTION A - A

M.H. DEPTH	SLAB & DOWELL REBTEEL SQ. IN./FT. E.W.
0-10'	0.17
11'-20'	0.22
21'-30'	0.27
31'-40'	0.32



SECTION C - C



SECTION B - B

STANDARD MANHOLE - BUTLER COUNTY WATER & SEWER (6200)
N.T.S.
6 C143

BUTLER COUNTY SEWER NOTES
SEE GENERAL NOTES SHEET C100 FOR BUTLER COUNTY WATER AND SEWER GENERAL NOTES

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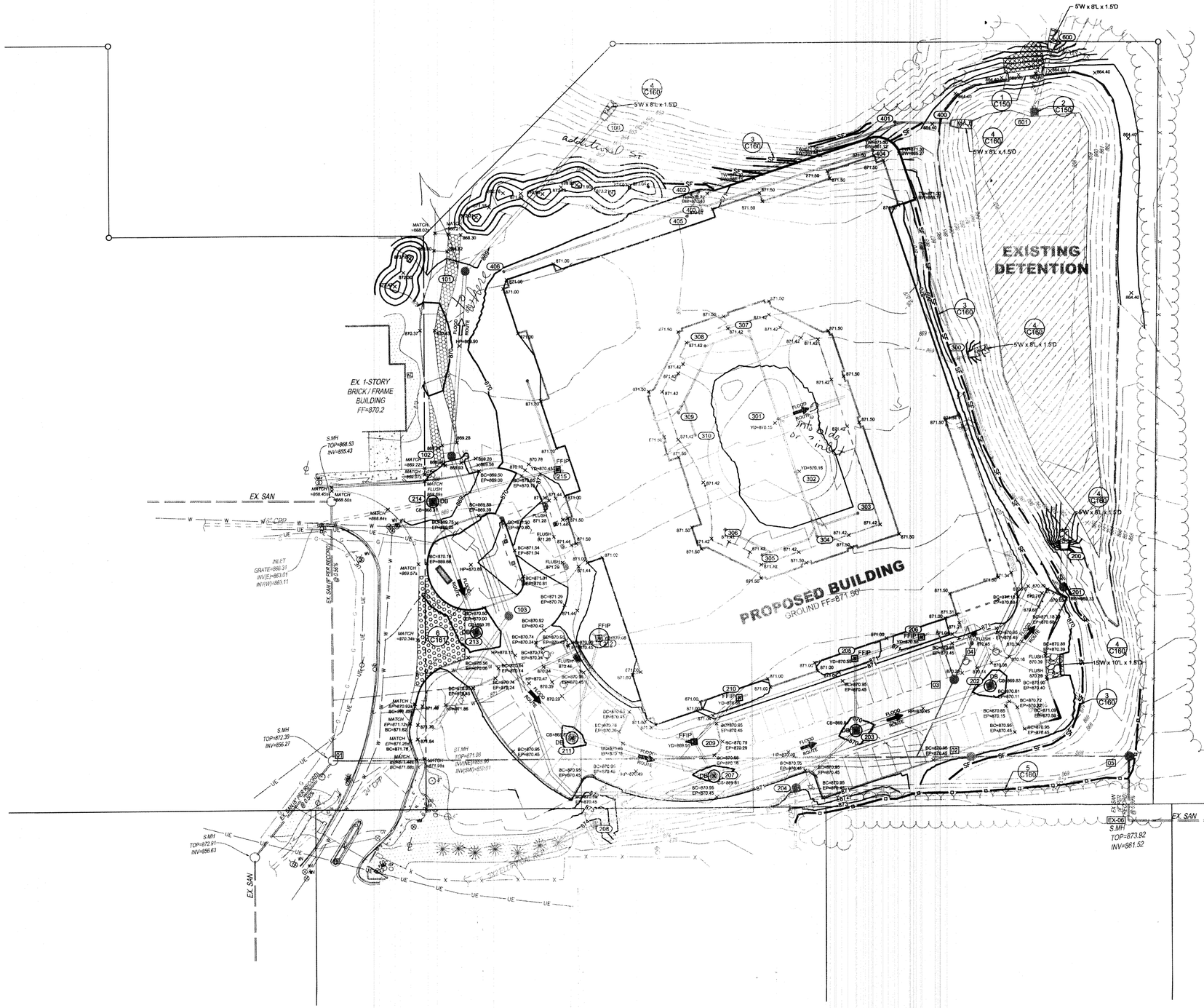
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BUTLER COUNTY, OHIO
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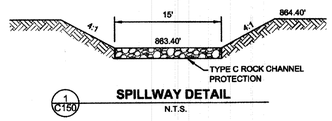
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V 0 5 10 20
H 0 25 50 100

SHEET NAME:
SANITARY SEWER PROFILES

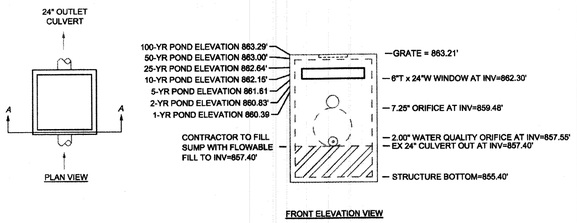
SHEET NO.
C143

INSPIRED PEOPLE ▲ CREATIVE DESIGN ▲ TRANSFORMING COMMUNITIES





1 C150 **SPILLWAY DETAIL**
N.T.S.



* MODIFIED ODOT TYPE CB 2-3

2 C150 **DETENTION CONTROL STRUCTURE (CB-601)**
N.T.S.

GRADING PLAN LEGEND:

1 C160 — DB	DANDY BAG SEE DETAIL
2 C160 — FFIP	FILTER FABRIC INLET PROTECTION
3 C160 — SF	SILT FENCE
4 C160	ODOT ROCK CHANNEL PROTECTION
5 C160	TREE PROTECTION
6 C161	CONTRUCTION ENTRANCE
× 685.15	PROPOSED ELEVATION
× *685.15*	EXISTING ELEVATION
FLOOD ROUTE	FLOOD ROUTE ARROW (IN PIPE)
FLOOD ROUTE	FLOOD ROUTE ARROW (OVERLAND)
BC	BACK OF CURB
BW / TW	BOTTOM & TOP OF WALL
EP	EDGE OF PAVEMENT
	DRAINAGE DIRECTION
	DO NOT DISTURB BOTTOM OF DETENTION BASIN
	ODOT TYPE-C 670 TEMPORARY EROSION CONTROL MATTING

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2	8/14/2015	FINAL P.U.D.

FINAL P.U.D.

CLARITY POINTE MEMORY CARE

SECTION 7, TOWN 3, RANGE 3
LIBERTY TOWNSHIP
BUTLER COUNTY, OHIO
FOR: HERITAGE DEVELOPMENT PARTNERS, LLC

PROJECT NO: 150275.000
DATE: 8/14/15
SCALE: 1" = 30'
0 15 30 60

SHEET NAME: **GRADING AND EROSION CONTROL PLAN**

SHEET NO. **C150**

INSPIRED PEOPLE ▲ CREATIVE DESIGN ▲ TRANSFORMING COMMUNITIES

1. DESCRIPTION OF CONSTRUCTION:

SITE RESTORATION AS A RESULT OF THE CONSTRUCTION OF A NEW MEMORY HEALTHCARE FACILITY IN LIBERTY TOWNSHIP, BUTLER COUNTY, OHIO. SITE WORK INCLUDES THE CONSTRUCTION OF ASPHALT PAVEMENT, CURB AND WALK, WATER LINE, STORM SEWER, AND SANITARY SEWER. SOIL DISTURBING ACTIVITIES WILL INCLUDE: CLEARING AND GRUBBING, INSTALLATION OF EROSION AND SEDIMENT CONTROLS, GRADING, AND THE PREPARATION FOR FINAL SEEDING.

2. AREA AFFECTED BY CONSTRUCTION:

AREA AFFECTED IS 4.00 ACRES

3. EXISTING SOIL DATA:

SOIL SYMBOL	SOIL DESCRIPTION
FcB	FINCASTLE SILT LOAM, 2 TO 6 PERCENT SLOPES
MsC2	MIAMIAN-RUSSELL SILT LOAM, 6 TO 12 PERCENT SLOPES, MODERATELY ERODED

4. RECEIVING WATERS:

UNNAMED TRIBUTARY TO LITTLE MUDDY CREEK.

