HAMPTON MANOR
of
VAN BUREN TOWNSHIP

SENIOR ASSISTED LIVING COMMUNITY

PART OF THE NORTHEAST 1/4 OF SECTION 14, TOWN 3 SOUTH, RANGE 8 EAST, VAN BUREN TOWNSHIP, WAYNE COUNTY, MICHIGAN

ENGINEER:
LEHNER ASSOCIATES, INC.
WILLIAM J. THOMPSON, PE
17001 NINETEEN MILE ROAD, SUITE 3
CLINTON TOWNSHIP, MICHIGAN 48038
(586) 412-7050 EXT. 106
bill@la-eng.com

DEVELOPER:
VAN BUREN INVESTORS
LAND HOLDINGS, LLC
ZOHAIB SYED
1451 S. GRATIOT AVENUE
CLINTON TOWNSHIP, MI 48035
989-708-1878
zohaibsyed2001@yahoo.com

DESCRIPTIONS ARE PREPARED FROM EXISTING VAN BUREN TOWNSHIP TAX RECORDS. ALL PARCELS SHALL BE COMBINED AFTER PURCHASE OF PROPERTY IS COMPLETED.

PARCEL 1: PARCEL #83-054-99-0012-000
PART OF THE NORTHWEST 1/4 OF SECTION 14, TOWN 3 SOUTH, RANGE 8 EAST, BEGINNING SOUTH 333 FEET FROM THE NORTHWEST CORNER OF SECTION 14; THENCE NORTH 89 DEGREES 00 MINUTES EAST 248 FEET; THENCE NORTH 333 FEET; THENCE NORTH 89 DEGREES 00 MINUTES EAST 150 FEET; THENCE SOUTH 258 FEET; THENCE NORTH 89 DEGREES 00 MINUTES EAST 150 FEET; THENCE SOUTH 294.87 FEET; THENCE SOUTH 89 DEGREES 00 MINUTES WEST 548 FEET; THENCE NORTH 219.87 FEET TO THE POINT OF BEGINNING. 4.18 ACRES.

PARCEL 2: PARCEL #83-054-99-0013-000
PART OF THE NORTHWEST 1/4 OF SECTION 14, TOWN 3 SOUTH, RANGE 8 EAST, BEGINNING NORTH 89 DEGREES 00 MINUTES EAST 398 FEET FROM THE NORTHWEST CORNER OF SECTION 14; THENCE NORTH 89 DEGREES 00 MINUTES EAST 150 FEET; THENCE SOUTH 258 FEET; THENCE SOUTH 89 DEGREES 00 MINUTES WEST 150 FEET; THENCE NORTH 258 FEET TO THE POINT OF BEGINNING. 0.89 ACRES.

PARCEL 3: PARCEL #83-054-99-0014-701
PART OF THE NORTHWEST 1/4 OF SECTION 14, TOWN 3 SOUTH, RANGE 8 EAST, BEGINNING SOUTH 60 FEET AND NORTH 89 DEGREES EAST 60 FEET FROM THE NORTHWEST CORNER OF SECTION 14; THENCE SOUTH 123 FEET; THENCE NORTH 89 DEGREES EAST 188 FEET; THENCE NORTH 123 FEET; THENCE SOUTH 89 DEGREES WEST 188 FEET TO THE POINT OF BEGINNING. 0.53 ACRES.

PARCEL 4: PARCEL #83-054-99-0015-701
PART OF THE NORTHWEST 1/4 OF SECTION 14, TOWN 3 SOUTH, RANGE 8 EAST, BEGINNING SOUTH 183 FEET FROM THE NORTHWEST CORNER OF SECTION 14; THENCE NORTH 89 DEGREES 00 MINUTES EAST 248 FEET; THENCE SOUTH 150 FEET; THENCE SOUTH 89 DEGREES 00 MINUTES WEST 248 FEET; THENCE NORTH 150 FEET TO THE POINT OF BEGINNING EXCEPT THE WEST 60 FEET THEREOF. 0.65 ACRES.

PARCEL 5: PARCEL #83-054-99-0016-002
PART OF THE NORTHWEST 1/4 OF SECTION 14, TOWN 3 SOUTH, RANGE 8 EAST, BEGINNING DUE SOUTH 672.10 FEET AND NORTH 90 DEGREES EAST 232 FEET FROM THE NORTHWEST CORNER OF SECTION 14; THENCE NORTH 89 DEGREES EAST 176 FEET; THENCE DUE NORTH 119.23 FEET; THENCE SOUTH 89 DEGREES WEST 176 FEET; THENCE DUE SOUTH 119.23 FEET TO THE POINT OF BEGINNING. 0.48 ACRES.

PARCEL 6: PARCEL #83-054-99-0016-003
PART OF THE NORTHWEST 1/4 OF SECTION 14, TOWN 3 SOUTH, RANGE 8 EAST, BEGINNING DUE SOUTH 672.10 FEET AND NORTH 90 DEGREES EAST 408 FEET FROM THE NORTHWEST CORNER OF SECTION 14; THENCE NORTH 89 DEGREES EAST 140 FEET; THENCE DUE NORTH 119.23 FEET; THENCE SOUTH 89 DEGREES WEST 140 FEET; THENCE DUE SOUTH 119.23 FEET TO THE POINT OF BEGINNING. 0.38 ACRES.

EXISTING UTILITY COMPANIES:

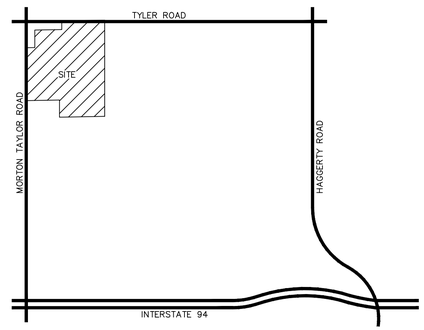
DTE ENERGY (ELECTRIC)
EVENT #55495158
PLANNING AND DESIGN-SOUTHWEST-WESTERN WAYNE
8001 HAGGERTY ROAD
BELLEVILLE, MI 48111
PH. 734.397.4321

DTE ENERGY (GAS)
CHRISTOPHER BURKHART
8001 HAGGERTY ROAD
BELLEVILLE, MI 48111
PH. 734.544.7809

COMCAST COMPANY
JAMES STITZEL
6095 WALL STREET
STERLING HEIGHTS, MI 48049
PH. 586.883.7263

AT & T
DIANE ROEHM
100 SOUTH MAIN
MOUNT CLEMENS, MI 48043
PH. 586.433.6305

WAYNE COUNTY ENVIRONMENTAL HEALTH DEPARTMENT
SEPTIC TANK REMOVAL/ABANDONMENT
DAVID WILSON
33030 VAN BORN
WAYNE, MI 48184
PH. 734.727.7400



LOCATION MAP
SCALE: 4"=1 MILE

GENERAL NOTES:

1. HAMPTON MANOR OF VAN BUREN TOWNSHIP IS A PROPOSED SENIOR ASSISTED LIVING COMMUNITY THAT WILL INCLUDE A DINING AREA, SALON, ACTIVITY CENTER, FITNESS ROOM, TELEVISION ROOM, AND LANDSCAPED COURTYARDS WITHIN THE BUILDING AND WALKING AREAS AND LANDSCAPED GARDEN AREAS WITH BENCHES AND OPEN SPACES OUTSIDE THE BUILDING.
2. ALL ONSITE DEBRIS SHALL BE REMOVED WEEKLY OR AS NEEDED.
3. PAVED SURFACES, WALKWAYS, SIGNS, LIGHTING AND OTHER STRUCTURES AND SURFACE SHALL BE MAINTAINED IN A SAFE, ATTRACTIVE CONDITION AS ORIGINALLY DESIGNED AND CONSTRUCTED. PARKING LOT STRIPING AND MARKINGS SHALL BE MAINTAINED IN A CLEARLY VISIBLE CONDITION.
4. ALL AREAS NOT BUILT OR PAVED UPON SHALL BE SODDED OR SEEDED AND IRRIGATED.
5. THERE SHALL BE NO OUTSIDE STORAGE.
6. THERE SHALL BE NO STORAGE, LOADING, DISPOSAL, OR TRANSFER OF ANY HAZARDOUS/TOXIC WASTE (GAS, OIL, TRANSMISSION FLUID, LUBRICANTS, SOLVENTS, ETC.).

FIRE DEPARTMENT NOTES:

1. THE PROPOSED FIRE DEPARTMENT CONNECTION IS LOCATED ON THE NORTH WALL NEAR THE EAST CORNER OF THE BUILDING.
2. THE FIRE DEPARTMENT CONNECTION SHALL BE A 4 INCH STORTZ FITTING WITH A 30 DEGREE DOWNTURN AS REQUIRED BY THE AUTHORITY HAVING JURISDICTION.
3. FIRE HYDRANTS SHALL BE TWO 4 INCH STORTZ CONNECTIONS NOT THREADED.
4. THE BUILDING SHALL BE PROVIDED WITH AN AUTOMATIC SPRINKLER SYSTEM IN ACCORDANCE WITH NFPA13, STANDARD FOR THE INSTALLATION OF AUTOMATIC SPRINKLER SYSTEMS.
5. THE ARCHITECT AND FIRE DEPARTMENT SHALL COORDINATE FOR THE LOCATION OF A KNOX BOX ELOCK SYSTEM.
6. EMERGENCY RESPONDER RADIO COVERAGE SYSTEM IS REQUIRED UNLESS IT CAN BE PROVEN AFTER BUILDING IS CONSTRUCTED AND OCCUPIED THAT COVERAGE IS SUFFICIENT. THIS WILL BE VERIFIED BY THE AUTHORITY HAVING JURISDICTION PRIOR TO FINAL CERTIFICATE OF OCCUPANCY.

PLAN SUBMITTAL, REVIEWS AND PERMITS

AGENCY	DATE SENT	DATE RECEIVED	DATE APPROVED	PERMIT #
VAN BUREN TOWNSHIP PLANNING AND ECONOMIC DEVELOPMENT	11-06-19			
VAN BUREN TOWNSHIP FIRE DEPARTMENT	11-06-19			
VAN BUREN TOWNSHIP ENGINEERING-CONSULTING ENGINEERS	11-06-19			
WAYNE COUNTY DEPT. OF PUBLIC SERVICES (STORM WATER AND ROADS)	11-06-19			
WAYNE COUNTY DEPT. OF PUBLIC SERVICES ENGINEERING-SOIL EROSION	11-06-19			
EGLE-WATER PERMIT				
DTE ENERGY (ELECTRIC)	10-23-19			
DTE ENERGY (GAS)				
CABLE COMPANY				
AT & T	11-19-19			
STATE LICENSING				

THE FOLLOWING STIPULATIONS ARE AN INTEGRAL PART OF THE CONTRACT

WHERE DATA RESPECTING EXISTING CONDITIONS IS PROVIDE OR MENTIONED IN THE CONTRACT, DOCUMENTS AND PLANS SUCH IS PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR, AND ARE NOT A GUARANTEE OF CONDITIONS.

THE CONTRACTOR SHALL SATISFY HIMSELF AS TO THE SUFFICIENCY OF SUCH DATA; AND SHALL HIMSELF MAKE ALL INVESTIGATIONS NECESSARY SO THAT HIS BOND SHALL BE BASED SOLELY UPON HIS KNOWLEDGE AND ESTIMATION OF CONDITIONS TO BE MET.

THE CONTRACTOR SHALL MAKE ALL INVESTIGATIONS NECESSARY TO INFORM HIMSELF THOROUGHLY REGARDING THE AVAILABILITY OF ALL FACILITIES WHICH WILL BE REQUIRED IN PERFORMANCE OF THE WORK, INCLUDING FACILITIES FOR THE DELIVERY OF MATERIALS AND EQUIPMENT.

NO PLEA OF IGNORANCE OF EXISTING CONDITIONS, OR OF FAILURE TO ANTICIPATE DEVELOPMENTS WHICH MAY OCCUR BECAUSE OF EXISTING CONDITIONS, OR OF IGNORANCE OF CONDITIONS OF DIFFICULTIES THAT MAY BE ENCOUNTERED IN THE PROSECUTION OF THE WORK DUE TO EXISTING CONDITIONS OR TO REQUIREMENTS OF THE CONTRACT DOCUMENTS, SHALL RELIEVE THE CONTRACTOR OF THE OBLIGATION TO FULFILL IN EVERY DETAIL ALL THE REQUIREMENTS OF THE CONTRACT DOCUMENTS NOR SHALL THEY CONSTITUTE A BASIS FOR ANY CLAIMS WHATSOEVER FOR EXTRA COMPENSATION OR EXTENSION OF TIME.

ALL CONSTRUCTION SHALL CONFORM TO THE CURRENT STANDARDS, SPECIFICATIONS AND GENERAL CONDITIONS OF VAN BUREN TOWNSHIP AND WAYNE COUNTY.

THE DEVELOPER IS RESPONSIBLE FOR RESOLVING ANY DRAINAGE PROBLEMS ON ADJACENT PROPERTIES WHICH ARE THE RESULT OF THE DEVELOPERS' ACTIONS.

ALL WATER MAINS, SANITARY SEWERS, (AND LEADS) AND STORM SEWERS UNDER PROPOSED OR EXISTING PAVEMENT OR WITHIN INFLUENCE OF PAVEMENT (EXTENDING 3' BEYOND EDGE OF PAVEMENT THEN TAPERING TO ORIGINAL GROUND AT 1:1 SLOPE) SHALL BE SAND BACKFILLED AND COMPACTED TO 95% OPTIMUM (PROCTOR) DENSITY; ALL UTILITY CROSSINGS SHALL BE SAND BACKFILLED. SAND BACKFILLING IS INCIDENTAL TO UNIT PRICES.

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BENCHMARKS:

1. RAILROAD SPIKE IN UTILITY POLE ELEVATION=682.19 (NAVD88)
2. RAILROAD SPIKE IN UTILITY POLE ELEVATION=683.05 (NAVD88)
3. ARROW ON HYDRANT ELEVATION=683.56 (NAVD88)
4. ARROW ON HYDRANT ELEVATION=683.20 (NAVD88)
5. ARROW ON HYDRANT ELEVATION 683.33 (NAVD88)

SUBTRACT 0.44 FT. TO CONVERT TO NGVD 29 DATUM

SHEET INDEX

SHEET No. DESCRIPTION
01.....COVER SHEET
02.....BOUNDARY AND TOPOGRAPHY
03.....TREE PRESERVATION PLAN
04.....TREE LIST
05.....SITE PLAN
06.....SIGNS AND AUTOTURN ANALYSIS
07.....CONCEPTUAL UTILITY AND STORM WATER MANAGEMENT PLAN
08.....CONCEPTUAL GRADING PLAN
09.....SOIL EROSION AND SEDIMENTATION CONTROL PLAN
10.....SOIL EROSION AND SEDIMENTATION CONTROL - NOTES AND DETAILS
A1.....FLOOR PLAN
A2.....EXTERIOR ELEVATIONS
A3.....EXTERIOR ELEVATIONS
L201.....PHOTOMETRIC CALCULATION
LS-1.....LANDSCAPE PLAN
LS-2.....LANDSCAPE PLAN
LS-3.....LANDSCAPE PLAN
LS-4.....LANDSCAPE PLAN

Revisions:
12-03-19 REV PER TWP L.A.