5. POTENTIAL POLLUTION SOURCES:

THE MAIN POLLUTION SOURCE WOULD BE FROM THE SOIL DISTURBING ACTIVITIES EXPLAINED IN ITEM #1

6. RUNOFF COEFFICIENTS:

POST: C=0.90 FOR BUILDINGS AND PAVEMENT, C=0.30 FOR PERVIOUS AREAS

7. PROJECT SCHEDULE AND SEQUENCE:

BEGIN: TO BE DETERMINED

END: TO BE DETERMINED

A. INSTALL EROSION CONTROL MEASURES

B. GRADE THE SITE AND STOCKPILE TOPSOIL MINIMIZING THE DISTURBANCE OF EXISTING VEGETATION

C. STABILIZE DENUDED AREAS AND STOCKPILES WITHIN 7 DAYS OF THE LAST CONSTRUCTION ACTIVITY IN THAT AREA

D. INSTALL UTILITIES, STORM SEWER

E. COMPLETE FINAL PAVING

F. COMPLETE GRADING AND INSTALL PERMANENT SEEDING

G. WHEN ALL CONSTRUCTION ACTIVITY IS COMPLETE AND THE SITE IS STABILIZED, REMOVE EROSION CONTROL MEASURES AND RESEED ANY AREAS DISTURBED BY THEIR REMOVAL

8. CONTROL MEASURES FOR STORM WATER RUNOFF, EROSION AND SEDIMENT:

STABILIZATION OF DENUDED AREAS AND SOIL STOCKPILES

PERMANENT OR TEMPORARY SOIL STABILIZATION WILL BE APPLIED TO DENUDED AREAS WITHIN 7 DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE. SOIL STABILIZATION WILL ALSO BE APPLIED TO DENUDED AREAS WHICH MAY NOT BE AT FINAL GRADE BUT WILL REMAIN UNDISTURBED FOR MORE THAN 45 DAYS. APPLICABLE PRACTICES INCLUDE VEGETATIVE ESTABLISHMENT, MULCHING, AND THE EARLY APPLICATION OF GRAVEL BASE ON AREAS TO BE PAVED. SOIL STABILIZATION MEASURES WILL BE SELECTED TO BE APPROPRIATE FOR THE TIME OF YEAR, SITE CONDITIONS, AND ESTIMATED DURATION OF USE. SOIL STOCKPILES WILL BE STABILIZED OR PROTECTED WITH SEDIMENT TRAPPING MEASURES TO PREVENT SOIL LOSS.

ESTABLISHMENT OF PERMANENT VEGETATION

A PERMANENT VEGETATIVE COVER WILL BE ESTABLISHED ON DENUDED AREAS NOT OTHERWISE PERMANENTLY STABILIZED. PERMANENT VEGETATION WILL NOT BE CONSIDERED ESTABLISHED UNTIL A GROUND COVER IS ACHIEVED WHICH IS MATURE ENOUGH TO CONTROL SOIL EROSION SATISFACTORILY AND TO SURVIVE SEVERE WEATHER CONDITIONS. (SEE VEGETATIVE PRACTICES - ITEM 10).

PROTECTION OF ADJACENT PROPERTIES
PROPERTIES ADJACENT TO THE SITE OF LAND DISTURBANCE WILL BE PROTECTED FROM SEDIMENT DEPOSITION. THIS WILL BE ACCOMPLISHED BY PRESERVING A WELL VEGETATED BUFFER STRIP AROUND THE LOWER PERIMETER OF LAND DISTURBANCE, BY INSTALLING PERIMETER CONTROLS SUCH AS SEDIMENT TRAPS, FILTERS OR DIKES, OR SEDIMENT BASINS, OR BY A COMBINATION OF SUCH MEASURES. VEGETATED FILTER STRIPS MAY BE USED ALONE ONLY WHERE RUNOFF IN SHEET FLOW IS EXPECTED. FILTER STRIPS SHOULD BE AT LEAST 15 FEET IN WIDTH. IF AT ANY TIME IT IS FOUND THAT A VEGETATED FILTER STRIP ALONE IS INEFFECTIVE IN STOPPING SEDIMENT MOVEMENT INTO ADJACENT PROPERTY, ADDITIONAL PERIMETER CONTROLS MUST BE PROVIDED.

TIMING AND STABILIZATION OF SEDIMENT TRAPPING MEASURES

SEDIMENT BASINS, DIVERSIONS, SEDIMENT TRAPS, AND OTHER MEASURES INTENDED TO TRAP SEDIMENT ON-SITE WILL BE CONSTRUCTED AS A FIRST STEP IN GRADING AND BE MADE FUNCTIONAL BEFORE UPSLOPE LAND DISTURBANCE TAKES PLACE. EARTHEN STRUCTURES SUCH AS DAMS, DIKES, AND DIVERSIONS WILL BE SEEDED AND MULCHED AFTER INSTALLATION.

SEDIMENT BASINS
STORMWATER RUNOFF CONTAINING DAMAGING AMOUNTS OF SEDIMENT SHALL PASS THROUGH A SEDIMENT BASIN OR OTHER SUITABLE SEDIMENT TRAPPING FACILITY.

CUT AND FILL SLOPES

CUT AND FILL SLOPES WILL BE DESIGNED AND CONSTRUCTED IN A MANNER WHICH WILL MINIMIZE EROSION. SLOPES WHICH ARE FOUND TO BE ERODING EXCESSIVELY WITHIN ONE YEAR OF CONSTRUCTION WILL BE PROVIDED WITH ADDITIONAL SLOPE STABILIZING MEASURES UNTIL THE PROBLEM IS CORRECTED.

STORMWATER MANAGEMENT

CONCENTRATED STORMWATER RUNOFF LEAVING THE SITE WILL BE DISCHARGED DIRECTLY INTO A WELL DEFINED ADEQUATELY PROTECTED NATURAL OR MAN-MADE OFF SITE RECEIVING CHANNEL OR PIPE. IF NO OFF SITE CHANNEL OR PIPE EXISTS, THE STORMWATER WILL BE DETAINED ON SITE IN A SUITABLE RETENTION/DETENTION FACILITY.

STORM SEWER INLET PROTECTION

ALL STORM SEWER INLETS WHICH ARE MADE OPERABLE DURING CONSTRUCTION WILL BE PROTECTED SO THAT SEDIMENT-LADEN WATER WILL NOT ENTER THE CONVEYANCE SYSTEM WITHOUT FIRST BEING FILTERED OR OTHERWISE TREATED TO REMOVE SEDIMENT.

WORKING IN OR CROSSING WATERCOURSES

CONSTRUCTION VEHICLES WILL BE KEPT OUT OF WATERCOURSES WHENEVER POSSIBLE. WHERE IN-CHANNEL WORK IS NECESSARY, PRECAUTIONS WILL BE TAKEN TO STABILIZE THE WORK AREA DURING CONSTRUCTION TO MINIMIZE EROSION. THE CHANNEL (INCLUDING BED AND BANKS) WILL ALWAYS BE RE-STABILIZED IMMEDIATELY AFTER IN-CHANNEL WORK IS COMPLETED. WHERE A LIVE WATERCOURSE MUST BE CROSSED BY CONSTRUCTION VEHICLES REGULARLY DURING CONSTRUCTION, A TEMPORARY STREAM CROSSING WILL BE PROVIDED.

DISPOSITION OF TEMPORARY MEASURES

ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES WILL BE DISPOSED OF AFTER FINAL SITE STABILIZATION IS ACHIEVED OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED. TRAPPED SEDIMENT AND OTHER DISTURBED SOIL AREAS RESULTING FROM THE DISPOSITION OF TEMPORARY MEASURES WILL BE PERMANENTLY STABILIZED TO PREVENT EROSION AND SEDIMENTATION.

MAINTENANCE
ALL TEMPORARY AND PERMANENT EROSION AND SEDIMENT CONTROL MEASURES WILL BE MAINTAINED AND REPAIRED AS NEEDED TO ASSURE CONTINUED PERFORMANCE OF THEIR INTENDED FUNCTION.

i.e. STORM INLET PROTECTION
INLET STRUCTURES SHALL BE INSPECTED AFTER EACH RAIN AND REPAIRS MADE AS NEEDED. SEDIMENT SHALL BE REMOVED AND THE INLET PROTECTION SHALL BE RESTORED TO ITS ORIGINAL WORKING CONDITION. AT NO TIME SHALL MORE THAN A 2" BUILD UP OF SEDIMENT REMAIN AROUND THE INLET PROTECTION.

i.e. FILTER STRIPS
A HEALTHY GROWTH OF VEGETATION CAN BEST BE MAINTAINED BY FERTILIZING, REMOVING SEDIMENT WHEN FILTER BECOMES CLOGGED, AND BY PREVENTING CONSTRUCTION TRAFFIC FROM DRIVING ACROSS FILTER STRIPS.

i.e. SILT FENCES AND FILTER BARRIERS
SILT FENCES AND FILTER BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.

i.e. STRAW BALE BARRIERS
STRAW BALE BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY.

9. CONSTRUCTION CONTROL PRACTICES:

SILT FENCES (SF) SEE SILT FENCE DETAIL

MATERIAL: SYNTHETIC FILTER FABRIC SHALL BE A SHEET OF PROPYLENE, NYLON, POLYESTER OR ETHYLENE YARN AND SHALL BE CERTIFIED BY THE MANUFACTURER OR SUPPLIER AS CONFORMING TO THE FOLLOWING REQUIREMENTS.

PHYSICAL PROPERTY	REQUIREMENTS
FILTERING EFFICIENCY	75 PERCENT (MIN.)
TENSILE STRENGTH AT 20% (MAX.) ELONGATION	EXTRA STRENGTH 50 lbs/lin. in. (MIN.)
	STANDARD STRENGTH 30 lbs/lin. in. (MIN.)
FLOW RATE	0.3 gal./sq. ft./min. (MIN.)

* REQUIREMENTS REDUCED BY 50% AFTER 6 MONTHS OF INSTALLATION.

SYNTHETIC FILTER FABRIC SHALL CONTAIN ULTRAVIOLET RAY INHIBITORS AND STABILIZERS TO PROVIDE A MINIMUM OF 6 MONTHS OF EXPECTED USABLE CONSTRUCTION LIFE AT A TEMPERATURE OF ZERO DEGREES F TO 120 DEGREES F.

BURLAP SHALL BE 10 OUNCES PER SQ. YD. OF FABRIC. POSTS FOR SILT FENCES SHALL BE EITHER 2" x 2" WOOD OR STEELWITH A MIN. LENGTH OF 5 FEET. STEEL POSTS SHALL HAVE PROJECTIONS FOR FASTENING WIRE TO THEM. WIRE FENCE REINFORCEMENT FOR SILT FENCES USING STANDARD STRENGTH FILTER CLOTH SHALL BE A MIN. OF 42 INCHES IN HEIGHT, A MIN. OF 14 GA. AND SHALL HAVE A MAX. MESH SPACING OF 6 INCHES.

THE STANDARD STRENGTH FILTER FABRIC SHALL BE STAPLED OR WIRED TO THE FENCE, AND 8 INCHES OF THE FABRIC SHALL BE EXTENDED INTO THE TRENCH. THE FABRIC SHALL NOT EXCEED 36 INCHES ABOVE THE ORIGINAL GROUND SURFACE. FILTER FABRIC SHALL NOT BE STAPLED TO EXISTING TREES.

FENCE POST SPACING SHALL NOT EXCEED 6 FEET. WHEN EXTRA STRENGTH FILTER FABRIC AND CLOSER POST SPACING ARE USED, THE WIRE MESH SUPPORT FENCE MAY BE ELIMINATED. IN SUCH A CASE, THE FILTER FABRIC IS STAPLED OR WIRED DIRECTLY TO THE POSTS WITH ALL OTHER PROVISIONS APPLYING.

DANDY BAG (DB)

(SEE DETAIL THIS SHEET)

10. VEGETATIVE PRACTICES:

SEEDING MIXTURE AND SITE SUITABILITY CHART

SEEDING MIXTURE1	RATE lbs/acre	WET2	WELL DRAINED3
1. Alfalfa4/	10	*	
or Red Clover	10		
plus			
Timothy	4		
or Orchardgrass	6		
or Bromegrass	6		
2. Ladino Clover4/	1/2	*	*
plus			
Timothy	4		
or Orchardgrass	6		
or Bromegrass	8		
3. Tall Fescue	40	*	*
4. Reed Canarygrass	15	*	
plus			
Tall Fescue	10		

1) ALL PERMANENT SEEDING SHALL BE COMPLETED BETWEEN APRIL 1 TO MAY 15, OR AUGUST 15 TO SEPTEMBER 30. IF AN ALTERNATE SEEDING TIME IS NECESSARY, FOLLOW THE SPECIFICATIONS CONTAINED IN CRITICAL AREA PLANTING - DORMANT SEEDING FOR METHODS, TIMING AND RATE ADJUSTMENTS.

2) INCLUDES SITES WHICH ARE EXCESSIVELY WET ONLY A PORTION OF THE GROWING SEASON.

3) INCLUDES SITES WHICH ARE WELL DRAINED WITH TILE; ALSO NATURALLY WELL DRAINED AND DROUGHTY SITES.

4) MIXTURES 1 AND 2 ARE MORE DESIRABLE FOR WILDLIFE HABITAT.

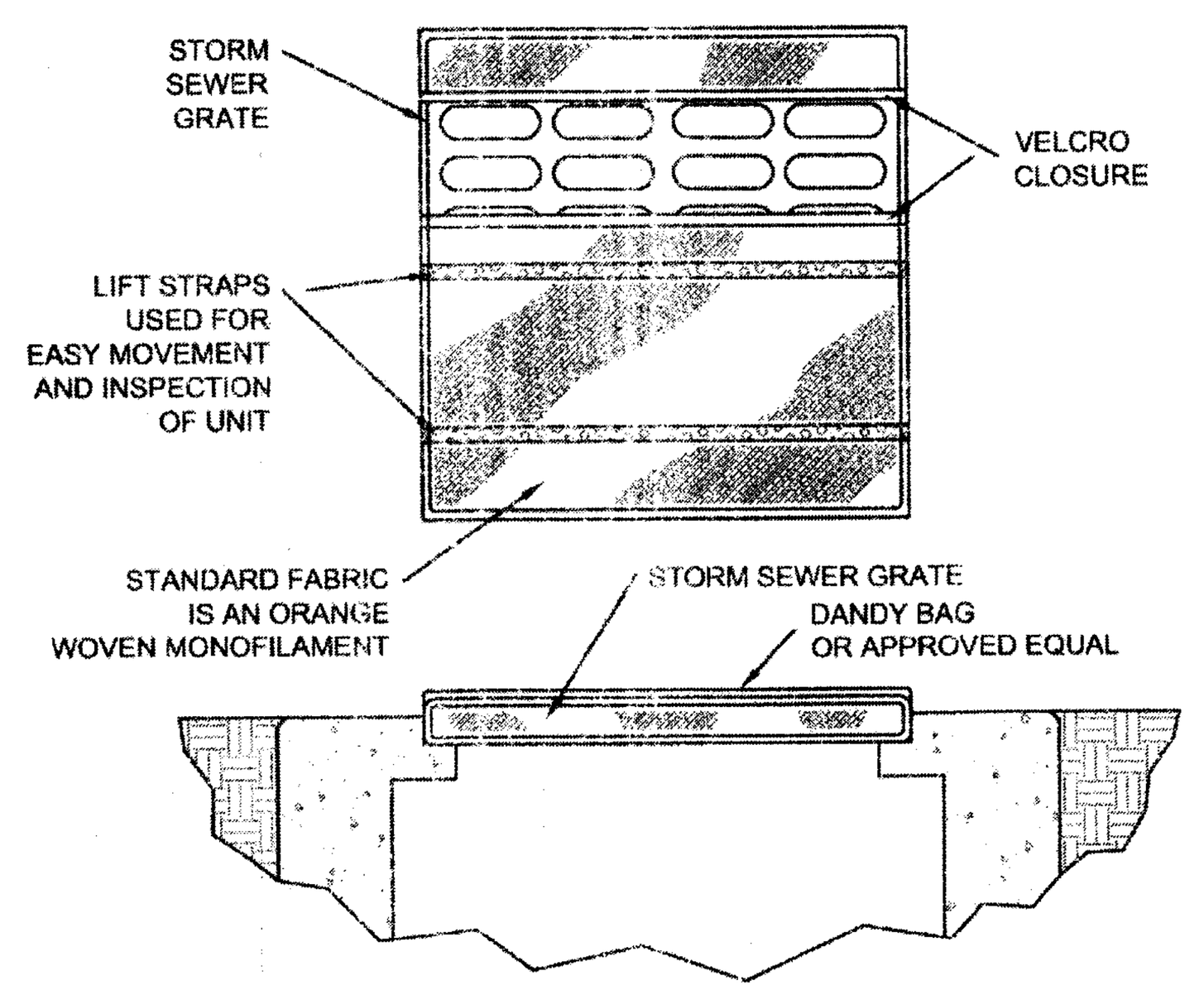
GRASS SELECTION AND ESTABLISHMENT:

A. TALL FESCUE--SEED AT A RATE OF 40 lbs./ACRE (1 lb./100 SQ. FT.) AND MULCH WITH STRAW AT A RATE OF 2 TONS PER ACRE (90 lbs./1000 SQ. FT.). ESTABLISH BETWEEN APRIL 1 TO MARCH 15 OR AUGUST 1 TO SEPTEMBER 30. COVER THE SEED 1/4-1/2 INCH BY RAKE OR SIMILAR TOOL. THIS IS THE MOST WIDELY USED AND BEST ADAPTED GRASS FOR STREAMBANK SEEDINGS. ITS HAS GOOD TOLERANCE TO WET SOILS AND FLOODING. IT IS ALSO WELL ADAPTED TO WELL DRAINED SOILS.

B. REED CANARYGRASS (PHALARIS ARUNDINACAE) PLUS TALL FESCUE--SEED THE REED CANARYGRASS AT A RATE OF 15 lbs./ACRE (1/3 lb./1000 SQ. FT.), PLUS 10 lbs./ACRE (1/4 lb./1000 SQ. FT.) OF TALL FESCUE. MULCH WITH STRAW AT A RATE OF 2 TONS/ACRE (90 lbs./1000 SQ. FT.). THIS MIXTURE SHOULD ONLY BE SEEDED FROM MARCH 1 TO MAY 15, OR AUGUST 15 TO SEPTEMBER 30. COVER THE SEED 1/4-1/2 INCH BY RAKING OR SIMILAR TOOL. THIS MIXTURE IS ADAPTABLE TO SOILS THAT ARE VERY WET AS WELL AS WELL DRAINED SOIL CONDITIONS. REED CANARYGRASS CAN WITHSTAND EXTENDED PERIODS OF FLOODING. IT IS EXCELLENT FOR EROSION CONTROL. REED CANARYGRASS CAN ALSO BE ESTABLISHED BY SOD STRIPS, USING RHIZIMES, OR FRESHLY CUT CULMS. THE LOCAL CONSERVATION SERVICE OFFICE CAN PROVIDE THE SPECIFIC DETAILS REQUIRED TO USE ONE OF THE ALTERNATIVE ESTABLISHMENT METHODS.

11. FINAL SITE STABILIZATION

FINAL SITE STABILIZATION IS CONSIDERED ACHIEVED ONCE ALL TEMPORARY EROSION AND SEDIMENT CONTROL PRACTICES ARE REMOVED AND DISPOSED OF AND ALL TRAPPED SEDIMENT HAS BEEN PERMANENTLY STABILIZED TO PREVENT FURTHER EROSION.