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HAMPTON MANOR
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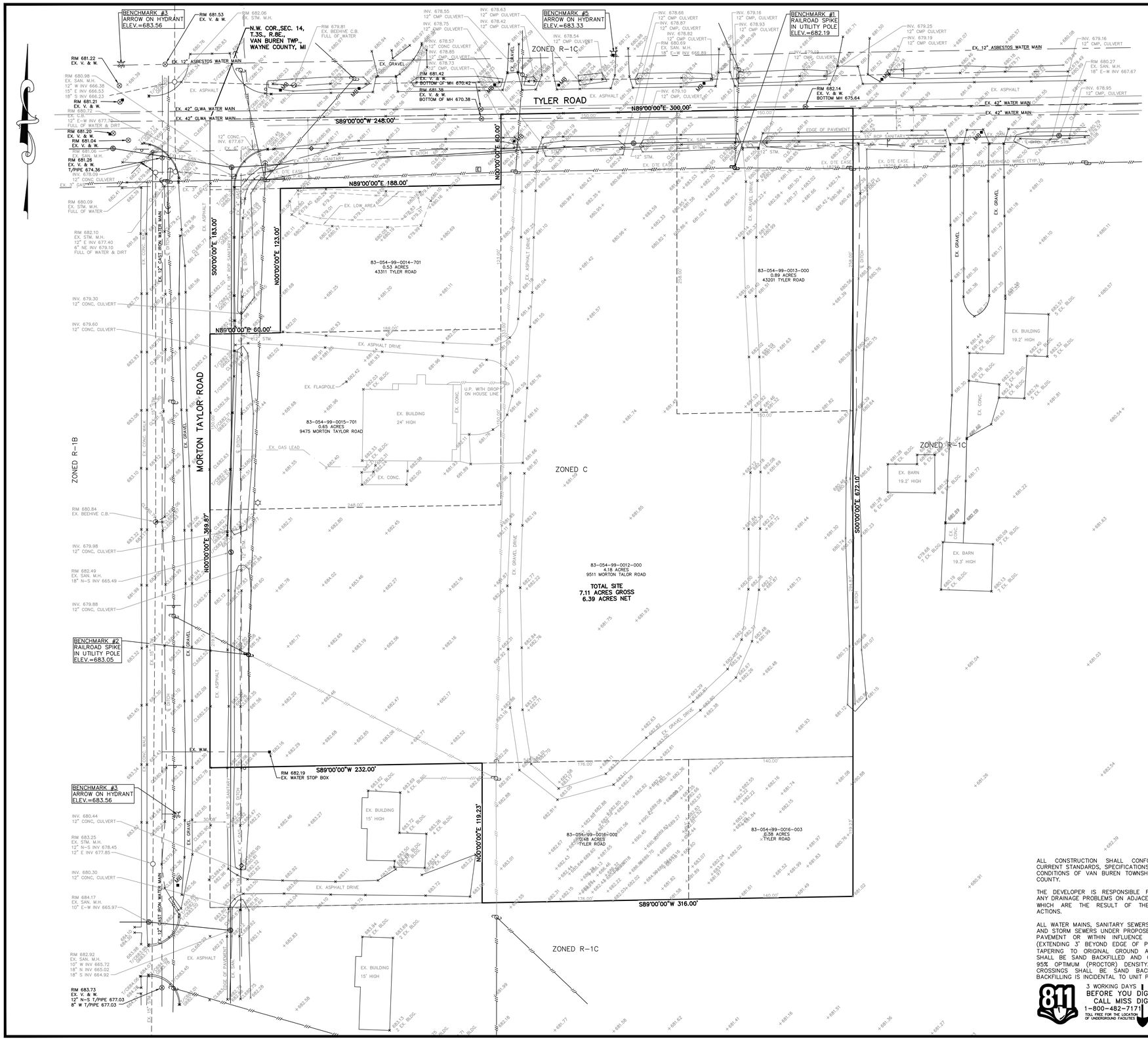
COVER SHEET

PART OF THE NORTHEAST 1/4 OF SECTION 14, TOWN 3, SOUTH, RANGE 8 EAST, VAN BUREN TOWNSHIP, WAYNE COUNTY, MICHIGAN

Scale: NO SCALE
Paper Size: 24"x36"
Date: 11-06-19
Drawn By: L.A.
Checked By: W.J.T.
Job No.: 19--249
Sheet No. 01



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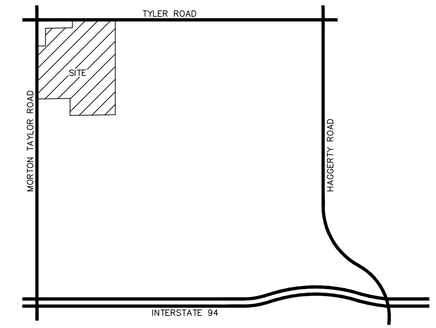

LOCATION MAP
SCALE: 4"=1 MILE

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NOTE:
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EXISTING LEGEND

- GAS LINE (PAINTED)
- SANITARY SEWER
- WATER MAIN
- STORM SEWER
- OVERHEAD UTILITY LINES
- UG — UG — UNDERGROUND UTILITY LINES
- FENCE
- DITCH
- SANITARY MANHOLE
- STORM SQ. CATCH BASIN
- STORM ROUND CATCH BASIN
- STORM MANHOLE
- CULVERT
- FIRE HYDRANT
- VALVE IN WELL
- WATER SHUT OFF
- WELL
- GAS VALVE
- LIGHT POLE
- UTILITY POLE
- GUY WIRE
- P.I. SIGN
- SECTION CORNER
- F.I. FOUND IRON
- S.I. SET IRON
- (M) MEASURED
- (R) RECORD
- GAS LINE MARKER

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GRAPHIC SCALE
40 0 20 40 80
(IN FEET)
1" = 40'

Revisions:	
12-03-19 REV PER TWP	L.A.

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HAMPTON MANOR OF VAN BUREN TOWNSHIP BOUNDARY AND TOPOGRAPHY

PART OF THE NORTHEAST 1/4 OF SECTION 14, TOWN 3, SOUTH, RANGE 8 EAST, VAN BUREN TOWNSHIP, WAYNE COUNTY, MICHIGAN

Scale:	1"=40'
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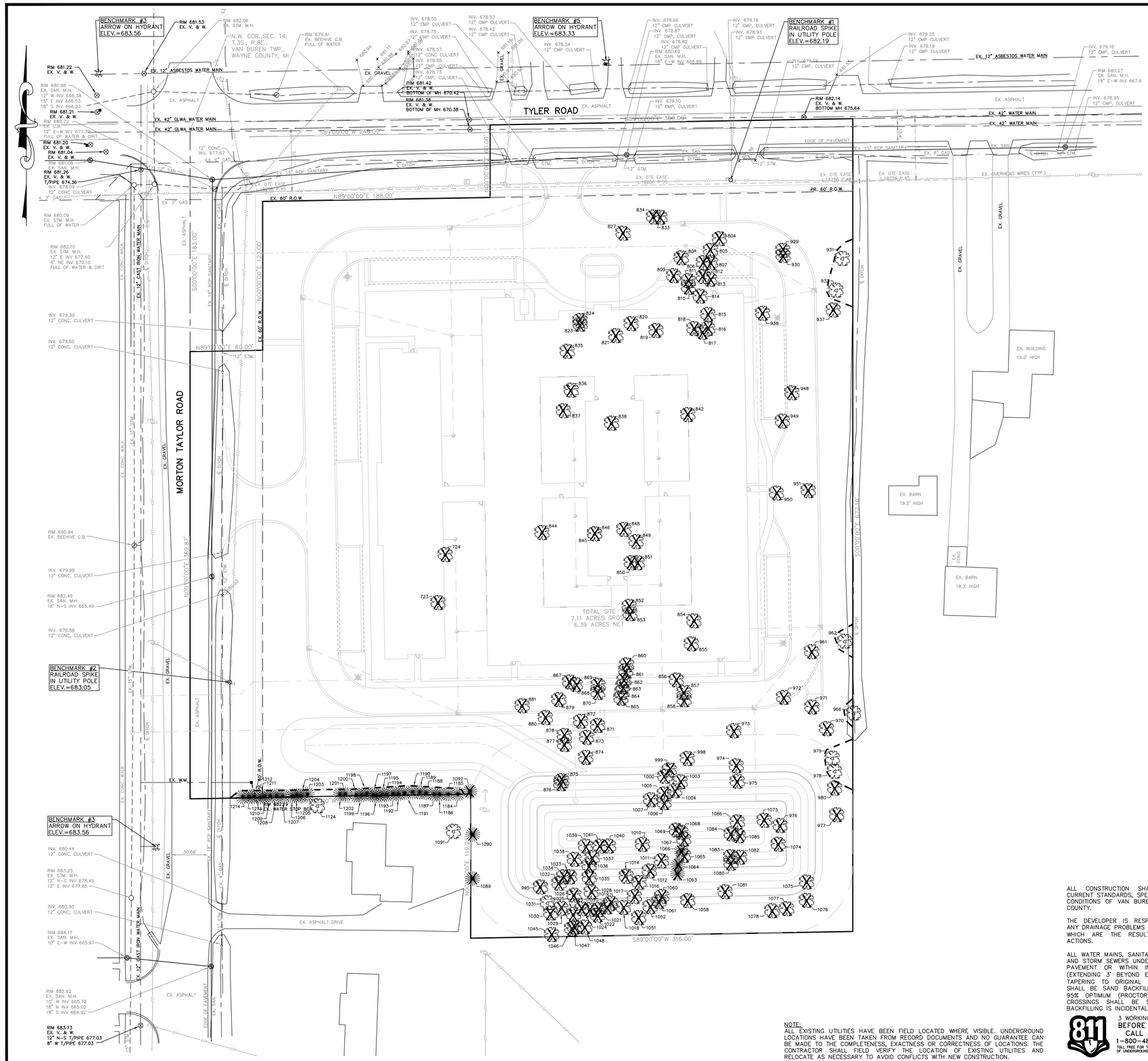

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SUBTRACT 0.44 FT. TO CONVERT TO NGVD 29 DATUM

EXISTING LEGEND

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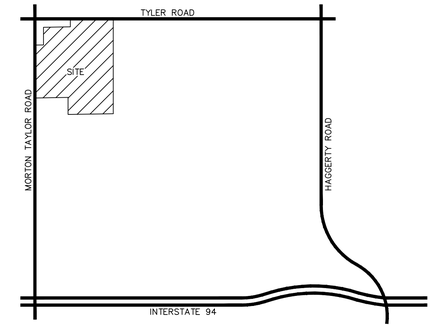
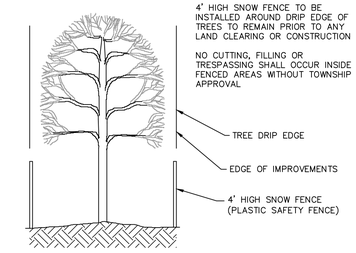
- P.I. SIGN
- SECTION CORNER
- F.I. FOUND IRON
- S.I. SET IRON
- (M) MEASURED
- (R) RECORD
- GAS LINE MARKER

LEGEND

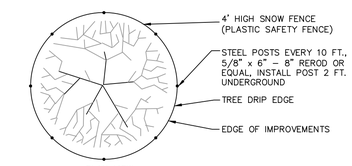
- TREE PROTECTION FENCE
- X TREE TO BE REMOVED



LOCATION MAP
SCALE: 4"=1 MILE



SECTION VIEW



PLAN VIEW

TREE PROTECTION DETAIL

N.T.S.

DEFINITIONS OF RATINGS:

Good: The tree appears to be in a healthy and satisfactory condition with an overall sound stem structure and with a full and balanced crown; the growth habit appears normal; there is no indication of pests or diseases present; the life expectancy is judged to be greater than twenty five (25) years.

Fair: The tree appears to be in a healthy and satisfactory condition with a minimum of structural problems and with minor crown imbalance or thin crown; the growth habit appears normal; there is no indication of pests or diseases present; and the life expectancy is judged to be greater than twenty (20) years.

Poor: The tree appears to be in an unhealthy condition with structural problems and with major crown imbalance, dead or dying limbs, or growth only in the top quarter of the tree; the growth habit is misshapen and askew; there is evidence of pests or diseases present; and the life expectancy is judged to be less than en (10) years.

Very Poor: The tree appears to be in an unhealthy condition with major structural problems and with major crown imbalance and several dead limbs and/or peeling bark; the growth habit is severely misshapen and askew; there is evidence of pest or diseases present; and the life expectancy is judged to be less than five (5) years.

Dead: The tree has no live branches, is topped, or fallen.

GRAPHIC SCALE
40 0 20 40 80
(IN FEET)
1" = 40'

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17001 Nineteen Mile Road, Suite 3
Clinton Township, Michigan 48038
o: 586.412.7050 | f: 586.412.7114
www.lehnerassociates.com

Client:
VAN BUREN INVESTORS
LAND HOLDINGS, LLC
ZOHAIB SYED
1451 S. GRATIOT AVENUE
CLINTON TOWNSHIP, MI 48035
989-708-1878
zohaibsyed2001@yahoo.com

HAMPTON MANOR OF VAN BUREN TOWNSHIP TREE PRESERVATION PLAN

PART OF THE NORTHEAST 1/4 OF SECTION 14, TOWN 3, SOUTH, RANGE 8 EAST, VAN BUREN TOWNSHIP, WAYNE COUNTY, MICHIGAN

Scale:	1"=40'
Paper Size:	24"x36"
Date:	11-06-19
Drawn By:	L.A.
Checked By:	W.J.T.
Job No.:	19-249
Sheet No.	03