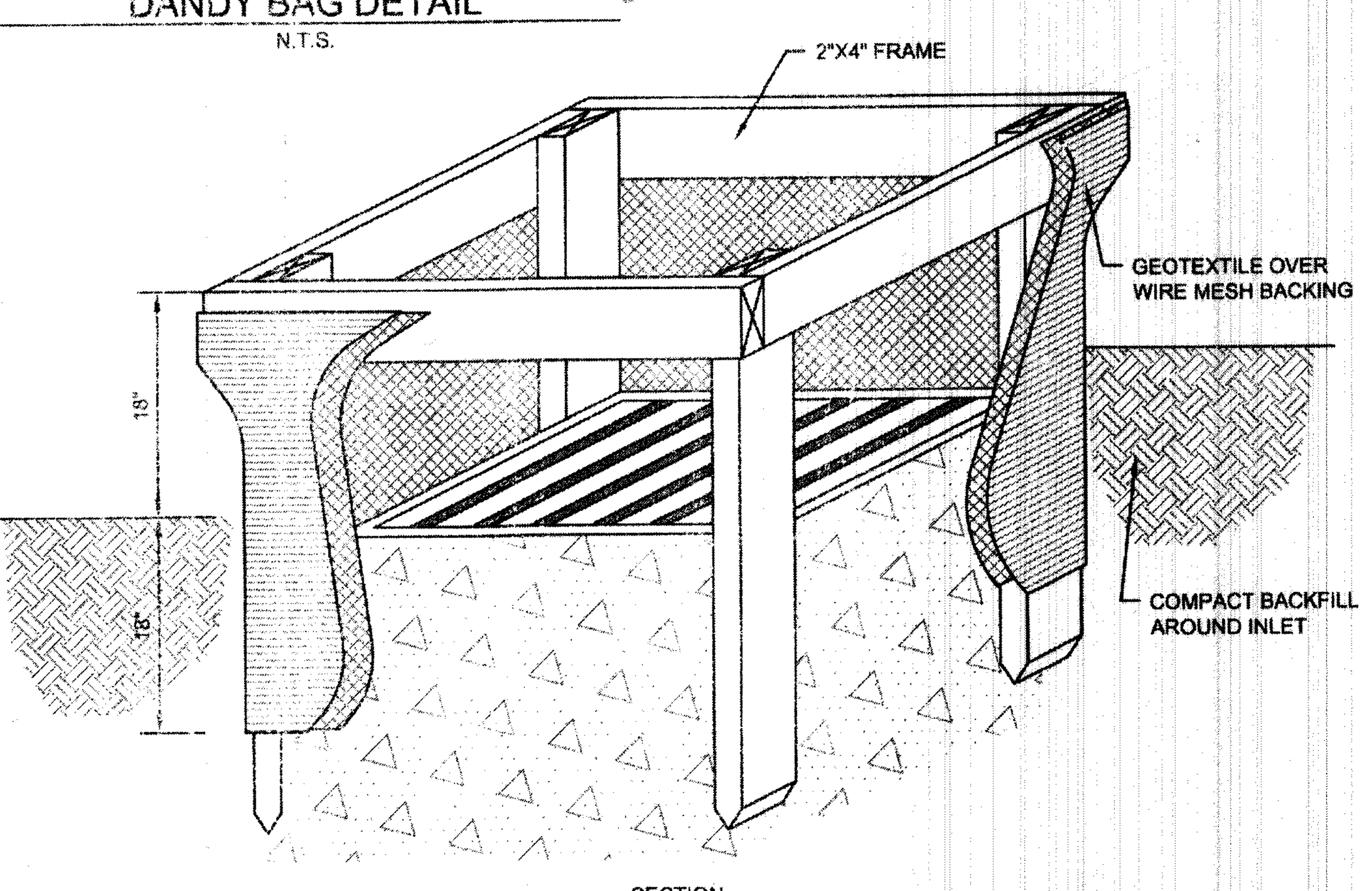
SPECIFICATIONS

MECHANICAL PROPERTIES	TEST METHOD	UNITS	MARV
GRAB TENSILE STRENGTH	ASTM D 4632	KN (LBS)	1.62 (365) X 0.89 (200)
GRAB TENSILE ELONGATION	ASTM D 4632	%	24 X 10
PUNCTURE STRENGTH	ASTM D 4833	KN (LBS)	0.40 (90)
MULLEN BURST STRENGTH	ASTM D 3786	KPA (PSI)	3097 (450)
TRAPEZOID TEAR STRENGTH	ASTM D 4533	KN (LBS)	0.51 (115) X 0.33 (75)
UV RESISTENCE	ASTM D 4355	%	90
APPARENT OPENING SIZE	ASTM D 4751	MM (US STD SIEVE)	0.425 (40)
FLOW RATE	ASTM D 4491	1/MIN/M²(GAL/MIN/FT²)	5907 (145)
PERMITTIVITY	ASTM D 4491	SEC⁻¹	2.1

INSTALLATION: THE EMPTY DANDY BAG SHOULD BE PLACED OVER THE GRATE AS THE GRATE STANDS ON END. IF USING OPTIONAL OIL ABSORBENTS: PLACE ABSORBENT PILLOW IN POUCH, ON THE BOTTOM (BELOW-GRADE SIDE) OF THE UNIT. ATTACH ABSORBENT PILLOW TO TETHER LOOP. TUCK THE ENCLOSURE FLAP INSIDE TO COMPLETELY ENCLOSE THE GRATE. HOLDING THE LIFTING DEVICES (DO NOT RELY ON LIFTING DEVICES TO SUPPORT THE ENTIRE WEIGHT OF THE GRATE), PLACE THE GRATE INTO ITS FRAME.

MAINTENANCE: REMOVE ALL ACCUMULATED SEDIMENT AND DEBRIS FROM SURFACE AND VICINITY OF UNIT AFTER EACH STORM EVENT. REMOVE SEDIMENT THAT HAS ACCUMULATED WITHIN THE CONTAINMENT AREA OF THE DANDY BAG AS NEEDED. IF USING OPTIONAL OIL ABSORBENTS; REMOVE AND REPLACE ABSORBENT PILLOW WHEN NEAR SATURATION.

(1/C160) DANDY BAG DETAIL
N.T.S.



NOTES:

1. INLET PROTECTION SHALL BE CONSTRUCTED EITHER BEFORE UPSLOPE LAND DISTURBANCE BEGINS OR BEFORE THE INLET BECOMES FUNCTIONAL.
2. THE EARTH AROUND THE INLET SHALL BE EXCAVATED COMPLETELY TO A DEPTH AT LEAST 18 INCHES.
3. THE WOODEN FRAME SHALL BE CONSTRUCTED OF 2-INCH BY 4-INCH CONSTRUCTION GRADE LUMBER. THE 2-INCH BY 4-INCH POSTS SHALL BE DRIVEN ONE (1) FT. INTO THE GROUND AT FOUR CORNERS OF THE INLET AND THE TOP PORTION OF 2-INCH BY 4-INCH FRAME ASSEMBLED USING THE OVERLAP JOINT SHOWN. THE TOP OF THE FRAME SHALL BE AT LEAST 6 INCHES BELOW ADJACENT ROADS IF PONDED WATER WILL POSE A SAFETY HAZARD TO TRAFFIC.
4. WIRE MESH SHALL BE OF SUFFICIENT STRENGTH TO SUPPORT FABRIC WITH WATER FULLY IMPOUNDED AGAINST IT. IT SHALL BE STRETCHED TIGHTLY AROUND THE FRAME AND FASTENED SECURELY TO THE FRAME.
5. GEOTEXTILE MATERIAL SHALL HAVE AN EQUIVALENT OPENING SIZE OF 20-40 SIEVE AND BE RESISTANT TO SUNLIGHT. IT SHALL BE STRETCHED TIGHTLY AROUND THE FRAME AND FASTENED SECURELY. IT SHALL EXTEND FROM THE TOP OF THE FRAME TO 18 INCHES BELOW THE INLET NOTCH ELEVATION. THE GEOTEXTILE SHALL OVERLAP ACROSS ONE SIDE OF THE INLET SO THE ENDS OF THE CLOTH ARE NOT FASTENED TO THE SAME POST.
6. BACKFILL SHALL BE PLACED AROUND THE INLET IN COMPACTED 6-INCH LAYERS UNTIL THE EARTH IS EVEN WITH NOTCH ELEVATION ON ENDS AND TOP ELEVATION ON SIDES.
7. A COMPACTED EARTH DIKE OR CHECK DAM SHALL BE CONSTRUCTED IN THE DITCH LINE BELOW THE INLET IF THE INLET IS NOT IN A DEPRESSION. THE TOP OF THE DIKE SHALL BE AT LEAST 6 INCHES HIGHER THAN THE TOP OF THE FRAME.