TREE LIST
LEGEND: G=GOOD, F=FAIR, P=POOR, D=DEAD

POINT	ELEVATION	NORTHING	EASTING	DESCRIPTION	CONDITION	REMOVE/SAVE	REGULATED/UNREGULATED
723	682.59	4609.42	5204.87	15" HONEY LOCUST	G	REMOVE	REGULATED
724	682.21	4649.08	5210.79	7" SUGAR MAPLE	G	REMOVE	REGULATED
804	681.42	4910.38	5437.58	10" RED MAPLE	G	REMOVE	REGULATED
805	681.70	4900.68	5430.07	10" HONEY LOCUST	G	REMOVE	REGULATED
806	681.65	4890.56	5424.25	10" HONEY LOCUST	G	REMOVE	REGULATED
807	681.65	4890.56	5430.25	7" RED MAPLE	G	REMOVE	REGULATED
808	681.34	4894.55	5405.99	10" HONEY LOCUST	G	REMOVE	REGULATED
809	681.29	4879.71	5399.61	15" HONEY LOCUST	G	REMOVE	REGULATED
810	680.57	4870.17	5411.90	10" HONEY LOCUST	G	REMOVE	REGULATED
811	681.30	4875.53	5411.84	8" HONEY LOCUST	G	REMOVE	REGULATED
812	681.44	4878.90	5424.22	3-6" HONEY LOCUST	G	REMOVE	REGULATED
813	681.02	4876.72	5429.56	5" HONEY LOCUST	G	REMOVE	REGULATED
814	681.57	4862.83	5421.46	10" HONEY LOCUST	G	REMOVE	REGULATED
815	681.74	4847.69	5427.94	10" HONEY LOCUST	G	REMOVE	REGULATED
816	681.69	4836.03	5427.79	10" HONEY LOCUST	G	REMOVE	REGULATED
817	681.76	4833.09	5423.40	10" HONEY LOCUST	G	REMOVE	REGULATED
818	681.59	4836.01	5416.41	12" HONEY LOCUST	G	REMOVE	REGULATED
819	681.91	4834.45	5385.04	3-5&6" MULBERRY	F	REMOVE	UNREGULATED
820	681.87	4840.09	5364.47	3-6" MULBERRY	F	REMOVE	UNREGULATED
821	681.53	4830.17	5351.82	7" APPLE	P	REMOVE	UNREGULATED
823	681.57	4839.67	5322.24	7" RED OAK	G	REMOVE	REGULATED
824	681.57	4842.67	5322.24	2-5" BASSWOOD	F	REMOVE	REGULATED
827	681.78	4914.88	5357.82	5" WHITE ASH	F	REMOVE	UNREGULATED
833	683.42	4928.05	5388.36	12&6" WHITE ASH	F	REMOVE	UNREGULATED
834	682.71	4928.29	5383.07	7" WHITE ASH	F	REMOVE	UNREGULATED
835	681.64	4817.22	5311.64	7" WHITE ASH	F	REMOVE	UNREGULATED
836	682.05	4785.11	5314.92	7" WHITE ASH	F	REMOVE	UNREGULATED
837	682.48	4768.13	5308.53	12" RED MAPLE	G	REMOVE	REGULATED
838	682.29	4757.83	5348.28	10" BOX ELDER	F	REMOVE	UNREGULATED
842	681.52	4764.92	5411.40	6&10" APPLE	D	REMOVE	UNREGULATED
844	682.09	4667.30	5290.75	12" HONEY LOCUST	G	REMOVE	REGULATED
845	681.80	4666.33	5334.36	6-6" APPLE	F	REMOVE	REGULATED
846	681.81	4666.33	5334.35	6-6" APPLE	F	REMOVE	REGULATED
848	681.85	4669.93	5358.54	3-6&8" RED MAPLE	G	REMOVE	REGULATED
849	681.85	4659.93	5368.54	10" RED MAPLE	G	REMOVE	REGULATED
850	681.90	4642.42	5364.58	7" RED MAPLE	G	REMOVE	REGULATED
851	681.90	4642.42	5369.58	8" RED MAPLE	G	REMOVE	REGULATED
852	682.14	4606.34	5362.92	9" RED MAPLE	G	REMOVE	REGULATED
853	682.04	4600.26	5363.50	7" RED MAPLE	F	REMOVE	REGULATED
854	682.18	4594.30	5416.37	5-6" CRABAPPLE	F	REMOVE	REGULATED
855	682.51	4575.34	5414.26	7" SUGAR MAPLE	F	REMOVE	REGULATED
856	682.43	4545.42	5401.86	5" WHITE ASH	D	REMOVE	UNREGULATED
857	682.53	4535.09	5408.26	5" WHITE ASH	D	REMOVE	UNREGULATED
858	682.53	4529.09	5408.26	3-8&3-5" RED MAPLE	F	REMOVE	REGULATED
860	681.93	4557.95	5360.91	11" RED MAPLE	G	REMOVE	REGULATED
861	681.93	4553.03	5360.05	11" RED MAPLE	G	REMOVE	REGULATED
862	681.93	4545.15	5358.66	11" RED MAPLE	G	REMOVE	REGULATED
863	681.93	4540.22	5357.79	11" RED MAPLE	G	REMOVE	REGULATED
864	681.93	4535.30	5356.92	11" RED MAPLE	G	REMOVE	REGULATED
865	681.93	4530.37	5356.05	11" RED MAPLE	G	REMOVE	REGULATED
867	682.29	4543.81	5313.63	6" BOX ELDER	F	REMOVE	UNREGULATED
868	682.22	4541.65	5318.44	7" BOX ELDER	P	REMOVE	UNREGULATED
869	682.21	4541.12	5337.22	6" WHITE ASH	D	REMOVE	UNREGULATED
870	682.21	4535.13	5336.91	6" BOX ELDER	P	REMOVE	UNREGULATED
871	681.60	4507.88	5336.77	8" EASTERN COTTONWOOD	G	REMOVE	UNREGULATED
872	682.30	4511.33	5322.77	5" AMERICAN ELM	D	REMOVE	UNREGULATED
873	682.15	4498.02	5327.65	5" AMERICAN ELM	D	REMOVE	UNREGULATED
874	682.02	4481.45	5326.98	6" WHITE ASH	D	REMOVE	UNREGULATED
875	682.83	4462.18	5307.14	2-6" AMERICAN ELM	D	REMOVE	UNREGULATED
876	683.09	4459.68	5306.33	2-5" WHITE ASH	D	REMOVE	UNREGULATED
877	682.69	4492.07	5309.29	5&9" RED MAPLE	G	REMOVE	REGULATED
878	682.34	4499.55	5309.27	8" RED MAPLE	G	REMOVE	REGULATED
879	682.38	4529.17	5304.66	2-8" RED MAPLE	G	REMOVE	REGULATED
880	682.38	4514.42	5293.60	6" HOP-HORNBEAM	F	REMOVE	REGULATED
881	683.02	4524.22	5274.35	4&8" BOX ELDER	G	REMOVE	UNREGULATED

TREE LIST
LEGEND: G=GOOD, F=FAIR, P=POOR, D=DEAD

POINT	ELEVATION	NORTHING	EASTING	DESCRIPTION	CONDITION	REMOVE/SAVE	REGULATED/UNREGULATED
929	681.63	4900.68	5489.96	7" BOX ELDER	F	REMOVE	UNREGULATED
930	681.61	4896.49	5490.06	2-7" BOX ELDER	F	REMOVE	UNREGULATED
931	681.34	4894.03	5539.03	18" HONEY LOCUST	G	SAVE	REGULATED
932	681.53	4867.76	5533.80	7" SUGAR MAPLE	G	SAVE	REGULATED
937	681.39	4851.44	5531.62	2-5" APPLE	F	SAVE	REGULATED
938	681.04	4848.63	5473.24	12" BOX ELDER	F	REMOVE	UNREGULATED
948	681.54	4782.88	5497.33	5&6" BOX ELDER	F	REMOVE	UNREGULATED
949	681.76	4759.58	5489.51	5" APPLE	P	REMOVE	REGULATED
950	681.45	4700.03	5484.60	14" BOX ELDER	F	REMOVE	UNREGULATED
951	681.34	4701.98	5510.92	2-12&8" BOX ELDER	F	REMOVE	UNREGULATED
961	681.50	4568.92	5513.65	7" APPLE	P	REMOVE	UNREGULATED
962	680.74	4577.51	5541.09	6" RED OAK	G	SAVE	REGULATED
966	680.55	4518.07	5548.45	2-5" WHITE ASH	F	SAVE	UNREGULATED/OFFSITE
970	681.06	4505.19	5526.07	5" HAWTHORN	G	REMOVE	REGULATED
971	681.76	4523.05	5513.97	6" HAWTHORN	G	REMOVE	REGULATED
972	682.07	4531.06	5490.56	6" SUGAR MAPLE	F	REMOVE	UNREGULATED
973	682.38	4503.52	5449.34	5&6" HONEY LOCUST	P	REMOVE	UNREGULATED
974	682.21	4474.50	5451.42	3-9" RED MAPLE	G	REMOVE	REGULATED
975	682.31	4461.71	5452.28	12" RED MAPLE	G	REMOVE	REGULATED
976	681.74	4425.14	5487.57	2-5" HAWTHORN	F	REMOVE	REGULATED
977	681.08	4433.99	5534.40	6&10" RED MAPLE	G	REMOVE	REGULATED
978	681.16	4470.06	5532.75	13" RED MAPLE	G	SAVE	REGULATED
979	681.16	4480.89	5530.84	6" RED MAPLE	F	SAVE	REGULATED
980	681.16	4456.06	5532.75	5&7" RED OAK	G	REMOVE	REGULATED
995	682.67	4374.35	5289.50	6" SILVER MAPLE	G	REMOVE	UNREGULATED
998	682.52	4480.56	5410.91	6" EASTERN COTTONWOOD	G	REMOVE	UNREGULATED
999	682.53	4471.01	5395.96	5" EASTERN COTTONWOOD	G	REMOVE	UNREGULATED
1000	682.92	4465.81	5392.42	7" EASTERN COTTONWOOD	G	REMOVE	UNREGULATED
1003	683.13	4461.23	5405.03	7" EASTERN COTTONWOOD	G	REMOVE	UNREGULATED
1004	682.97	4453.91	5400.44	5" EASTERN COTTONWOOD	G	REMOVE	UNREGULATED
1005	682.93	4451.23	5391.92	8" EASTERN COTTONWOOD	G	REMOVE	UNREGULATED
1006	682.32	4444.06	5391.71	8" EASTERN COTTONWOOD	G	REMOVE	UNREGULATED
1007	682.41	4446.39	5380.56	5" EASTERN COTTONWOOD	G	REMOVE	UNREGULATED
1010	689.08	4409.53	5373.86	12" EASTERN COTTONWOOD	F	REMOVE	UNREGULATED
1011	689.27	4395.84	5389.52	2-5" EASTERN COTTONWOOD	P	REMOVE	UNREGULATED
1012	689.83	4387.55	5379.53	2-6" RED MAPLE	G	REMOVE	REGULATED
1014	690.45	4383.25	5360.56	2-4&7" WILLOW	F	REMOVE	UNREGULATED
1016	690.93	4378.13	5371.10	10" BOX ELDER	F	REMOVE	UNREGULATED
1017	689.70	4366.36	5367.15	5" WILLOW	F	REMOVE	UNREGULATED
1018	686.86	4357.37	5358.03	2-5" WILLOW	F	REMOVE	UNREGULATED
1019	687.18	4361.04	5347.66	6" WILLOW	F	REMOVE	UNREGULATED
1020	687.47	4357.80	5344.49	8" WILLOW	F	REMOVE	UNREGULATED
1021	686.32	4355.60	5337.59	2-5" SILVER MAPLE	G	REMOVE	UNREGULATED
1022	685.53	4350.97	5336.59	5" WILLOW	F	REMOVE	UNREGULATED
1023	686.46	4355.53	5330.28	6" SILVER MAPLE	F	REMOVE	UNREGULATED
1024	686.13	4356.28	5323.74	6" SILVER MAPLE	F	REMOVE	UNREGULATED
1025	686.38	4351.63	5316.86	6" WILLOW	F	REMOVE	UNREGULATED
1026	689.60	4367.57	5317.31	6" WILLOW	F	REMOVE	UNREGULATED
1028	687.65	4370.18	5331.47	6" SILVER MAPLE	G	REMOVE	UNREGULATED
1029	685.64	4356.78	5306.40	6" SILVER MAPLE	G	REMOVE	UNREGULATED
1030	682.44	4352.76	5298.01	2-5" SILVER MAPLE	G	REMOVE	UNREGULATED
1031	682.43	4361.27	5295.33	12" SILVER MAPLE	F	REMOVE	UNREGULATED
1032	683.01	4377.38	5304.84	3-5" EASTERN COTTONWOOD	G	REMOVE	UNREGULATED
1033	682.57	4382.72	5313.66	10" WILLOW	G	REMOVE	UNREGULATED
1034	682.57	4382.72	5308.66	8" SILVER MAPLE	G	REMOVE	UNREGULATED
1035	682.51	4382.15	5329.86	6" SILVER MAPLE	G	REMOVE	UNREGULATED
1036	681.39	4392.14	5329.63	6" SILVER MAPLE	G	REMOVE	UNREGULATED
1037	682.59	4398.60	5332.19	5" SILVER MAPLE	F	REMOVE	UNREGULATED
1038	682.80	4397.22	5317.46	11" EASTERN COTTONWOOD	G	REMOVE	UNREGULATED
1039	682.88	4408.12	5326.72	12" EASTERN COTTONWOOD	F	REMOVE	UNREGULATED
1040	682.85	4408.12	5345.90	9" SILVER MAPLE	G	REMOVE	UNREGULATED
1041	682.85	4408.12	5338.90	6" SILVER MAPLE	G	REMOVE	UNREGULATED
1045	682.15	4335.01	5298.76	6" SILVER MAPLE	F	REMOVE	UNREGULATED
1046	682.35	4339.87	5315.32	5" SILVER MAPLE	F	REMOVE	UNREGULATED
1047	683.14	4341.05	5317.83	5" SILVER MAPLE	G	REMOVE	UNREGULATED
1048	682.43	4341.13	5326.07	5" SILVER MAPLE	G	REMOVE	UNREGULATED