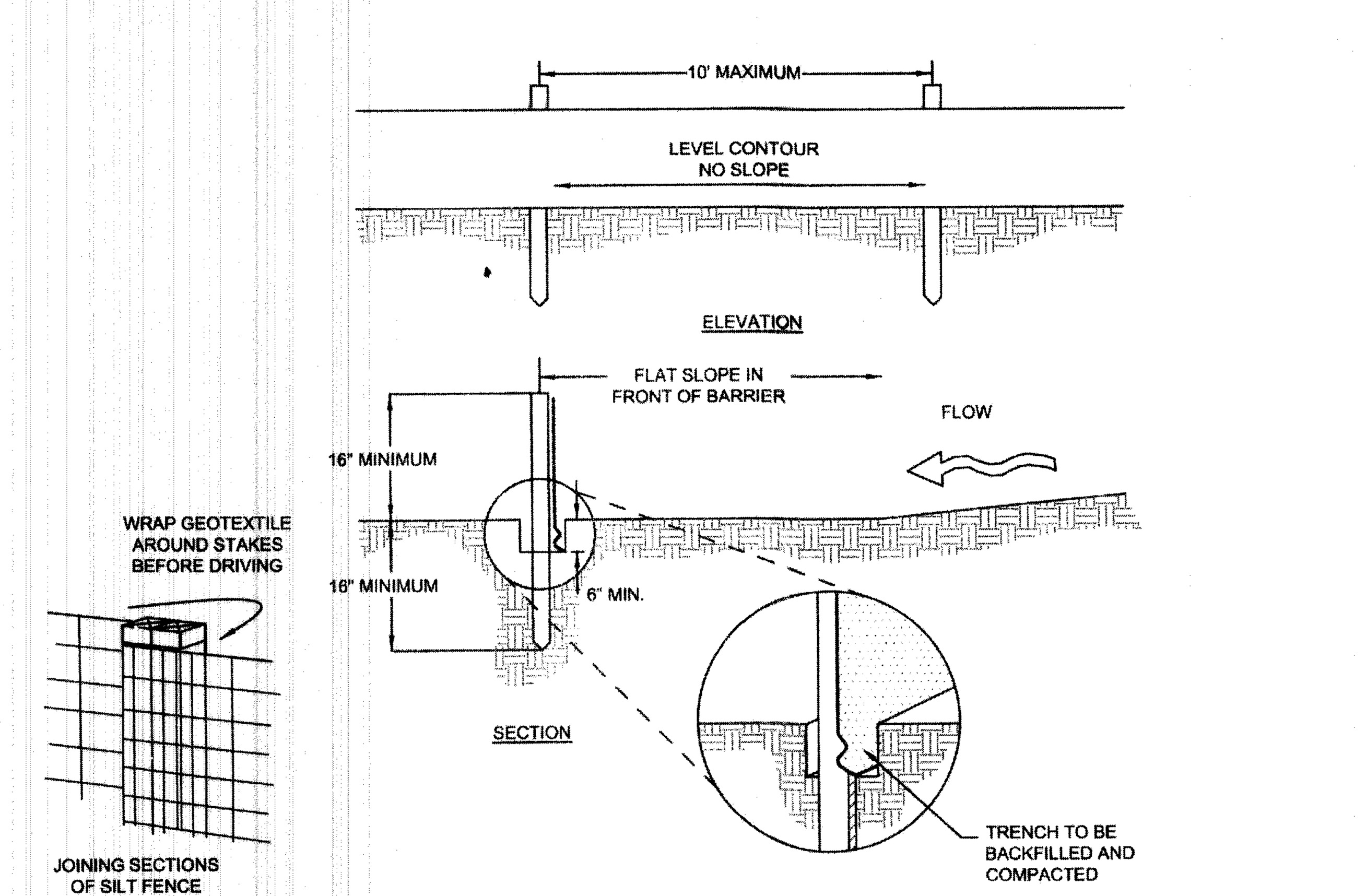
MAINTENANCE:

EFFECTIVE STORM DRAIN INLET PROTECTION COLLECTS SEDIMENT AND THEREFORE MUST BE CLEANED REGULARLY TO PREVENT CLOGGING AND SUBSEQUENT FLOODING CONDITIONS, PIPING, OR OVERTOPPING OF THE CONTROL STRUCTURES. SEDIMENT BARRIERS THAT SAG, FALL OVER, OR ARE NOT PROPERLY SECURED, MUST BE PROMPTLY REPAIRED OR REPLACED.

INLET PROTECTION SHALL BE INSPECTED WEEKLY AND AFTER EACH RAINFALL EVENT. AREAS WHERE THERE IS ACTIVE TRAFFIC SHALL BE INSPECTED DAILY. REPAIRS SHALL BE MADE AS NEEDED TO ASSURE THE PRACTICE IS PERFORMING AS INTENDED. SEDIMENT SHALL BE REMOVED WHEN ACCUMULATION IS ONE-HALF THE HEIGHT OF THE TRAP. SEDIMENT SHALL NOT BE WASHED INTO THE INLET. SEDIMENT SHALL BE REMOVED AND PLACED IN A LOCATION WHERE IT IS STABLE AND NOT SUBJECT TO EROSION.

ONCE THE CONTRIBUTING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED, ALL FILTER MATERIAL AND COLLECTED SEDIMENT SHALL BE REMOVED AND PROPERLY DISPOSED.

(2/C160) GEOTEXTILE INLET PROTECTION DETAIL
N.T.S.



NOTES:

1. SILT FENCE SHALL BE CONSTRUCTED BEFORE UPSLOPE LAND DISTURBANCE BEGINS.
2. ALL SILT FENCE SHALL BE PLACED AS CLOSE TO THE CONTOUR AS POSSIBLE SO THAT WATER WILL NOT CONCENTRATE AT LOW POINTS IN THE FENCE AND SO THAT SMALL SWALES OR DEPRESSIONS THAT MAY CARRY SMALL CONCENTRATED FLOWS TO THE SILT FENCE ARE DISSIPATED ALONG ITS LENGTH.
3. ENDS OF THE SILT FENCES SHALL BE BROUGHT UPSLOPE SLIGHTLY SO THAT WATER PONDED BY THE SILT FENCE WILL BE PREVENTED FROM FLOWING AROUND THE ENDS.
4. SILT FENCE SHALL BE PLACED ON THE FLATTEST AREA AVAILABLE.
5. WHERE POSSIBLE, VEGETATION SHALL BE PRESERVED FOR 5 FEET (OR AS MUCH AS POSSIBLE) UPSLOPE FROM THE SILT FENCE. IF VEGETATION IS REMOVED, IT SHALL BE REESTABLISHED WITHIN 7 DAYS FROM THE INSTALLATION OF THE SILT FENCE.
6. THE HEIGHT OF THE SILT FENCE SHALL BE A MINIMUM OF 16 INCHES ABOVE THE ORIGINAL GROUND SURFACE.
7. THE SILT FENCE SHALL BE PLACED IN AN EXCAVATED OR SLICED TRENCH CUT A MINIMUM OF 6 INCHES DEEP. THE TRENCH SHALL BE MADE WITH A TRENCHER, CABLE LAYING MACHINE, SLICING MACHINE, OR OTHER SUITABLE DEVICE THAT WILL ENSURE AN ADEQUATELY UNIFORM TRENCH DEPTH.
8. THE SILT FENCE SHALL BE PLACED WITH THE STAKES ON THE DOWNSLOPE SIDE OF THE GEOTEXTILE. A MINIMUM OF 8 INCHES OF GEOTEXTILE MUST BE BELOW THE GROUND SURFACE. EXCESS MATERIAL SHALL LAY ON THE BOTTOM OF THE 6-INCH DEEP TRENCH. THE TRENCH SHALL BE BACKFILLED AND COMPACTED ON BOTH SIDES OF THE FABRIC.
9. SEAMS BETWEEN SECTIONS OF SILT FENCE SHALL BE SPLICED TOGETHER ONLY AT A SUPPORT POST WITH A MINIMUM 6-IN. OVERLAP PRIOR TO DRIVING INTO THE GROUND.
10. MAINTENANCE—SILT FENCE SHALL ALLOW RUNOFF TO PASS ONLY AS DIFFUSE FLOW THROUGH THE GEOTEXTILE. IF RUNOFF OVERTOPS THE SILT FENCE, FLOWS UNDER THE FABRIC OR AROUND THE FENCE ENDS, OR IN ANY OTHER WAY ALLOWS A CONCENTRATED FLOW DISCHARGE, ONE OF THE FOLLOWING SHALL BE PERFORMED, AS APPROPRIATE: 1) THE LAYOUT OF THE SILT FENCE SHALL BE CHANGED, 2) ACCUMULATED SEDIMENT SHALL BE REMOVED, OR 3) OTHER PRACTICES SHALL BE INSTALLED.

    SEDIMENT DEPOSITS SHALL BE ROUTINELY REMOVED WHEN THE DEPOSIT REACHES APPROXIMATELY ONE-HALF OF THE HEIGHT OF THE SILT FENCE.

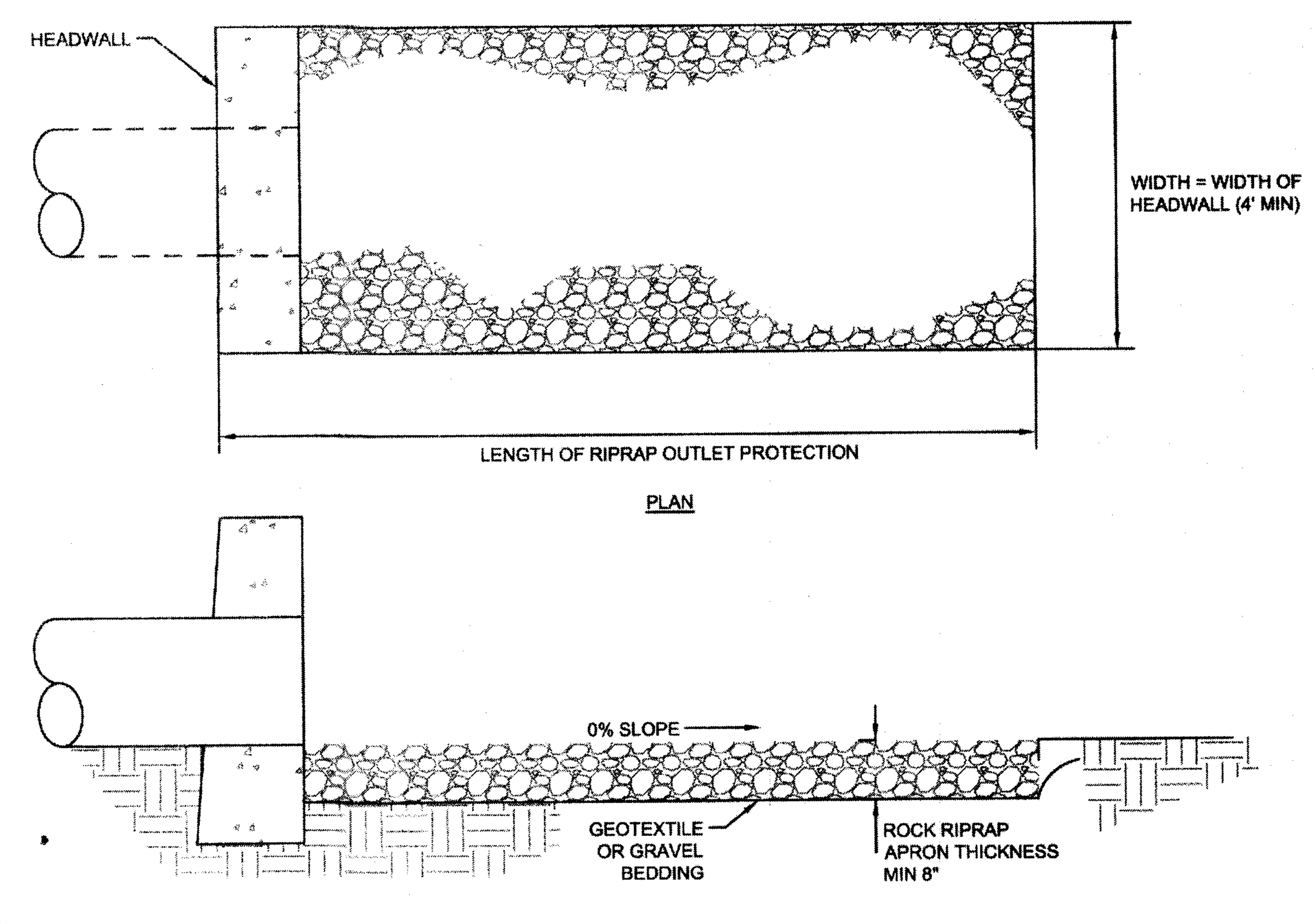
    SILT FENCES SHALL BE INSPECTED AFTER EACH RAINFALL AND AT LEAST DAILY DURING A PROLONGED RAINFALL. THE LOCATION OF EXISTING SILT FENCE SHALL BE REVIEWED DAILY TO ENSURE ITS PROPER LOCATION AND EFFECTIVENESS. IF DAMAGED, THE SILT FENCE SHALL BE REPAIRED IMMEDIATELY.

CRITERIA FOR SILT FENCE MATERIALS

1. FENCE POST – THE LENGTH SHALL BE A MINIMUM OF 32 INCHES. WOOD POSTS WILL BE 2-BY-2-IN. NOMINAL DIMENSIONED HARDWOOD OF SOUND QUALITY. THEY SHALL BE FREE OF KNOTS, SPLITS AND OTHER VISIBLE IMPERFECTIONS, THAT WILL WEAKEN THE POSTS. THE MAXIMUM SPACING BETWEEN POSTS SHALL BE 10 FT. POSTS SHALL BE DRIVEN A MINIMUM 16 INCHES INTO THE GROUND, WHERE POSSIBLE. IF NOT POSSIBLE, THE POSTS SHALL BE ADEQUATELY SECURED TO PREVENT OVERTURNING OF THE FENCE DUE TO SEDIMENT/WATER LOADING.
2. SILT FENCE FABRIC – SEE CHART BELOW.

FABRIC PROPERTIES	VALUES	TEST METHOD
MINIMUM TENSILE STRENGTH	120 LBS. (535 N)	ASTM D 4632
MAXIMUM ELONGATION AT 60 LBS	50%	ASTM D 4632
MINIMUM PUNCTURE STRENGTH	50 LBS. (220 N)	ASTM D 4833
MINIMUM TEAR STRENGTH	40 LBS. (180 N)	ASTM D 4533
APPARENT OPENING SIZE	<0.84 MM	ASTM D 4751
MINIMUM PERMITTIVITY	1X10-2 SEC-1	ASTM D 4491
UV EXPOSURE STRENGTH RETENTION	70%	ASTM G 4355

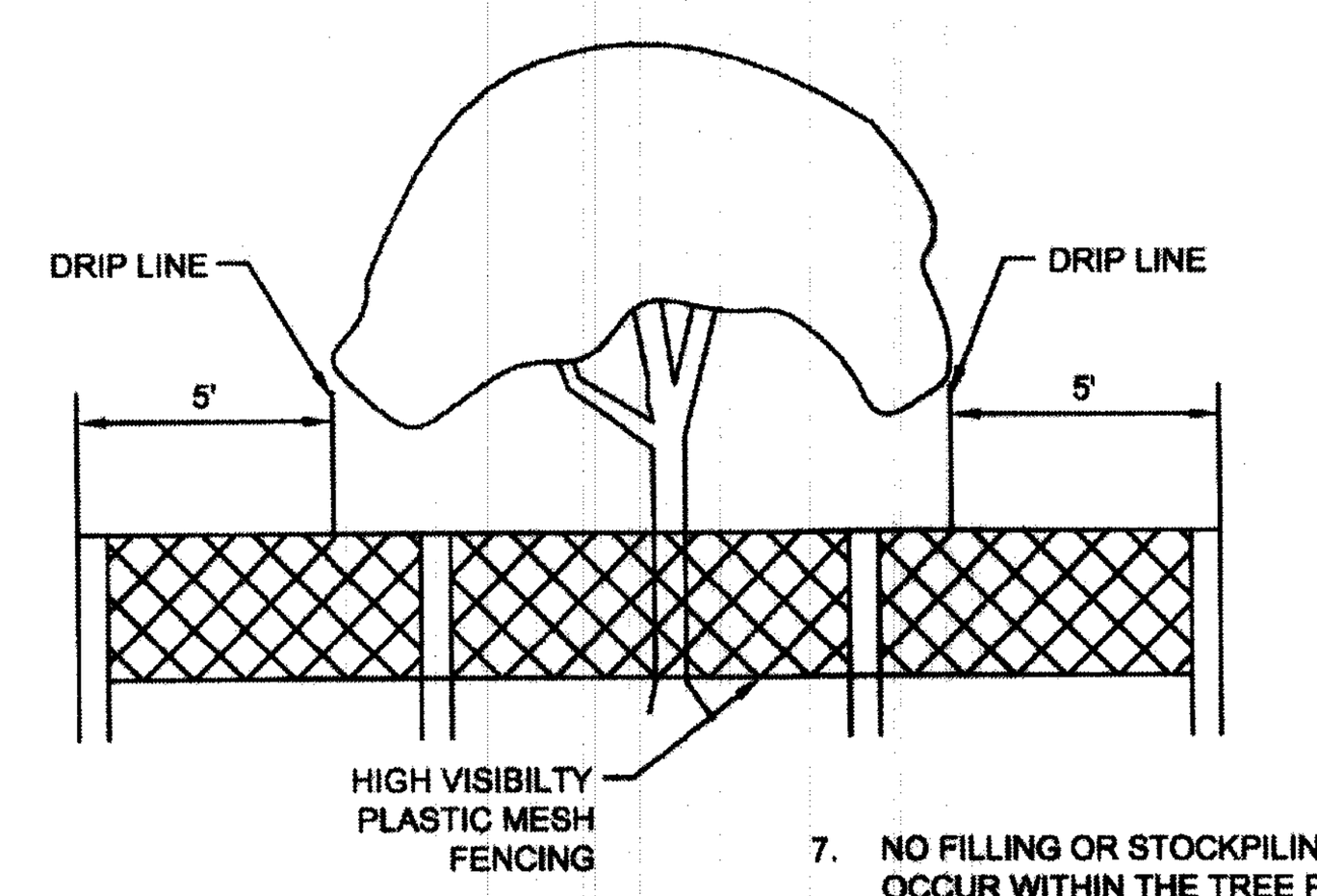
(3/C160) SILT FENCE DETAIL
N.T.S.



NOTES:

1. SUBGRADE FOR THE FILTER OR BEDDING AND RIPRAP SHALL BE PREPARED TO THE REQUIRED LINES AND GRADES AS SHOWN ON THE PLAN. THE SUBGRADE SHALL BE CLEARED OF ALL TREES, STUMPS, ROOTS, SOD, LOOSE ROCK, OR OTHER MATERIAL.
2. RIPRAP SHALL CONFORM TO THE GRADING LIMITS AS SHOWN ON THE PLAN.
3. GEOTEXTILE SHALL BE SECURELY ANCHORED ACCORDING TO MANUFACTURERS' RECOMMENDATIONS.
4. GEOTEXTILE SHALL BE LAID WITH THE LONG DIMENSION PARALLEL TO THE DIRECTION OF FLOW AND SHALL BE LAID LOOSELY BUT WITHOUT WRINKLES AND CREASES. WHERE JOINTS ARE NECESSARY, STRIPS SHALL BE PLACED TO PROVIDE A 12-IN. MINIMUM OVERLAP, WITH THE UPSTREAM STRIP OVERLAPPING THE DOWNSTREAM STRIP.
5. GRAVEL BEDDING SHALL BE ODOT NO. 67'S OR 57'S UNLESS SHOWN DIFFERENTLY ON THE DRAWINGS.
6. RIPRAP MAY BE PLACED BY EQUIPMENT BUT SHALL BE PLACED IN A MANNER TO PREVENT SLIPPAGE OR DAMAGE TO THE GEOTEXTILE.
7. RIPRAP SHALL BE PLACED BY A METHOD THAT DOES NOT CAUSE SEGREGATION OF SIZES. EXTENSIVE PUSHING WITH A DOZER CAUSES SEGREGATION AND SHALL BE AVOIDED BY DELIVERING RIPRAP NEAR ITS FINAL LOCATION WITHIN THE CHANNEL.
8. CONSTRUCTION SHALL BE SEQUENCED SO THAT OUTLET PROTECTION IS PLACED AND FUNCTIONAL WHEN THE STORM DRAIN, CULVERT, OR OPEN CHANNEL ABOVE IT BECOMES OPERATIONAL.
9. ALL DISTURBED AREAS WILL BE VEGETATED AS SOON AS PRACTICAL.