TREE LIST
LEGEND: G=GOOD, F=FAIR, P=POOR, D=DEAD

POINT	ELEVATION	NORTHING	EASTING	DESCRIPTION	CONDITION	REMOVE/SAVE	REGULATED/UNREGULATED
1051	684.99	4348.97	5370.77	7" WILLOW	G	REMOVE	UNREGULATED
1052	686.94	4358.00	5380.15	2-5" WILLOW	G	REMOVE	UNREGULATED
1058	683.07	4363.03	5411.29	5" SILVER MAPLE	F	REMOVE	UNREGULATED
1060	687.16	4366.46	5389.83	6" WILLOW	F	REMOVE	UNREGULATED
1061	687.18	4362.23	5387.44	12" WILLOW	G	REMOVE	UNREGULATED
1063	682.44	4385.30	5403.01	6" BLUE SPRUCE	D	REMOVE	UNREGULATED
1064	682.51	4392.70	5403.39	6" BLUE SPRUCE	D	REMOVE	UNREGULATED
1065	682.52	4400.41	5407.91	6" HAWTHORN	D	REMOVE	UNREGULATED
1066	682.83	4403.68	5406.17	6" BLUE SPRUCE	D	REMOVE	UNREGULATED
1067	682.57	4413.82	5407.97	5" WHITE ASH	P	REMOVE	UNREGULATED
1068	682.66	4419.48	5405.65	5" BLACK CHERRY	P	REMOVE	REGULATED
1069	683.35	4421.29	5401.85	7" SILVER MAPLE	G	REMOVE	UNREGULATED
1073	682.16	4429.46	5474.47	5" RED MAPLE	P	REMOVE	REGULATED
1074	682.15	4409.67	5486.09	7" RED MAPLE	F	REMOVE	REGULATED
1075	681.97	4378.45	5509.57	8" PIN OAK	G	REMOVE	REGULATED
1076	681.83	4363.27	5509.41	3-6" SUGAR MAPLE	G	REMOVE	REGULATED
1077	681.99	4356.36	5493.13	5" SUGAR MAPLE	F	REMOVE	REGULATED
1078	681.52	4354.69	5480.88	7" RED MAPLE	G	REMOVE	REGULATED
1080	682.29	4393.97	5446.98	5&7" SUGAR MAPLE	G	REMOVE	REGULATED
1081	682.02	4370.33	5442.15	9" SUGAR MAPLE	G	REMOVE	REGULATED
1082	681.84	4398.91	5454.29	11" SUGAR MAPLE	G	REMOVE	REGULATED
1083	682.19	4399.37	5446.87	6" SUGAR MAPLE	G	REMOVE	REGULATED
1084	682.22	4418.22	5447.27	9" SUGAR MAPLE	F	REMOVE	REGULATED
1085	682.22	4416.67	5453.07	7&10" SILVER MAPLE	F	REMOVE	UNREGULATED
1086	682.55	4428.11	5452.34	16" SUGAR MAPLE	G	REMOVE	REGULATED
1089	683.49	4381.26	5233.64	9" SCOTCH PINE	P	REMOVE	UNREGULATED
1090	683.48	4417.71	5233.68	7" BLUE SPRUCE	P	REMOVE	UNREGULATED
1091	683.15	4420.42	5217.58	6" RED MAPLE	G	SAVE	UNREGULATED/OFFSITE
1092	683.04	4453.46	5231.47	10" RED PINE	P	REMOVE	UNREGULATED
1124	683.11	4441.45	5105.07	12" BLACK CHERRY	G	SAVE	UNREGULATED/OFFSITE
1184	682.45	4451.21	5221.35	13" RED PINE	F	SAVE	REGULATED
1185	682.40	4451.08	5213.46	10" RED PINE	F	SAVE	REGULATED
1186	682.52	4450.94	5206.18	10" RED PINE	F	SAVE	REGULATED
1187	682.53	4450.98	5201.78	11" RED PINE	F	SAVE	REGULATED
1188	682.66	4452.09	5195.11	7" RED PINE	F	SAVE	REGULATED
1189	682.75	4452.64	5189.88	15" RED PINE	F	SAVE	REGULATED
1190	682.79	4452.78	5184.07	8" RED PINE	F	SAVE	REGULATED
1191	682.74	4452.01	5177.38	10" RED PINE	F	SAVE	REGULATED
1192	682.77	4451.25	5172.27	9" RED PINE	F	SAVE	REGULATED
1193	682.75	4451.50	5167.99	9" RED PINE	F	SAVE	REGULATED
1194	682.83	4450.54	5162.40	9" RED PINE	F	SAVE	REGULATED
1195	682.82	4450.61	5158.69	13" RED PINE	F	SAVE	REGULATED
1196	682.90	4449.89	5154.21	9" RED PINE	F	SAVE	REGULATED
1197	682.94	4450.36	5151.11	13" RED PINE	F	SAVE	REGULATED
1198	683.06	4451.37	5146.15	9" RED PINE	F	SAVE	REGULATED
1199	683.06	4450.29	5141.72	10" RED PINE	F	SAVE	REGULATED
1200	683.08	4450.30	5137.52	12" RED PINE	F	SAVE	REGULATED
1201	682.86	4451.00	5128.40	12" RED PINE	F	SAVE	REGULATED
1202	682.85	4450.86	5123.95	12" RED PINE	F	SAVE	REGULATED
1203	682.68	4450.95	5097.04	12" RED PINE	F	SAVE	REGULATED
1204	682.59	4449.77	5091.61	12" RED PINE	F	SAVE	REGULATED
1205	682.58	4450.11	5088.20	9" RED PINE	F	SAVE	REGULATED
1206	682.46	4449.41	5084.37	9" RED PINE	F	SAVE	REGULATED
1207	682.38	4449.33	5076.49	10" RED PINE	F	SAVE	REGULATED
1208	682.43	4449.91	5071.70	9" RED PINE	F	SAVE	REGULATED
1209	682.34	4449.39	5066.23	11" RED PINE	F	SAVE	REGULATED
1210	682.35	4449.32	5061.80	12" RED PINE	F	SAVE	REGULATED
1211	682.31	4448.40	5058.25	12" RED PINE	F	SAVE	REGULATED
1212	682.26	4449.05	5052.96	8" RED PINE	F	SAVE	REGULATED
1213	682.23	4448.96	5048.95	9" RED PINE	F	SAVE	REGULATED
1214	681.97	4448.76	5043.54	13" RED PINE	F	SAVE	REGULATED

SEE LANDSCAPE PLAN LS-1 OF 4
FOR TREE REMOVAL/REPLACEMENT SUMMARY.

Revisions:
12-03-19 REV PER TWP L.A.

Client:
VAN BUREN INVESTORS
LAND HOLDINGS, LLC
ZOHAIB SYED
1451 S. GRATIOT AVENUE
CLINTON TOWNSHIP, MI 48035
989-708-1878
zohaibsyed2001@yahoo.com

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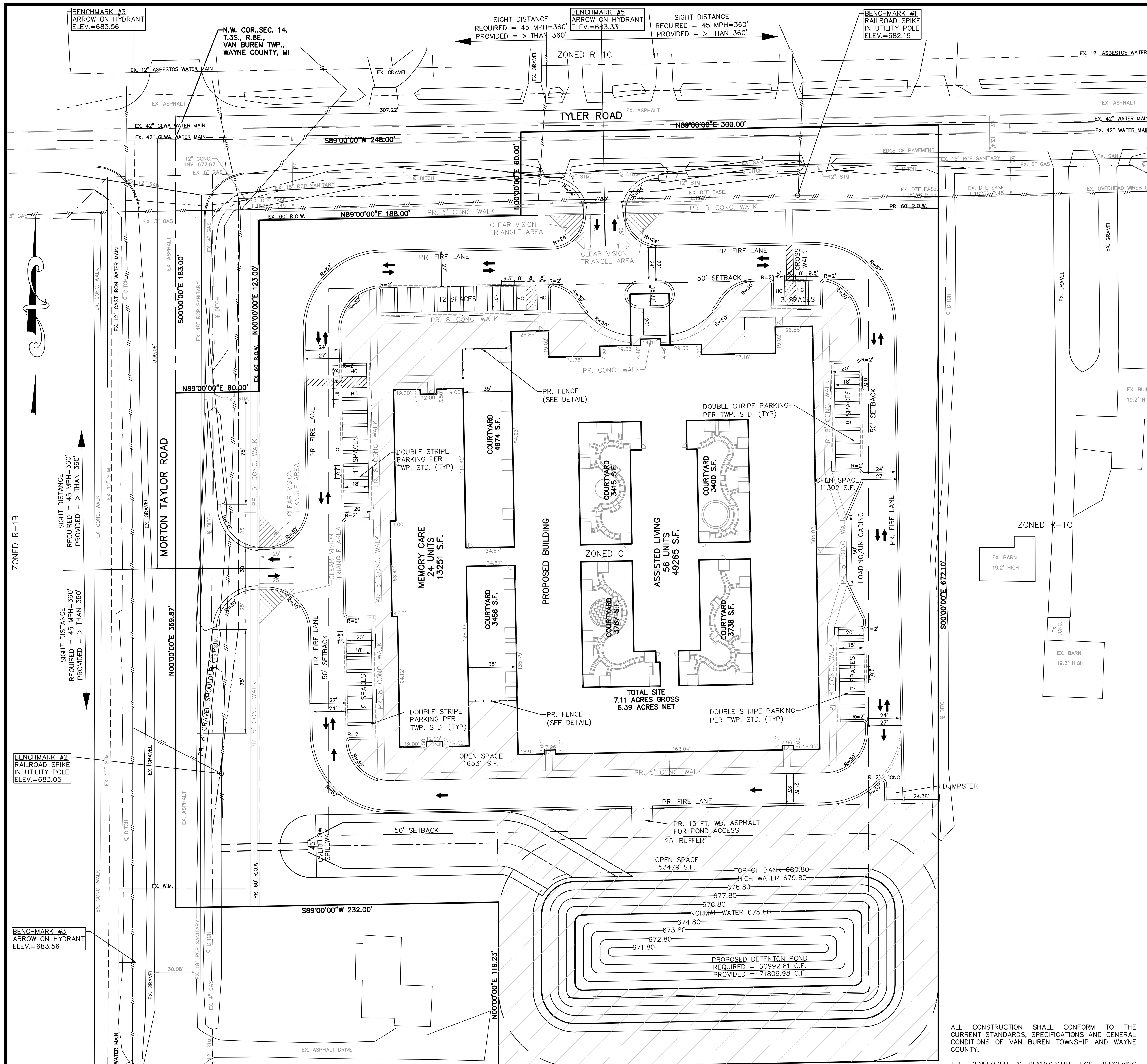
HAMPTON MANOR
OF VAN BUREN TOWNSHIP
TREE LIST

PART OF THE NORTHEAST 1/4 OF SECTION 14,
TOWN 3, SOUTH, RANGE 8 EAST, VAN BUREN TOWNSHIP,
WAYNE COUNTY, MICHIGAN

Scale: 1"=40'
Paper Size: 24"x36"
Date: 11-06-19
Drawn By: L.A.
Checked By: W.J.T.
Job No.: 19-249
Sheet No. 04



GRAPHIC SCALE
40 0 20 40 80
(IN FEET)
1" = 40'

DESCRIPTIONS ARE PREPARED FROM EXISTING VAN BUREN TOWNSHIP TAX RECORDS. ALL PARCELS SHALL BE COMBINED AFTER PURCHASE OF PROPERTY IS COMPLETED.

PARCEL 1: PARCEL #83-054-99-0012-000
PART OF THE NORTHWEST 1/4 OF SECTION 14, TOWN 3 SOUTH, RANGE 8 EAST, BEGINNING SOUTH 333 FEET FROM THE NORTHWEST CORNER OF SECTION 14; THENCE NORTH 89 DEGREES 00 MINUTES EAST 248 FEET; THENCE NORTH 333 FEET; THENCE NORTH 89 DEGREES 00 MINUTES EAST 150 FEET; THENCE SOUTH 258 FEET; THENCE NORTH 89 DEGREES 00 MINUTES EAST 150 FEET; THENCE SOUTH 294.87 FEET; THENCE SOUTH 89 DEGREES 00 MINUTES WEST 548 FEET; THENCE NORTH 219.87 FEET TO THE POINT OF BEGINNING. 4.18 ACRES.

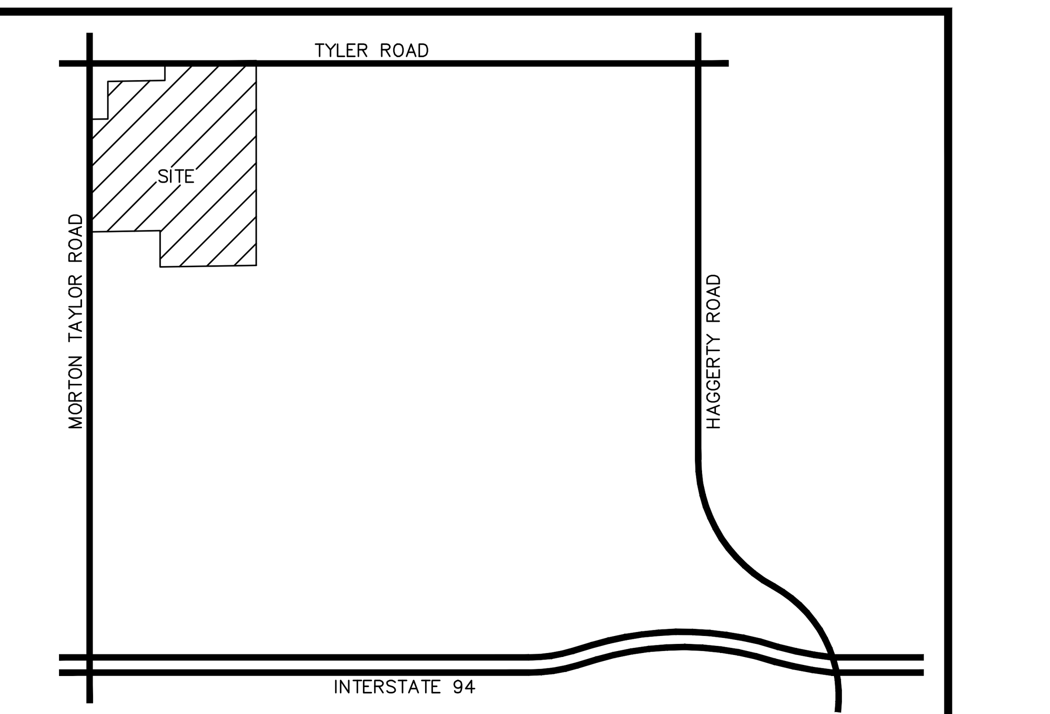
PARCEL 2: PARCEL #83-054-99-0013-000
PART OF THE NORTHWEST 1/4 OF SECTION 14, TOWN 3 SOUTH, RANGE 8 EAST, BEGINNING NORTH 89 DEGREES 00 MINUTES EAST 398 FEET FROM THE NORTHWEST CORNER OF SECTION 14; THENCE NORTH 89 DEGREES 00 MINUTES EAST 150 FEET; THENCE SOUTH 258 FEET; THENCE SOUTH 89 DEGREES 00 MINUTES WEST 150 FEET; THENCE NORTH 258 FEET TO THE POINT OF BEGINNING. 0.89 ACRES.

PARCEL 3: PARCEL #83-054-99-0014-701
PART OF THE NORTHWEST 1/4 OF SECTION 14, TOWN 3 SOUTH, RANGE 8 EAST, BEGINNING SOUTH 60 FEET AND NORTH 89 DEGREES EAST 60 FEET FROM THE NORTHWEST CORNER OF SECTION 14; THENCE SOUTH 123 FEET; THENCE NORTH 89 DEGREES EAST 188 FEET; THENCE NORTH 123 FEET; THENCE SOUTH 89 DEGREES WEST 188 FEET TO THE POINT OF BEGINNING. 0.53 ACRES.

PARCEL 4: PARCEL #83-054-99-0015-701
PART OF THE NORTHWEST 1/4 OF SECTION 14, TOWN 3 SOUTH, RANGE 8 EAST, BEGINNING SOUTH 183 FEET FROM THE NORTHWEST CORNER OF SECTION 14; THENCE NORTH 89 DEGREES 00 MINUTES EAST 248 FEET; THENCE SOUTH 150 FEET; THENCE SOUTH 89 DEGREES 00 MINUTES WEST 248 FEET; THENCE NORTH 150 FEET TO THE POINT OF BEGINNING EXCEPT THE WEST 60 FEET THEREOF. 0.65 ACRES.

PARCEL 5: PARCEL #83-054-99-0016-002
PART OF THE NORTHWEST 1/4 OF SECTION 14, TOWN 3 SOUTH, RANGE 8 EAST, BEGINNING DUE SOUTH 672.10 FEET AND NORTH 90 DEGREES EAST 232 FEET FROM THE NORTHWEST CORNER OF SECTION 14; THENCE NORTH 89 DEGREES EAST 176 FEET; THENCE DUE NORTH 119.23 FEET; THENCE SOUTH 89 DEGREES WEST 176 FEET; THENCE DUE SOUTH 119.23 FEET TO THE POINT OF BEGINNING. 0.48 ACRES.

PARCEL 6: PARCEL #83-054-99-0016-003
PART OF THE NORTHWEST 1/4 OF SECTION 14, TOWN 3 SOUTH, RANGE 8 EAST, BEGINNING DUE SOUTH 672.10 FEET AND NORTH 90 DEGREES EAST 408 FEET FROM THE NORTHWEST CORNER OF SECTION 14; THENCE NORTH 89 DEGREES EAST 140 FEET; THENCE DUE NORTH 119.23 FEET; THENCE SOUTH 89 DEGREES WEST 140 FEET; THENCE DUE SOUTH 119.23 FEET TO THE POINT OF BEGINNING. 0.38 ACRES.



LOCATION MAP
SCALE: 4"=1 MILE

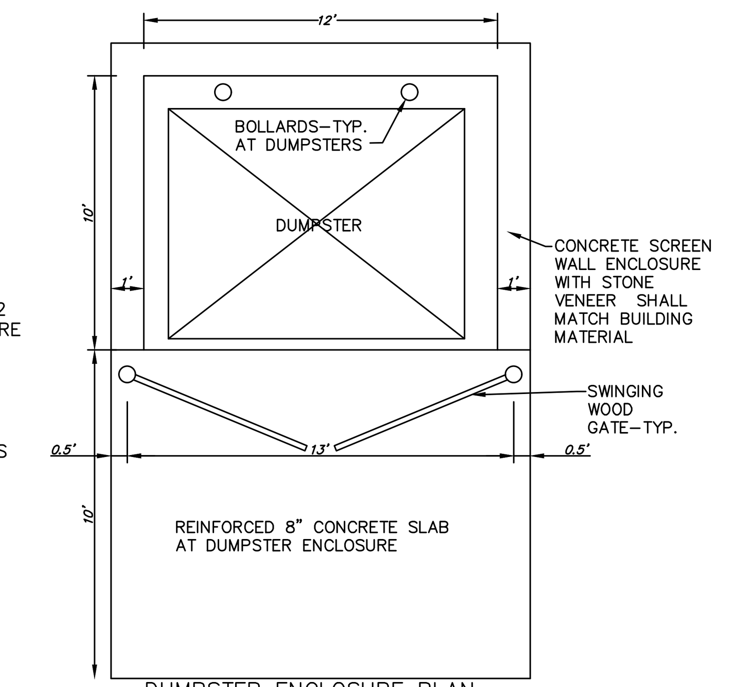
BENCHMARKS:
1. RAILROAD SPIKE IN UTILITY POL ELEVATION=682.19 (NAVD88)
2. RAILROAD SPIKE IN UTILITY POL ELEVATION=683.05 (NAVD88)
3. ARROW ON HYDRANT ELEVATION=683.56 (NAVD88)
4. ARROW ON HYDRANT ELEVATION=683.20 (NAVD88)
5. ARROW ON HYDRANT ELEVATION 683.33 (NAVD88)

SUBTRACT 0.44 FT. TO CONVERT TO NGVD 29 DATUM

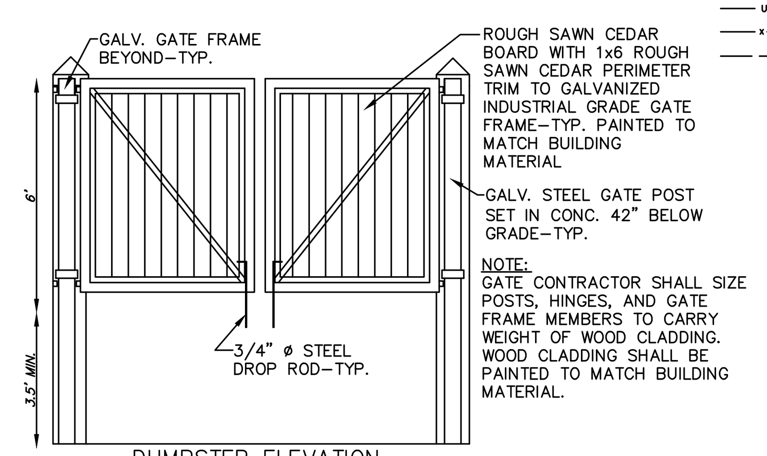
PROPOSED LEGEND
- SANITARY SEWER
- WATER MAIN
- STORM SEWER
- FENCE
- UNDERGROUND CABLE, ELECTRIC & PHONE
- GAS
- SANITARY MANHOLE
- SANITARY CLEANOUT
- STORM CATCH BASIN (PAVEMENT)
- STORM CATCH BASIN (YARD)
- STORM MANHOLE
- STORM MANHOLE WITH CATCH BASIN COVER (PAVEMENT)
- STORM MANHOLE WITH CATCH BASIN COVER (YARD)
- STORM INLET
- FIRE HYDRANT
- VALVE IN WELL
- WATER LEAD STOP BOX
- CB 1 — STORM STRUCTURE NUMBER
- MH 1 — SANITARY STRUCTURE NUMBER
- HYD 1 — WATER STRUCTURE NUMBER
- 1 — UTILITY CROSSING NUMBER
- UTILITY CROSSING
- SAND BACKFILL

EXISTING LEGEND
- GAS LINE (PAINTED)
- SANITARY SEWER
- WATER MAIN
- STORM SEWER
- OVERHEAD UTILITY LINES
- UNDERGROUND UTILITY LINES
- FENCE
- DITCH
- SANITARY MANHOLE
- STORM SQ. CATCH BASIN
- STORM ROUND CATCH BASIN
- STORM MANHOLE
- CULVERT
- FIRE HYDRANT
- VALVE IN WELL
- WATER SHUT OFF
- WELL
- GAS VALVE
- LIGHT POLE
- UTILITY POLE
- GUY WIRE
- P.I. SIGN
- SECTION CORNER
- F.I. FOUND IRON
- S.I. SET IRON
- (M) MEASURED
- (R) RECORD
- GAS LINE MARKER

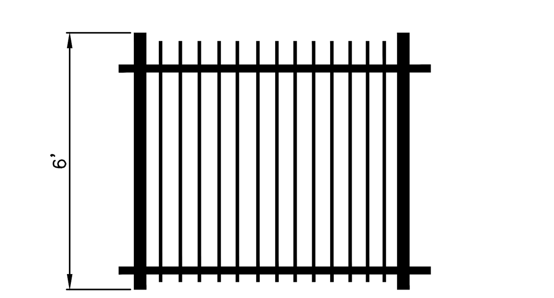
SITE NOTES:
1. DEVELOPER:
   VAN BUREN INVESTORS LAND HOLDINGS, LLC
   ZOHAIB SYED
   1451 GRATIOT AVENUE
   CLINTON TWP., MI 48036
   PHONE: 989-708-1878
2. TOTAL SITE AREA = 6.39 ACRES.
3. BUILDING AND PAVEMENT LOT COVERAGE = 50%
4. PROPOSED SENIOR ASSISTED LIVING WITH 4 TWO BEDROOM, 32 ONE BEDROOM UNITS, 20 EFFICIENCY UNITS AND 24 MEMORY CARE UNITS FOR A TOTAL OF 80 UNITS.
5. PERIMETER SETBACK = 50 FT.
6. OPEN SPACE REQUIRED = 25% OF SITE AREA
   =6.39 ACRES * 0.25 = 1.6 ACRES
   OPEN SPACE PROVIDED = 2.25 ACRES
7. PARKING REQUIRED = 1 SPACE FOR EVERY 4 RESIDENTS PLUS ONE FOR EACH EMPLOYEE
   24 MEMORY CARE = 24 RESIDENTS
   20 STUDIO = 20 RESIDENTS
   32 ONE BED = 32 RESIDENTS
   4 TWO BED = 8 RESIDENTS
   84 RESIDENTS/4
   =21 SPACES + 15 EMPLOYEES
   =36 SPACES REQUIRED
8. PARKING PROVIDED = 44 SPACES @ 9.5'x20'
   6 HANDICAP SPACES
   50 TOTAL SPACES PROVIDED
9. LOADING/UNLOADING REQUIRED
   = 2 SPACES FOR OVER 50,000 S.F. OF FLOOR AREA
10. LOADING/UNLOADING PROVIDED = 1 10'x50' SPACE
   ONCE BUILDING IS OPERATIONAL DELIVERIES WILL BE FROM ONE VENDOR 2-3 TIMES A WEEK WHICH DOES NOT NECESSITATE TWO SPACES.
11. ZONING:
   SITE= C LOCAL BUSINESS
   NORTH = R-1C SINGLE FAMILY RESIDENTIAL
   SOUTH = R-1C SINGLE FAMILY RESIDENTIAL
   EAST = R-1C SINGLE FAMILY RESIDENTIAL
   WEST = R-1B SINGLE FAMILY RESIDENTIAL
12. ALL PARKING AND PAVING SURFACES SHALL BE ASPHALT WITH CONCRETE CURB AND GUTTER AND/OR THICKENED EDGE ASPHALT PER TOWNSHIP SPECIFICATIONS.
13. ALL AREAS NOT BUILT OR PAVED UPON SHALL BE IRRIGATED.
14. ALL DEBRIS SHALL BE REMOVED FROM WITHIN THE PROPERTY LIMITS ON A WEEKLY BASIS OR AS NEEDED.
15. SITE WILL NOT BE CONSTRUCTED IN PHASES.
16. THERE IS NO FLOOD PAIN ON THIS SITE PER FEMA COMMUNITY #26054, MAP #6163C0352E, DATED 02-02-2012.
17. THERE ARE NO REGULATED WETLANDS ON THIS SITE.
18. PAVED SURFACES, WALKWAYS, SIGNS, LIGHTING AND OTHER STRUCTURES AND SURFACES SHALL BE MAINTAINED IN A SAFE, ATTRACTIVE CONDITION AS ORIGINALLY DESIGNED AND CONSTRUCTED. PARKING LOT STRIPING AND MARKINGS SHALL BE MAINTAINED IN A CLEARLY VISIBLE CONDITION.
19. THERE SHALL BE NO OUTDOOR STORAGE.
20. OWNER AGREES TO SEASONAL MAINTENANCE PROGRAM AND WILL REPLACE ALL DISEASED, DEAD OR DAMAGED PLANTS, REPLENISH MULCH, CONTROL WEEDS, FERTILIZE AND PRUNE BEGINNING UPON COMPLETION OF CONSTRUCTION OF LANDSCAPING.
21. THERE SHALL BE NO HAZARDOUS/TOXIC WASTE FROM THIS SITE.



DUMPSTER ENCLOSURE PLAN
(N.T.S.)



DUMPSTER ELEVATION
(N.T.S.)



6' SIMULATED WROUGHT IRON FENCE
(N.T.S.)

ALUMINUM FENCE SIMULATING THE LOOK OF WROUGHT IRON. (MAINTENANCE FREE, POLYESTER POWDER COAT FINISH-NO PAINTING NECESSARY, DOESN'T RUST, CHIP, ETC.).

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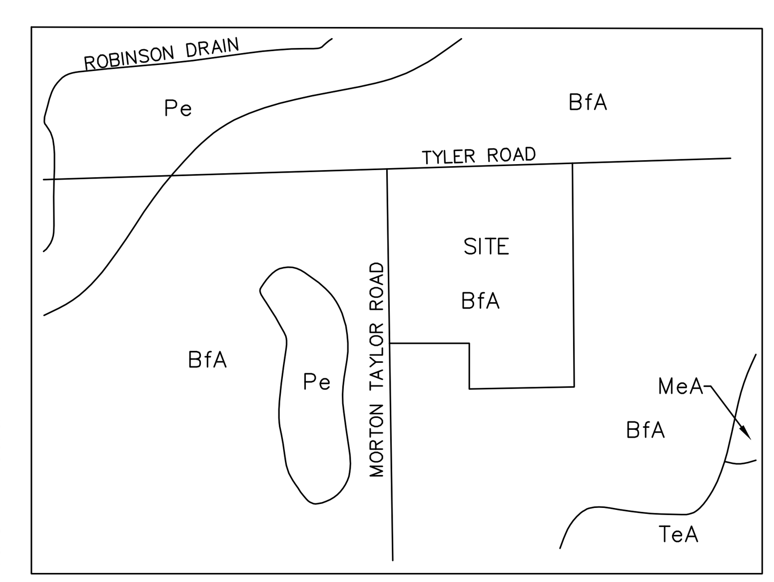

SOIL MAP
NO SCALE

SOIL TYPES
SOIL SURVEY OF WAYNE COUNTY, MICHIGAN
BfA: BLOUNT LOAM, ERIE-HURON LAKE PLAIN, 0 TO 2 PERCENT SLOPES, HYDROLOGIC SOIL GROUP D
MeA : METAMORA SANDY LOAM, 0 TO 3 PERCENT SLOPES, HYDROLOGIC SOIL GROUP C/D
Pe: PEWAMO LOAM, HYDROLOGIC SOIL GROUP C/D
TeA: TEDROW LOAMY FINE SAND, 0 TO 2 PERCENT SLOPES, HYDROLOGIC SOIL GROUP A/D

Revisions:
12-03-19 REV PER TWP L.A.

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989-708-1878
zohaibsyed2001@yahoo.com

HAMPTON MANOR OF VAN BUREN TOWNSHIP SITE PLAN

PART OF THE NORTHEAST 1/4 OF SECTION 14, TOWN 3, SOUTH, RANGE 8 EAST, VAN BUREN TOWNSHIP, WAYNE COUNTY, MICHIGAN

Scale:	1'=40'
Paper Size:	24"x36"
Date:	11-06-19
Drawn By:	L.A.
Checked By:	W.J.T.
Job No.:	19-249
Sheet No.	05

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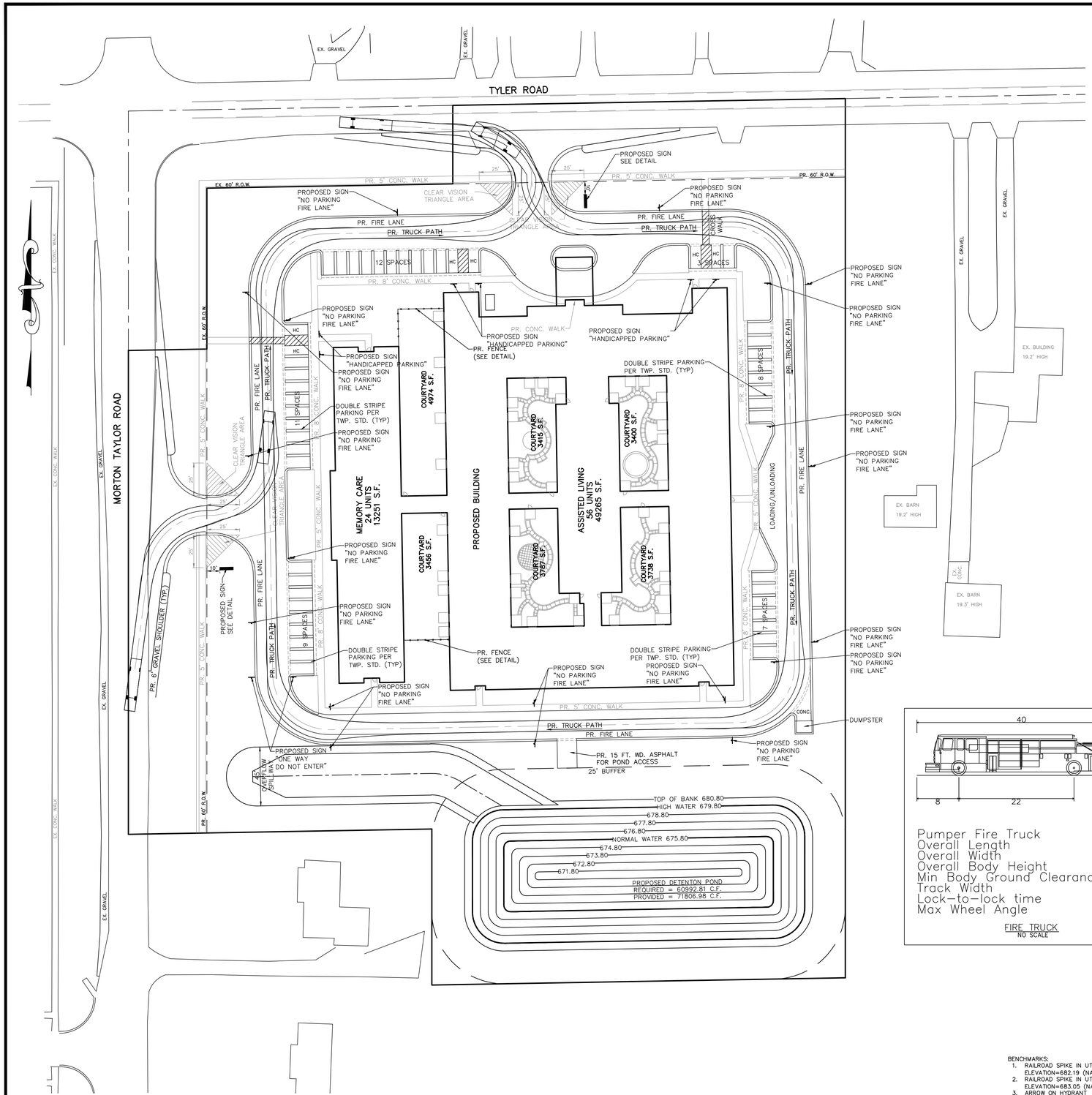