(4/C160) ROCK OUTLET PROTECTION DETAIL
N.T.S.



NOTES:

1. PROTECT EXISTING TREES AND OTHER VEGETATION INDICATED TO REMAIN IN PLACE AGAINST UNNECESSARY CUTTING, BREAKING OR SKINNING OF ROOTS, SKINNING OR BRUISING OF BARK, SMOTHERING OF TREES BY STOCKPILING CONSTRUCTION MATERIALS OR EXCAVATED MATERIALS WITHIN DRIP LINE, EXCESS FOOT OR VEHICULAR TRAFFIC, OR PARKING OF VEHICLES WITHIN DRIP LINE. PROVIDE TEMPORARY GUARDS TO PROTECT TREES AND AND VEGETATION TO BE LEFT STANDING.
2. SIGNAGE SHALL CLEARLY IDENTIFY THE TREE AND NATURAL PRESERVATION AREA AND STATE THAT NO CLEARING OR EQUIPMENT IS ALLOWED WITHIN IT.
3. TREE AND NATURAL PRESERVATION AREA SHALL BE FENCED PRIOR TO BEGINNING CLEARING OPERATIONS.
4. FENCE MATERIALS SHALL BE METAL FENCE POSTS WITH SNOW FENCE.
5. FENCE SHALL BE PLACED AS SHOWN ON PLANS AND BEYOND THE DRIP LINE OR CANOPY OF TREES TO BE PROTECTED.
6. IF ANY CLEARING IS DONE AROUND SPECIMEN TREES IT SHALL BE DONE BY CUTTING AT GROUND LEVEL WITH HAND HELD TOOLS AND SHALL NOT BE GRUBBED OR PULLED OUT. NO CLEARING SHALL BE DONE IN BUFFER STRIPS OR OTHER PRESERVED FORESTED AREAS.
7. NO FILLING OR STOCKPILING OF MATERIALS SHALL OCCUR WITHIN THE TREE PROTECTION AREA, INCLUDING DEPOSITION OF SEDIMENT.
8. WHERE UTILITIES MUST RUN THROUGH A TREE'S DRIP LINE, TUNNELING SHOULD BE USED TO MINIMIZE ROOT DAMAGE. TUNNELING SHOULD BE AT A MINIMUM DEPTH OF 24 INCHES FOR TREES LESS THAN 12 INCHES IN DIAMETER OR AT A MINIMUM DEPTH OF 36 INCHES FOR LARGER DIAMETER TREES.
9. WHERE TUNNELING WILL BE PERFORMED WITHIN THE DRIP LINE OF A TREE, THE TUNNEL SHOULD BE PLACED A MINIMUM OF 2 FEET AWAY FROM THE TREE TRUNK TO AVOID TAPROOTS.
10. MINIMIZE EXCAVATION OR TRENCHING WITHIN THE DRIP LINE OF THE TREE. ROUTE TRENCHES AROUND THE DRIP LINE OF TREES.
11. ROOTS 2 INCHES OR LARGER THAT ARE SEVERED BY TRENCHING SHOULD BE SAWN OFF NEATLY IN ORDER TO ENCOURAGE NEW GROWTH AND DISCOURAGE DECAY.
12. SOIL EXCAVATED DURING TRENCHING SHALL BE PILED ON THE SIDE AWAY FROM THE TREE.
13. ROOTS SHALL BE KEPT MOIST WHILE TRENCHES ARE OPEN AND REFILLED IMMEDIATELY AFTER UTILITIES ARE INSTALLED OR REPAIRED.

(5/C160) TREE PROTECTION DETAIL
N.T.S.

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9/22/15

SEAL: STATE OF OHIO STEVEN R. KORTE E-61033 REGISTERED PROFESSIONAL ENGINEER

NO.	DATE	DESCRIPTION
1	6/12/2015	PRELIMINARY P.U.D. - MAJOR MOD.
2	8/14/2015	FINAL P.U.D.

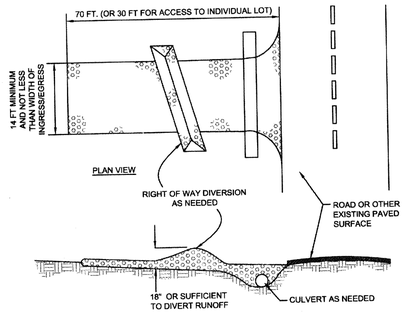
FINAL P.U.D.
CLARITY POINTE MEMORY CARE
SECTION 7, TOWN 3, RANGE 3
LIBERTY TOWNSHIP
BUTLER COUNTY, OHIO
FOR: HERITAGE DEVELOPMENT PARTNERS, LLC

PROJECT NO: 150275.000
DATE: 8/14/15
SCALE:

SHEET NAME:
EROSION CONTROL NOTES AND DETAILS

SHEET NO.
C160

INSPIRED PEOPLE ▲ CREATIVE DESIGN ▲ TRANSFORMING COMMUNITIES



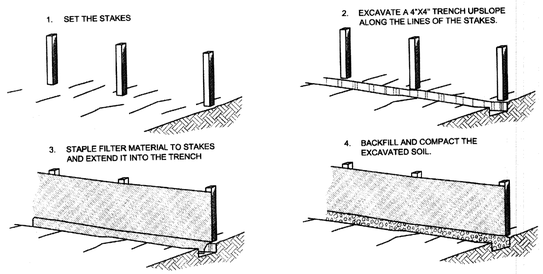
NOTES

1. STONE SIZE - ODOT #2 (1.5-2.5 INCH) STONE SHALL BE USED, OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH - THE CONSTRUCTION ENTRANCE SHALL BE AS LONG AS REQUIRED TO STABILIZE HIGH TRAFFIC AREAS BUT NOT LESS THAN 70 FT. (EXCEPTION: APPLY 30 FT. MINIMUM TO SINGLE RESIDENCE LOTS).
3. THICKNESS - THE STONE LAYER SHALL BE AT LEAST 6 INCHES THICK FOR LIGHT DUTY ENTRANCES OR AT LEAST 10 INCHES FOR HEAVY DUTY USE.
4. WIDTH - THE ENTRANCE SHALL BE AT LEAST 14 FEET WIDE, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
5. GEOTEXTILE - A GEOTEXTILE SHALL BE LAID OVER THE ENTIRE ARE PRIOR TO PLACING STONE. IT SHALL BE COMPOSED OF STRONG ROT-PROOF POLYMERIC FIBERS AND MEET THE FOLLOWING SPECIFICATIONS:

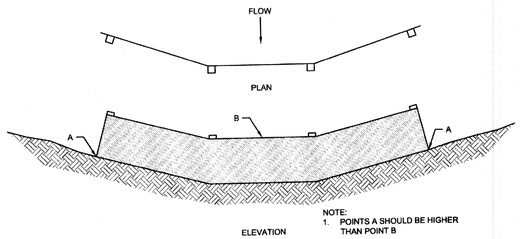
MINIMUM TENSILE STRENGTH	200 LBS
MINIMUM PUNCTURE STRENGTH	80 LBS
MINIMUM TEAR STRENGTH	50 LBS
MINIMUM BURST STRENGTH	320 PSI
MINIMUM ELONGATION	20%
EQUIVALENT OPENING SIZE	EOS< 0.6MM
PERMITTIVTY	1X10^{-1} CM/SEC

6. TIMING - THE CONSTRUCTION ENTRANCE SHALL BE INSTALLED AS SOON AS IS PRACTICABLE BEFORE MAJOR GRADING ACTIVITIES.
7. CULVERT - A PIPE OR CULVERT SHALL BE CONSTRUCTED UNDER THE ENTRANCE IF NEED ED TO PREVENT SURFACE WATER FROM FLOWING ACROSS THE ENTRANCE OR TO PREVENT RUNOFF FROM BEING DIRECTED OUT ONTO PAVED SURFACES.
8. WATER BAR - A WATER BAR SHALL BE CONSTRUCTED AS PART OF THE CONSTRUCTION ENTRANCE IF NEEDED TO PREVENT SURFACE RUNOFF FROM FLOWING THE LENGTH OF THE CONSTRUCTION ENTRANCE AND OUT ONTO PAVED SURFACES.
9. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE OR THE WASHING AND REWORKING OF EXISTING STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY STRUCTURES USED TO TRAP SEDIMENT. ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY. THE USE OF WATER TRUCKS TO REMOVE MATERIALS DROPPED, WASHED, OR TRACKED ONTO ROADWAYS WILL NOT BE PERMITTED UNDER ANY CIRCUMSTANCES. TOP DRESSING OF ADDITIONAL STONE SHALL BE APPLIED AS CONDITIONS DEMAND. MUD SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC ROADS, OR ANY SURFACE WHERE RUNOFF IS NOT CHECKED BY SEDIMENT CONTROLS, SHALL BE REMOVE IMMEDIATELY. REMOVAL SHALL BE ACCOMPLISHED BY SCRAPING OR SWEEPING.
10. CONSTRUCTION ENTRANCES SHALL NOT BE RELIED UPON TO REMOVE MUD FROM VEHICLES AND PREVENT OFF-SITE TRACKING. VEHICLES THAT ENTER AND LEAVE THE CONSTRUCTION-SITE SHALL BE RESTRICTED FROM MUDDY AREAS.
11. REMOVAL - THE ENTRANCE SHALL REMAIN IN PLACE UNTIL THE DISTURBED AREA IS STABILIZED OR REPLACED WITH A PERMANENT ROADWAY OR ENTRANCE.