PROPOSED LEGEND

- SANITARY SEWER
- WATER MAIN
- STORM SEWER
- FENCE
- UG — UG UNDERGROUND CABLE, ELECTRIC & PHONE
- GAS
- SANITARY MANHOLE
- SANITARY CLEANOUT
- STORM CATCH BASIN (PAVEMENT)
- STORM CATCH BASIN (YARD)
- STORM MANHOLE
- STORM MANHOLE WITH CATCH BASIN COVER (PAVEMENT)
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- STORM INLET
- FIRE HYDRANT
- VALVE IN WELL
- WATER LEAD STOP BOX
- CB 1 STORM STRUCTURE NUMBER
- MH 1 SANITARY STRUCTURE NUMBER
- HYD 1 WATER STRUCTURE NUMBER
- 1 UTILITY CROSSING NUMBER
- UTILITY CROSSING
- SAND BACKFILL

EXISTING LEGEND

- GAS LINE (PAINTED)
- SANITARY SEWER
- WATER MAIN
- STORM SEWER
- OVERHEAD UTILITY LINES
- UG — UG UNDERGROUND UTILITY LINES
- FENCE
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- SANITARY MANHOLE
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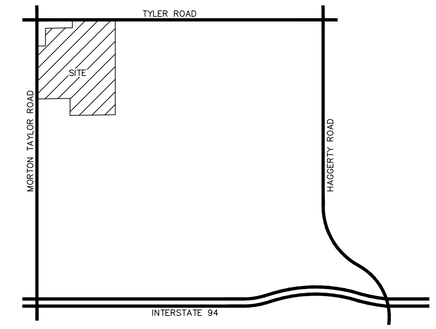
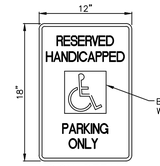
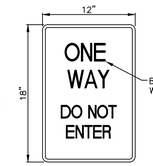


LOCATION MAP
SCALE: 4"=1 MILE



SIGN DETAIL



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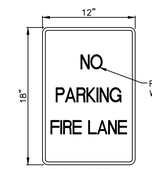

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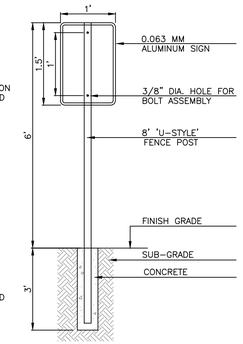
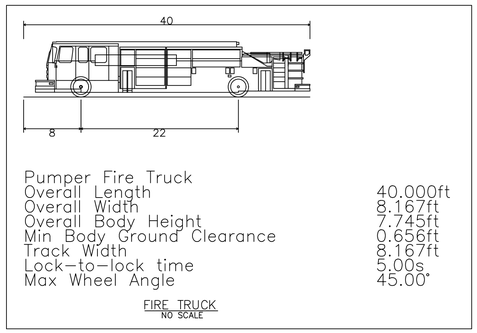
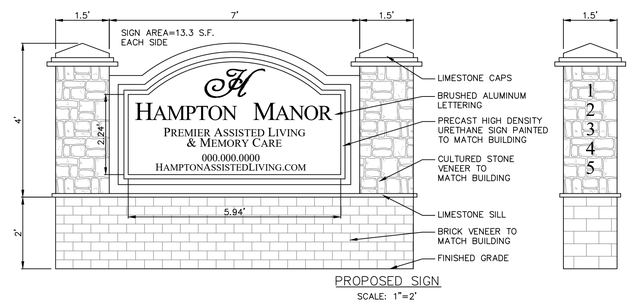


PARKING AREA SIGN DETAIL
(N.T.S.)



Pumper Fire Truck	
Overall Length	40.000ft
Overall Width	8.167ft
Overall Body Height	7.745ft
Min Body Ground Clearance	0.656ft
Track Width	8.167ft
Lock-to-lock time	5.00s
Max Wheel Angle	45.00°

FIRE TRUCK
NO SCALE



PROPOSED SIGN
SCALE: 1"=2'

SEE ARCHITECTURAL PLANS FOR ENTRANCE SIGN DETAIL

GRAPHIC SCALE
40 0 20 40 80
(IN FEET)
1" = 40'

BENCHMARKS:
1. RAILROAD SPIKE IN UTILITY POLE ELEVATION=682.19 (NAVD88)
2. RAILROAD SPIKE IN UTILITY POLE ELEVATION=683.05 (NAVD88)
3. ARROW ON HYDRANT ELEVATION=683.56 (NAVD88)
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5. ARROW ON HYDRANT ELEVATION 683.33 (NAVD88)

SUBTRACT 0.44 FT. TO CONVERT TO NGVD 29 DATUM

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HAMPTON MANOR OF VAN BUREN TOWNSHIP SIGNS AND AUTOTURN ANALYSIS

PART OF THE NORTHEAST 1/4 OF SECTION 14, TOWN 3, SOUTH, RANGE 8 EAST, VAN BUREN TOWNSHIP, WAYNE COUNTY, MICHIGAN

Scale:	1"=40'
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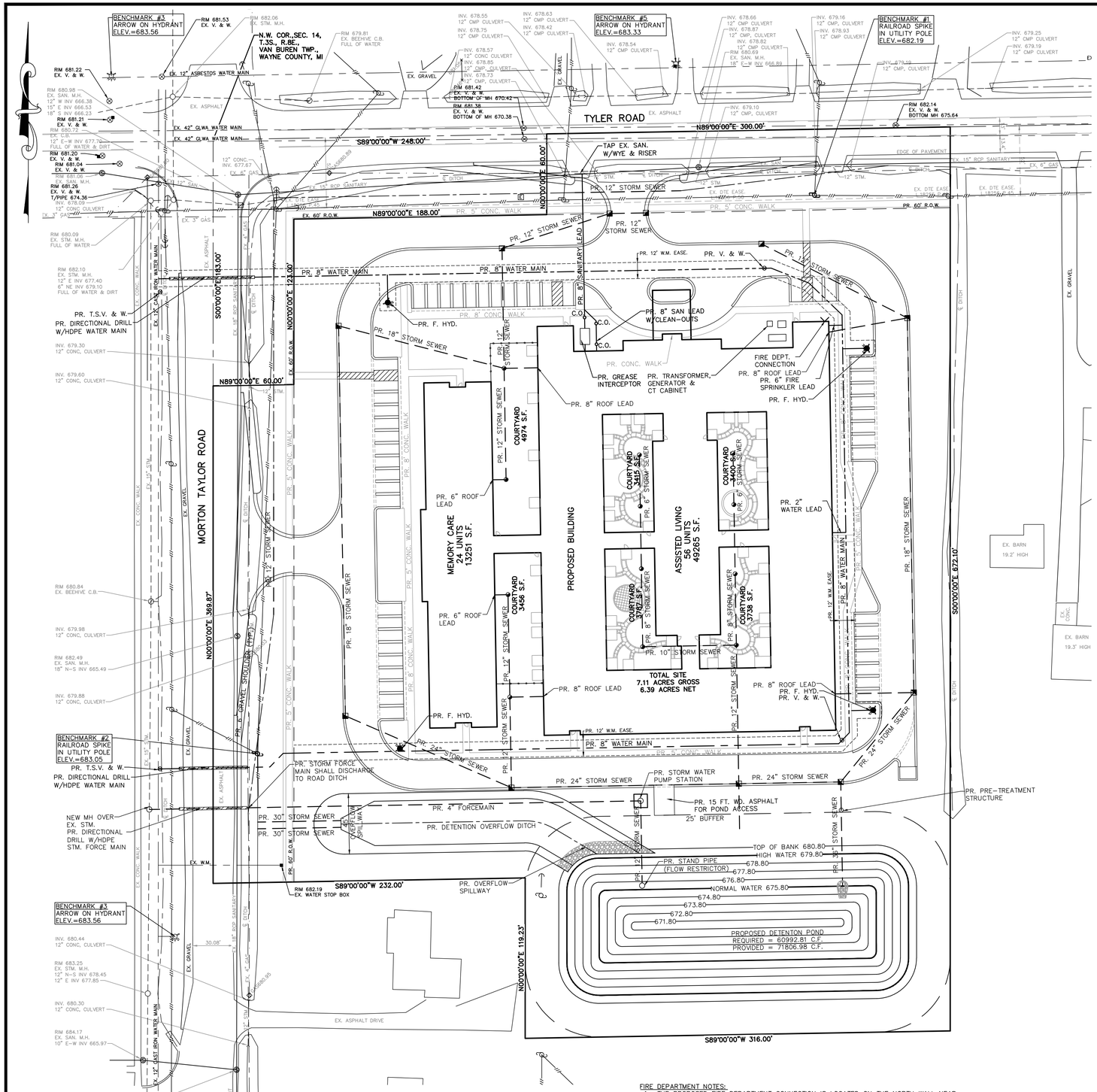

DETENTION POND OVERFLOW

OVERFLOW REQUIRED FOR 100 YEAR STORM

Q=CIA		
C=	0.75	
I=	6.07	
A=	6.39	ac
Q=	**29.23**	cfs

OVERFLOW WEIR PROVIDED

Q=3.367BH^3/2		
B=	33.00	
H=	0.41	
Q=3.367BH^3/2	**29.11**	

OVERLAND OVERFLOW PROVIDED

Channel		
Trapezoidal		
Base Width	33	ft
Depth	0.49	ft
Side Slope (ft)	1 on 6	
Side Length=	2.96	ft
Top Width=	38.8332	ft
Area (A)=	17.46	sf
Wetted Perimeter (P)=	38.91	ft
Hydraulic Radius (R)=	0.45	ft
Roughness Coefficient (n)=	0.03	
Slope (%)=	0.33	%
Velocity Flowing Full (v)=	1.67	sft/sec
Capacity (Q)=	**29.11**	cfs

BENCHMARKS:
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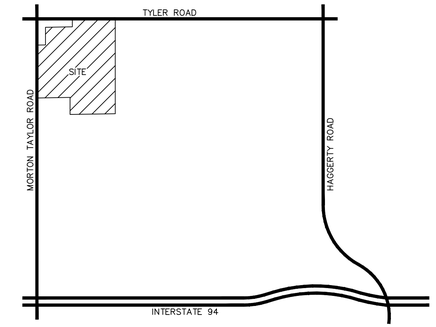

LOCATION MAP
SCALE: 4"=1 MILE

WAYNE COUNTY STORM WATER MANAGEMENT STANDARDS

WEIGHTED COEFFICIENT OF IMPERVIOUSNESS

SURFACE		AREA A				Cimp	CxA	Cweighted
Net Site Area	=	278150.00	sft	6.39	acres			
Water Surface	=	25412.00	sft	0.58	acres	1.00	0.58	
Building	=	77580.00	sft	1.78	acres	0.95	1.69	
Pavement	=	63654.00	sft	1.46	acres	0.95	1.39	
Open Space, Soil Group D	=	111504.00	sft	2.56	acres	0.45	1.15	
Subtotal				6.39			4.82	0.75

DETENTION REQUIRED

Net Site Area A	=	6.39	acres
Coefficient of Imperviousness C	=	0.75	
Allowable Outflow (Qa)	=	0.10	cfs/ac
	=	0.64	cfs

12" Outlet Pipe at 0.32% conveys 2.02 cfs
Proposed Pump Qmax=0.64 cfs

Volume Required

Qo = Qa/(C*A)	=	0.13	cfs/acre-imp
T=(-45+{19845/Qo}^0.5)	=	341.86	
Vs=(17649*T)/(T+45)-40QoT	=	13782.78	
Vr=Vs*Acreage*C	=	66370.40	cu. ft.
100-Year Storm: storage volume required:		**66370.40**	cu.ft.

DETENTION PROVIDED

	Contour	Area	Ave. Area	Increment	Volume cu. ft.	Summation cu. ft.
High Water	679.80	25412.24				
			23429.22	1.00	23429.22	71806.98
	678.80	21500.66				
			19629.12	1.00	19629.12	48377.76
	677.80	17815.28				
			16054.60	1.00	16054.60	28748.64
	676.80	14356.09				
			12694.04	1.00	12694.04	12694.04
Normal Water	675.80	11101.62				
					TOTAL=	**71806.98** cu.ft.

PERMANENT POND VOLUME

	Contour	Area	Ave. Area	Increment	Volume cu. ft.	Summation cu. ft.
Normal Water	675.80	11101.62				
			9575.07	1.00	9575.07	22383.51
	674.80	8125.74				
			6736.99	1.00	6736.99	12808.45
	673.80	5437.91				
			4180.21	1.00	4180.21	6071.45
	672.80	3038.12				
			1891.24	1.00	1891.24	1891.24
Bottom of Pond	671.80	942.99				
					TOTAL=	**22383.51** cu.ft.