6 / C161 CONSTRUCTION ENTRANCE DETAIL
N.T.S.



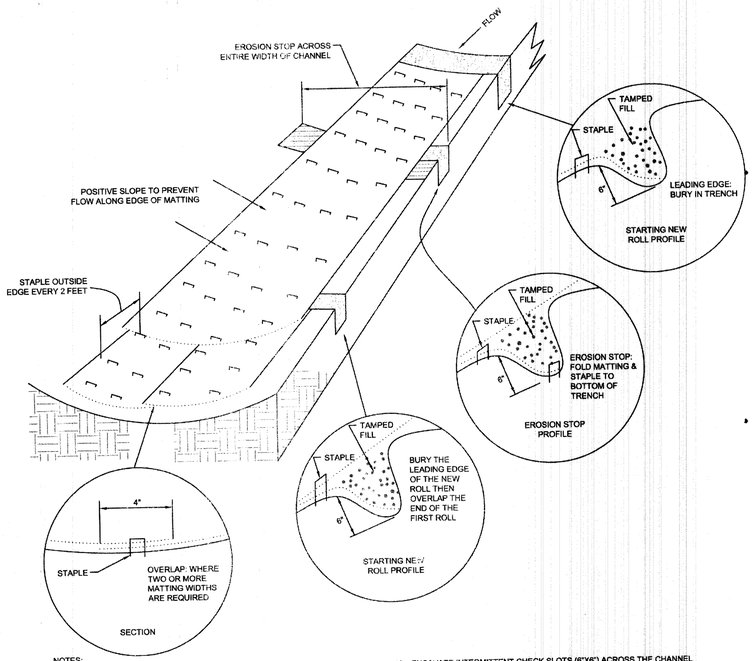
CONSTRUCTION OF A FILTER BARRIER



NOTE:
1. POINTS A SHOULD BE HIGHER THAN POINT B

PROPOER PLACEMENT OF FILTER BARRIER IN A DRAINAGE WAY

7 / C161 FILTER BARRIER DETAIL
N.T.S.



NOTES:

1. CHANNEL/SLOPE SOIL PREPARATION GRADE AND COMPACT AREA OF INSTALLATION, PREPARING SEEDBED BY LOOSENING 2"-3" OF TOPSOIL ABOVE FINAL GRADE. INCORPORATE AMENDMENTS SUCH AS LIME AND FERTILIZER INTO SOIL. REMOVE ALL ROCKS, CLODS, VEGETATION OR OTHER DEBRIS SO THAT INSTALLED RECP WILL HAVE DIRECT CONTACT WITH THE SOIL SURFACE.
2. CHANNEL/SLOPE SEEDING APPLY SEED TO SOIL SURFACE PRIOR TO INSTALLATION. ALL CHECK SLOTS, ANCHOR TRENCHES, AND OTHER DISTURBED AREAS MUST BE RESEEDED. REFER TO THE PERMANENT SEEDING SPECIFICATION FOR SEEDING RECOMMENDATIONS.

SLOPE INSTALLATION

3. EXCAVATE TOP AND BOTTOM TRENCHES (12"X6"). INTERMITTENT EROSION CHECK SLOTS (6"X6") MAY BE REQUIRED BASED ON SLOPE LENGTH. EXCAVATE TOP ANCHOR TRENCH 2'X3' OVER CREST OF THE SLOPE.
4. IF INTERMITTENT EROSION CHECK SLOTS ARE REQUIRED, INSTALL RECP IN 6"X6" SLOT AT A MAXIMUM OF 39' CENTERS OR THE MID POINT OF THE SLOPE. RECP SHOULD BE STAPLED INTO TRENCH ON 12" CENTERS.
5. INSTALL RECP IN TOP ANCHOR TRENCH, ANCHOR ON 12" SPACINGS, BACKFILL AND COMPACT SOIL.
6. UNROLL RECP DOWN SLOPE WITH ADJACENT ROLLS OVERLAPPED A MINIMUM OF 3". ANCHOR THE SEAM EVERY 16". LAY THE RECP LOOSE TO MAINTAIN DIRECT SOIL CONTACT, DO NOT PULL TAUGHT.
7. OVERLAP ROLL ENDS A MINIMUM OF 12" WITH UPSLOPE RECP ON TOP FOR A SHINGLE EFFECT. BEGIN ALL NEW ROLLS IN AN EROSION CHECK SLOT IF REQUIRED, DOUBLE ANCHOR ACROSS ROLL EVERY 12".
8. INSTALL RECP IN BOTTOM ANCHOR TRENCH (12"X6"), ANCHOR EVERY 12". PLACE ALL OTHER STAPLES THROUGHOUT SLOPE AT 1 TO 2.5 PER SQUARE YARD DEPENDANT ON SLOPE. REFER TO MANUFACTURER'FS ANCHOR GUIDE.

CHANNEL INSTALLATION

9. EXCAVATE INITIAL ANCHOR TRENCH (12"X6") ACROSS THE LOWER END OF THE PROJECT AREA.
10. EXCAVATE INTERMITTENT CHECK SLOTS (6"X6") ACROSS THE CHANNEL AT 30' INTERVALS ALONG THE CHANNEL.
11. EXCAVATE LONGITUDINAL CHANNEL ANCHOR SLOTS (4"X4") ALONG BOTH SIDES OF THE CHANNEL TO BURY THE EDGES. WHENEVER POSSIBLE EXTEND THE RECP 2'-3' ABOVE THE CREST OF CHANNEL SIDE SLOPES.
12. INSTALL RECP IN INITIAL ANCHOR TRENCH (DOWNSTREAM) ANCHOR EVERY 12', BACKFILL AND COMPACT SOIL.
13. ROLL OUT RECP BEGINNING IN THE CENTER OF THE CHANNEL TOWARD THE INTERMITTENT CHECK SLOT. DO NOT PULL TAUGHT. UNROLL ADJACENT ROLLS UPSTREAM WITH A 3" MINIMUM OVERLAP (ANCHOR EVERY 18") AND UP EACH CHANNEL SIDE SLOPE.
14. AT TOP OF CHANNEL SIDE SLOPES INSTALL RECP IN THE LONGITUDINAL ANCHOR SLOTS, ANCHOR EVERY 18".
15. INSTALL RECP IN INTERMITTENT CHECK SLOTS, LAY INTO TRENCH AND SECURE WITH ANCHORS EVERY 12", BACKFILL WITH SOIL AND COMPACT.
16. OVERLAP ROLL ENDS A MINIMUM OF 12" WITH UPSTREAM RECP ON TOP FOR A SHINGLING EFFECT. BEGIN ALL NEW ROLLS IN AN INTERMITTENT CHECK SLOT, DOUBLE ANCHORED EVERY 12".
17. INSTALL UPSTREAM END IN A TERMINAL ANCHOR TRENCH (12"X6"); ANCHOR EVERY 12", BACKFILL AND COMPACT.
18. COMPLETE ANCHORING THROUGHOUT CHANNEL AT 2.5 PER SQUARE YARD USING SUITABLE GROUND ANCHORING DEVICES (U SHAPED WIRE STAPLES, METAL GEOTEXTILE PINS, PLASTIC STAKES, AND TRIANGULAR WOODEN STAKES). ANCHORS SHOULD BE OF SUFFICIENT LENGTH TO RESIST PULLOUT. LONGER ANCHORS MAY BE REQUIRED IN LOOSE SANDY OR GRAVELLY SOILS.

MAINTENANCE

19. ALL RECPS SHOULD BE INSPECTED REGULARLY AFTER INSTALLATION, ESPECIALLY AFTER STORMS TO CHECK FOR EROSION OR UNDERMINING OF THE PRODUCT. MAKE NEEDED REPAIRS IMMEDIATELY, ADDRESSING RILLS OR GULLIES THAT HAVE DEVELOPED PRIOR TO REPLACING THE RECP. IN THE CASE EROSION REPAIRS, ASSURE THAT SUBSEQUENT RUNOFF ACROSS THE AREA IS DISPERSED OR ADEQUATELY SPREAD.

8 / C161 TEMPORARY ROLLED EROSION CONTROL MATTING DETAIL
N.T.S.

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SEAL:

STATE OF OHIO
STEVEN J. KORTE
E-61033
REGISTERED PROFESSIONAL ENGINEER

NO.	DATE	DESCRIPTION
1	8/12/2015	PRELIMINARY P.U.D. - MAJOR MOD.
2	8/14/2015	FINAL P.U.D.

FINAL P.U.D.
CLARITY POINTE MEMORY CARE
SECTION 7, TOWN 3, RANGE 3
LIBERTY TOWNSHIP
BUTLER COUNTY, OHIO
FOR: HERITAGE DEVELOPMENT PARTNERS, LLC

PROJECT NO:	150275.000
DATE:	8/14/15
SCALE:	

SHEET NAME:
EROSION CONTROL NOTES AND DETAILS

SHEET NO.
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