OUTLET STANDPIPE DESIGN

FIRST FLUSH:

First Flush Volume Vt ff=1815*C*A=	8740.06	cft
First Flush Elevation Zff=675.80+[(676.80-675.80)*((8740 cft-0)/(12694 cft-0 cft))]=	676.49	ft
24 Hour Allowable Flow Rate Qavg ff=Vt ff/86,400=	0.1012	cfs
ORIFICE CALCULATIONS:		
Design 1" Diameter Orifices at Low Water 675.80:		
Aout=Qavg ff/(0.62*SQRT(2*g*havg))=	0.0253	sft
g=32.2 ft/sec^2	32.2000	ft/sec^2
havg=676.49-(675.80+(0.08 ft/2))=	0.6469	ft
1" Diameter Holes Area=	0.0055	sft
Number of 1" Diameter Holes=	4.6350	each at Elevation 675.80
Use 4 holes		
Actual Area of Orifices Ao=4*0.005454 sft=	0.0218	sft
Actual Outflow Qavg ff=0.62*Ao*SQRT(2*g*havg)=	0.0873	cfs
Actual Holding Time Tff = Vt ff/(Qavg*3,600)=	27.8099	hours

BANK FULL FLOOD:

Bank Full Volume Vt bf=5160*C*A=	24847.77	cft
Bank Full Elev Zbf=676.80+[(677.80-676.80)*((24848 cft-12694 cft-0)/(28748 cft-12694 cft))]=	677.56	ft
40 Hour Allowable Flow Rate Qavg bf=Vt ff/144000=	0.1726	cfs
ORIFICE CALCULATIONS		
Qavg bf to Low Water 675.80=0.62*4*0.005454*SQRT(2*g*havg)=	0.1439	cfs
g=32.2 ft/sec^2	32.2000	ft/sec^2
havg=677.56-(675.80+(0.08 ft/2))=	1.7154	ft
Difference Between 0.1718 - 0.1436 =	0.0287	cfs
Design 1" Orifices at First Flush Elevation 676.49:		
g=32.2 ft/sec^2	32.2000	ft/sec^2
havg=677.55-(676.49+(0.08 ft/2))=	1.0268	ft
Aout = 0.0282/(0.62*SQRT(2*g*havg))	0.0057	sft
1" Diameter Holes Area=	0.0055	sft
Number of 1" Diameter Holes=	1.0428	each at Elevation 676.49
Use 1 hole		
Actual Area of Orifices Ao=1*0.005454 sft=	0.0055	sft
Actual Outflow Qavg bf=0.62*Ao*SQRT(2*g*havg)=	0.0275	cfs
Q bf Sum of 0.1436 cfs + 0.0276 cfs =	0.1714	cfs
Actual Holding Time Tbf Vt bf 24,741 cft / (Qbf cfs * 3,600) =	40.2746	hours

EXISTING LEGEND

- GAS LINE (PAINTED)
- SANITARY SEWER
- WATER MAIN
- STORM SEWER
- OVERHEAD UTILITY LINES
- UNDERGROUND UTILITY LINES
- FENCE
- DITCH
- SANITARY MANHOLE
- STORM SQ. CATCH BASIN
- STORM ROUND CATCH BASIN
- STORM MANHOLE
- CULVERT
- FIRE HYDRANT
- VALVE IN WELL
- WATER SHUT OFF
- WELL
- GAS VALVE
- LIGHT POLE
- UTILITY POLE
- GUY WIRE
- P.I. SIGN
- SECTION CORNER
- F.I. FOUND IRON
- S.I. SET IRON
- (M) MEASURED
- (R) RECORD
- GAS LINE MARKER

PROPOSED LEGEND

- SANITARY SEWER
- WATER MAIN
- STORM SEWER
- FENCE
- UNDERGROUND CABLE, ELECTRIC & PHONE
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- SANITARY MANHOLE
- SANITARY CLEANOUT
- STORM CATCH BASIN (PAVEMENT)
- STORM CATCH BASIN (YARD)
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- VALVE IN WELL
- WATER LEAD STOP BOX
- CB 1 STORM STRUCTURE NUMBER
- MH 1 SANITARY STRUCTURE NUMBER
- HYD 1 WATER STRUCTURE NUMBER
- 1 UTILITY CROSSING NUMBER
- UTILITY CROSSING
- SAND BACKFILL

WATER MAIN NOTES:
1. CONNECTION TO THE EXISTING WATER MAIN SHALL NOT OCCUR UNTIL ALL REQUIRED HYDROSTATIC AND BACTERIOLOGICAL TESTING HAS BEEN SUCCESSFULLY COMPLETED AND ACCEPTED BY THE TOWNSHIP ENGINEER.
2. ALL 8" WATER MAIN SHALL BE DUCTILE IRON, CLASS 54, DOUBLE CEMENT LINED (WITH INTERIOR BITUMINOUS COATING) WITH PUSH ON TYPE JOINTS. PUSH ON JOINTS SHALL BE TYTON, SURER BELLTITE OR APPROVED EQUAL WITH SERRATED BRASS WEDGES (2 WEDGES PER JOINT).
3. ALL WATER MAIN AND WATER SYSTEM CONSTRUCTION SHALL CONFORM TO THE CURRENT STANDARDS AND SPECIFICATIONS OF VAN BUREN TOWNSHIP.

FIRE DEPARTMENT NOTES:
1. THE PROPOSED FIRE DEPARTMENT CONNECTION IS LOCATED ON THE NORTH WALL NEAR THE EAST CORNER OF THE BUILDING.
2. THE FIRE DEPARTMENT CONNECTION SHALL BE A 4 INCH STORTZ FITTING WITH A 30 DEGREE DOWNTURN AS REQUIRED BY THE AUTHORITY HAVING JURISDICTION.
3. FIRE HYDRANTS SHALL BE TWO 4 INCH STORTZ CONNECTIONS NOT THREADED.
4. THE BUILDING SHALL BE PROVIDED WITH AN AUTOMATIC SPRINKLER SYSTEM IN ACCORDANCE WITH NFPA13, STANDARD FOR THE INSTALLATION OF AUTOMATIC SPRINKLER SYSTEMS.
5. THE ARCHITECT AND FIRE DEPARTMENT SHALL COORDINATE FOR THE LOCATION OF A KNOX BOX ELOCK SYSTEM.
6. EMERGENCY RESPONDER RADIO COVERAGE SYSTEM IS REQUIRED UNLESS IT CAN BE PROVEN AFTER BUILDING IS CONSTRUCTED AND OCCUPIED THAT COVERAGE IS SUFFICIENT. THIS WILL BE VERIFIED BY THE AUTHORITY HAVING JURISDICTION PRIOR TO

GRAPHIC SCALE
40 0 20 40 80
(IN FEET)
1" = 40'

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ALL CONSTRUCTION SHALL CONFORM TO THE CURRENT STANDARDS, SPECIFICATIONS AND GENERAL CONDITIONS OF VAN BUREN TOWNSHIP AND WAYNE COUNTY.

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ALL WATER MAINS, SANITARY SEWERS, (AND LEADS) AND STORM SEWERS UNDER PROPOSED OR EXISTING PAVEMENT OR WITHIN INFLUENCE OF PAVEMENT (EXTENDING 3' BEYOND EDGE OF PAVEMENT THEN TAPERING TO ORIGINAL GROUND AT 1:1 SLOPE) SHALL BE SAND BACKFILLED AND COMPACTED TO 95% OPTIMUM (PROCTOR) DENSITY. ALL UTILITY CROSSINGS SHALL BE SAND BACKFILLED. SAND BACKFILLING IS INCIDENTAL TO UNIT PRICES.

Revisions:	
12-03-19 REV PER TWP	L.A.

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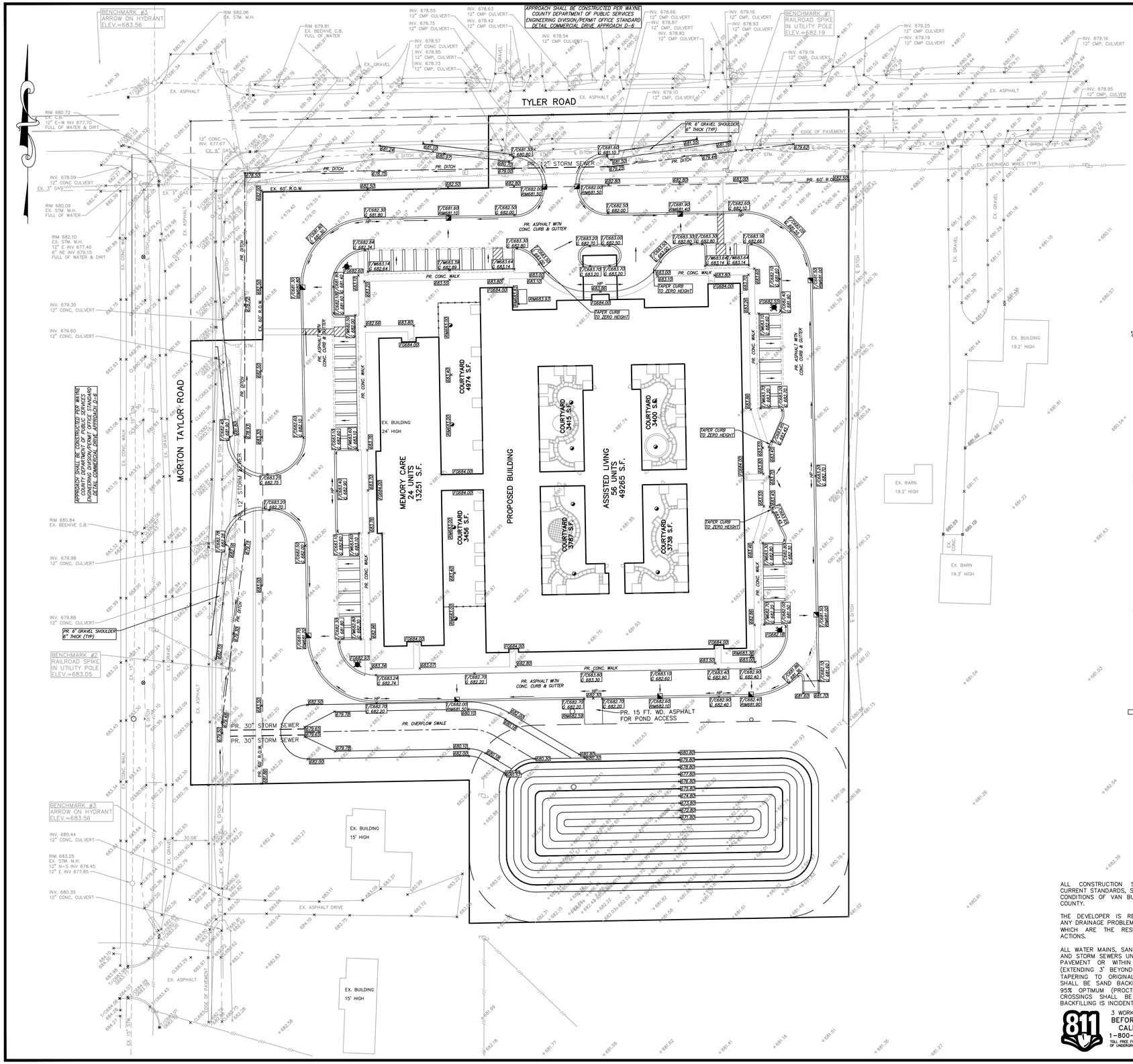
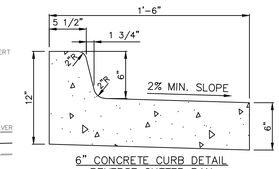
989-708-1878
zohaibsyed2001@yahoo.com

HAMPTON MANOR OF VAN BUREN TOWNSHIP CONCEPTUAL UTILITY AND STORM WATER MANAGEMENT PLAN

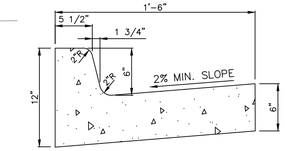
PART OF THE NORTHEAST 1/4 OF SECTION 14, TOWN 3, SOUTH, RANGE 8 EAST, VAN BUREN TOWNSHIP, WAYNE COUNTY, MICHIGAN

Scale: 1"=40'
Paper Size: 24"x36"
Date: 11-06-19
Drawn By: L.A.
Checked By: W.J.T.
Job No.: 19-249
Sheet No. 07

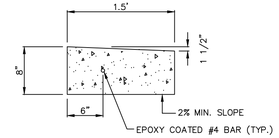




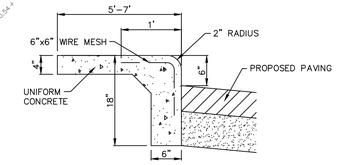
6" CONCRETE CURB DETAIL
REVERSE GUTTER PAN
(N.T.S.)



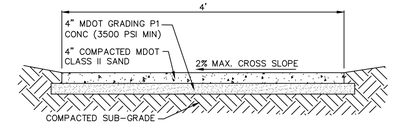
6" CONCRETE CURB & GUTTER DETAIL
(N.T.S.)



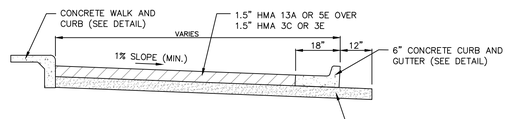
PARKING/DRIVE TRANSITION
(N.T.S.)



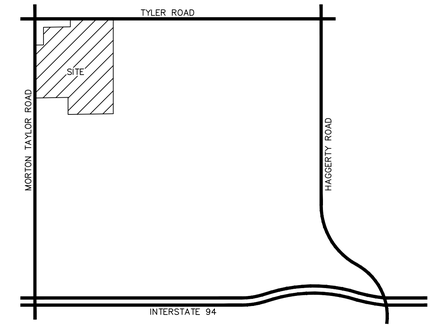
SIDEWALK CURB DETAIL
(N.T.S.)



TYPICAL WALK CROSS-SECTION
(N.T.S.)



TYPICAL PAVEMENT CROSS-SECTION
27' B/C TO B/C
(N.T.S.)



LOCATION MAP
SCALE: 4"=1 MILE

BENCHMARKS:
1. RAILROAD SPIKE IN UTILITY POL ELEVATION=682.19 (NAVD88)
2. RAILROAD SPIKE IN UTILITY POL ELEVATION=683.05 (NAVD88)
3. ARROW ON HYDRANT ELEVATION=683.56 (NAVD88)
4. ARROW ON HYDRANT ELEVATION=683.20 (NAVD88)
5. ARROW ON HYDRANT ELEVATION 683.33 (NAVD88)

SUBTRACT 0.44 FT. TO CONVERT TO NGVD 29 DATUM

EXISTING LEGEND

- GAS LINE (PAINTED)
- SANITARY SEWER
- WATER MAIN
- STORM SEWER
- OVERHEAD UTILITY LINES
- UNDERGROUND UTILITY LINES
- FENCE
- DITCH
- SANITARY MANHOLE
- STORM SQ. CATCH BASIN
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- 1 UTILITY CROSSING NUMBER
- UTILITY CROSSING
- SAND BACKFILL

GRAPHIC SCALE
40 0 20 40 80
(IN FEET)
1" = 40'

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Revisions:		
12-03-19 REV PER TWP	L.A.	

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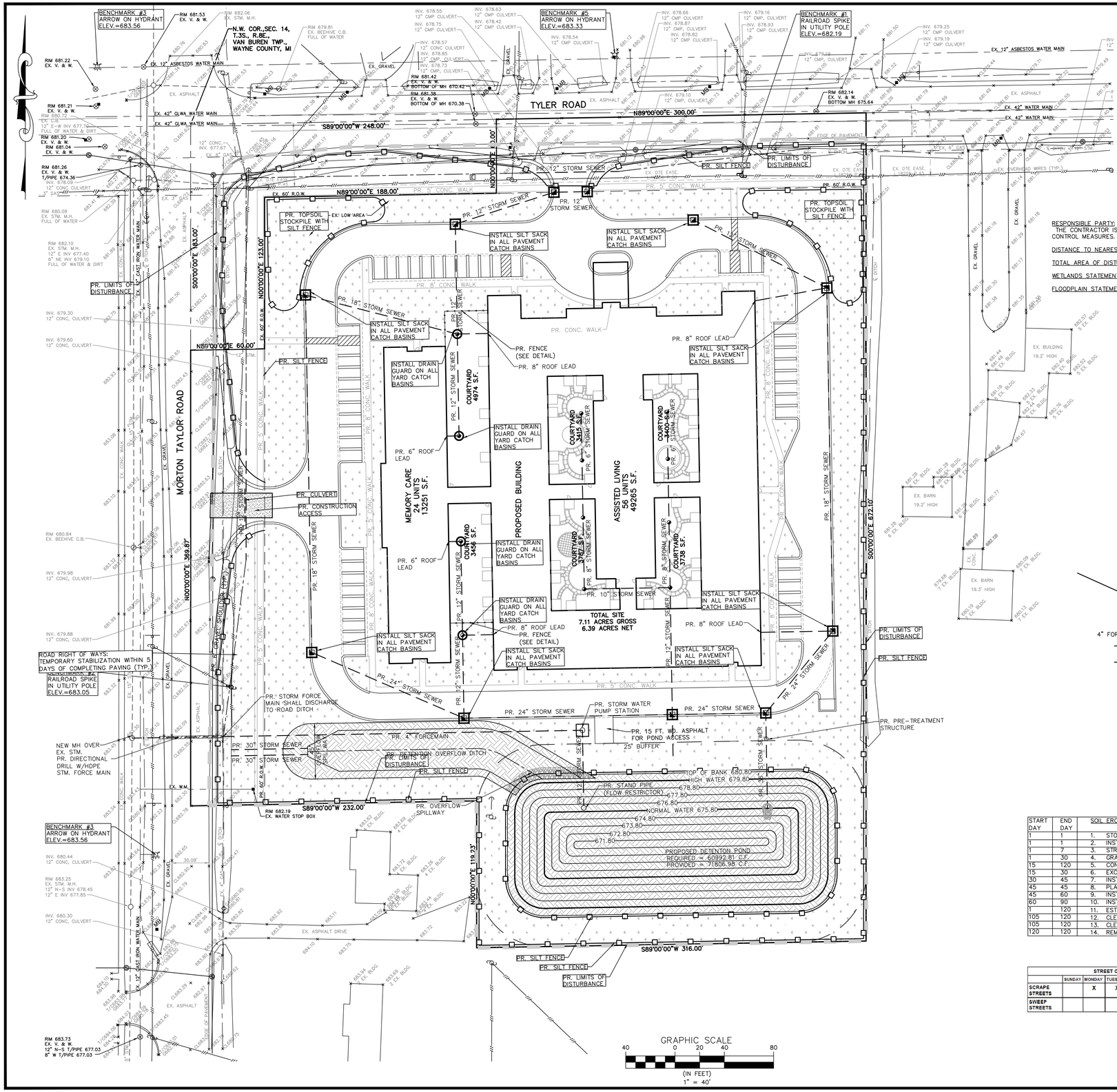
HAMPTON MANOR OF VAN BUREN TOWNSHIP CONCEPTUAL GRADING PLAN

PART OF THE NORTHEAST 1/4 OF SECTION 14, TOWN 3, SOUTH, RANGE 8 EAST, VAN BUREN TOWNSHIP, WAYNE COUNTY, MICHIGAN

Scale:	1"=40'
Paper Size:	24"x36"
Date:	11-06-19
Drawn By:	L.A.
Checked By:	W.J.T.
Job No.:	19-249
Sheet No.	08



BENCHMARKS:
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2. RAILROAD SPIKE IN UTILITY POLE ELEVATION=683.05 (NAVD88)
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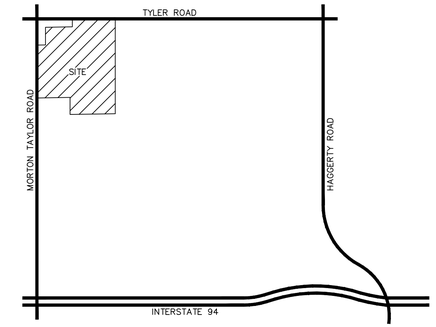
4. ARROW ON HYDRANT ELEVATION=683.20 (NAVD88)
5. ARROW ON HYDRANT ELEVATION 683.33 (NAVD88)

SUBTRACT 0.44 FT. TO CONVERT TO NGVD 29 DATUM

SOIL EROSION LEGEND

- LIMITS OF DISTURBANCE
- SILT FENCE
- SEED AND MULCH
- SILT SACK
- DRAIN GUARD
- MULCH BLANKET



LOCATION MAP
SCALE: 4"=1 MILE

RESPONSIBLE PARTY: THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ALL SOIL EROSION AND SEDIMENTATION CONTROL MEASURES.

DISTANCE TO NEAREST WATERCOURSE: 5,700 FEET SOUTH TO THE HURON RIVER.

TOTAL AREA OF DISTURBANCE: 8 ACRES, N.P.D.E.S., N.O.C. IS REQUIRED.

WETLANDS STATEMENT: NO WETLANDS ARE ON THE SITE.

FLOODPLAIN STATEMENT: NO FLOODPLAINS ARE ON THE SITE.

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PROPOSED LEGEND

- SANITARY SEWER
- WATER MAIN
- STORM SEWER
- FENCE
- UNDERGROUND CABLE, ELECTRIC & PHONE
- GAS
- SANITARY MANHOLE
- SANITARY CLEANOUT
- STORM CATCH BASIN (PAVEMENT)
- STORM CATCH BASIN (YARD)
- STORM MANHOLE
- STORM MANHOLE WITH CATCH BASIN COVER (PAVEMENT)
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- UTILITY CROSSING
- SAND BACKFILL

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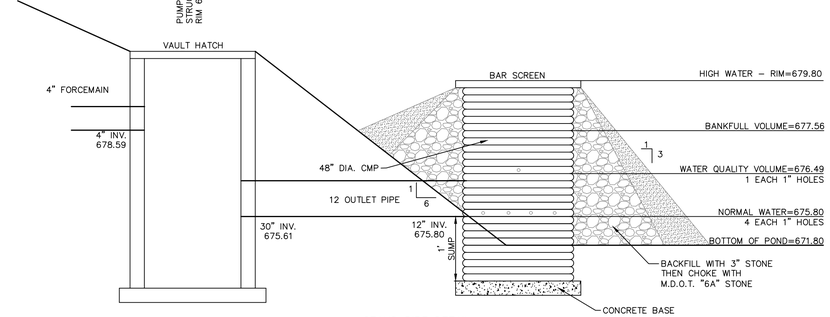

STAND PIPE DETAIL
N.T.S.

START DAY	END DAY	SOIL EROSION CONTROL SEQUENCE OF CONSTRUCTION:
1	1	1. STONE TRACKING MAT ATOP GEOTEXTILE LINER: MUD-MAT.
1	1	2. INSTALL SILT FENCING AND PROTECTIVE FENCING.
1	7	3. STRIP AND STOCKPILE TOPSOIL.
1	30	4. GRADE AND BALANCE AS REQUIRED. STABILIZE DITCHES, SWALES, COMMON AREAS AND SLOPES PER PLAN WITHIN 5 DAYS OF GRADE.
15	120	5. CONSTRUCT BUILDING.
15	30	6. EXCAVATE DETENTION BASIN, INSTALL APPROVED OUTLET, STABILIZE BASIN BEFORE PAVING IS STARTED.
30	45	7. INSTALL UNDERGROUND UTILITIES: I.E. SANITARY, STORM, AND WATER MAIN.
45	45	8. PLACE INLET FILTERS.
45	60	9. INSTALL ALL PUBLIC UTILITIES COMPLETE: ELECTRIC, TELEPHONE, AND CABLE T.V.
60	90	10. INSTALL PAVEMENT COMPLETE.
1	120	11. ESTABLISH VEGETATION FOR ALL DISTURBED AREAS AND ROAD/R.O.W.s
105	120	12. CLEAN OUT STORM SEWERS SYSTEM.
105	120	13. CLEAN OUT AND RESTORE SEDIMENT BASIN AND DETENTION POND TO DESIGN SPECIFICATIONS.
120	120	14. REMOVE SILT FENCE AND CATCH BASIN FILTERS FOLLOWING WC-DPS APPROVAL: CALL FOR FINAL INSPECTION.

STREET CLEANING SCHEDULE

	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
SCRAPE STREETS		X	X	X	X	X	X
SWEEP STREETS				X			

Revisions:
12-03-19 REV PER TWP L.A.

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HAMPTON MANOR OF VAN BUREN TOWNSHIP SOIL EROSION AND SEDIMENTATION CONTROL PLAN

PART OF THE NORTHEAST 1/4 OF SECTION 14, TOWN 3, SOUTH, RANGE 8 EAST, VAN BUREN TOWNSHIP, WAYNE COUNTY, MICHIGAN

Scale: 1"=40'
Paper Size: 24"x36"
Date: 11-06-19
Drawn By: L.A.
Checked By: W.J.T.
Job No.: 19-249
Sheet No. 09

EROSION CONTROL STANDARD NOTES

1. ALL EROSION AND SEDIMENTATION CONTROL WORK SHALL CONFORM TO THE CURRENT STANDARDS AND SPECIFICATIONS OF WAYNE COUNTY DEPARTMENT OF PUBLIC SERVICES.

2. DAILY INSPECTIONS SHALL BE MADE BY THE CONTRACTOR FOR EFFECTIVENESS OF EROSION AND SEDIMENTATION CONTROL MEASURES. ANY NECESSARY REPAIRS SHALL BE PERFORMED WITHOUT DELAY.

3. EROSION AND ANY SEDIMENTATION FROM WORK ON THIS SITE SHALL BE CONTAINED WITHIN THE WORK AREA AND NOT ALLOWED TO COLLECT ON ANY OFF-SITE AREAS OR IN WATERWAYS. WATERWAYS INCLUDE BOTH NATURAL AND MAN MADE OPEN DITCHES, STREAMS, STORM DRAINS, LAKES, PONDS AND WETLANDS.

4. THE CONTRACTOR SHALL APPLY TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES AS DIRECTED ON THESE PLANS AND WHERE OTHERWISE REQUIRED BY THE WORK. THE CONTRACTOR SHALL REMOVE TEMPORARY MEASURES AS SOON AS PERMANENT STABILIZATION OF SLOPES, DITCHES, AND OTHER CHANGES HAVE BEEN ACCOMPLISHED.

5. SOIL EROSION CONTROL PRACTICES WILL BE ESTABLISHED IN EARLY STAGES OF CONSTRUCTION BY THE CONTRACTOR. SEDIMENT CONTROL PRACTICES WILL BE APPLIED AS A PERIMETER DEFENSE AGAINST ANY TRANSPORTING OF DIRT OFF THE WORK AREA.

6. THE CONTRACTOR SHALL PRESERVE OFF-SITE NATURAL VEGETATION AS MUCH AS POSSIBLE.

7. PROTECT ALL EXISTING TREES , INCLUDING THEIR BRANCHES AND ROOTS, FROM DAMAGE DUE TO THIS WORK UNLESS SPECIFICALLY IDENTIFIED FOR REMOVAL.

8. ALL EXPOSED EARTH SHALL BE STABILIZED WITH SEED AND MULCH OR SOD WITHIN 5 DAYS OF FINAL GRADE. SEDIMENT AND DETENTION BASINS, SWALES AND DITCHES SHALL BE STABILIZED WITH SEED AND STRAW MULCH BLANKETS, STAKED INTO THE GROUND 5 DAYS AFTER THE CONSTRUCTION OF THE SEDIMENT AND DETENTION BASINS, SWALES AND DITCHES.

9. THE CONTRACTOR SHALL SCRAPE THE STREETS DAILY, AND SWEEP THE STREETS WEEKLY.

10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DUST CONTROL AND SHALL PROVIDE ALL EQUIPMENT AND MATERIAL TO KEEP DUST IN CHECK AT ALL TIMES. THE CONTRACTOR SHALL RESPOND IMMEDIATELY TO ANY AND ALL COMPLAINTS.

11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING THE NPDES PERMIT AND ENSURING COMPLIANCE WITH ALL APPLICABLE PERMIT REGULATIONS, INCLUDING BUT NOT LIMITED TO, INSPECTION, RESTORATION AND RECORD KEEPING REQUIREMENTS. REPORTS FROM THE CERTIFIED STORM WATER OPERATOR SHALL BE MADE AVAILABLE TO WAYNE COUNTY.

DESCRIPTIONS ARE PREPARED FROM EXISTING VAN BUREN TOWNSHIP TAX RECORDS. ALL PARCELS SHALL BE COMBINED AFTER PURCHASE OF PROPERTY IS COMPLETED.

PARCEL 1: PARCEL #83-054-99-0012-000
PART OF THE NORTHWEST 1/4 OF SECTION 14, TOWN 3 SOUTH, RANGE 8 EAST, BEGINNING SOUTH 333 FEET FROM THE NORTHWEST CORNER OF SECTION 14; THENCE NORTH 89 DEGREES 00 MINUTES EAST 248 FEET; THENCE NORTH 333 FEET; THENCE NORTH 89 DEGREES 00 MINUTES EAST 150 FEET; THENCE SOUTH 258 FEET; THENCE NORTH 89 DEGREES 00 MINUTES EAST 150 FEET; THENCE SOUTH 294.87 FEET; THENCE SOUTH 89 DEGREES 00 MINUTES WEST 548 FEET; THENCE NORTH 219.87 FEET TO THE POINT OF BEGINNING. 4.18 ACRES.

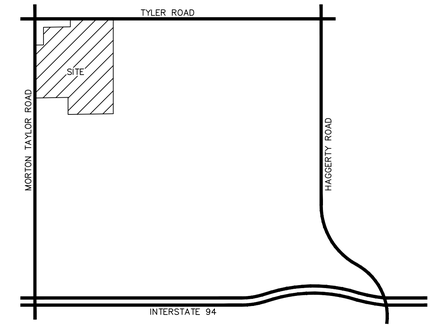
PARCEL 2: PARCEL #83-054-99-0013-000
PART OF THE NORTHWEST 1/4 OF SECTION 14, TOWN 3 SOUTH, RANGE 8 EAST, BEGINNING NORTH 89 DEGREES 00 MINUTES EAST 398 FEET FROM THE NORTHWEST CORNER OF SECTION 14; THENCE NORTH 89 DEGREES 00 MINUTES EAST 150 FEET; THENCE SOUTH 258 FEET; THENCE SOUTH 89 DEGREES 00 MINUTES WEST 150 FEET; THENCE NORTH 258 FEET TO THE POINT OF BEGINNING. 0.89 ACRES.

PARCEL 3: PARCEL #83-054-99-0014-701
PART OF THE NORTHWEST 1/4 OF SECTION 14, TOWN 3 SOUTH, RANGE 8 EAST, BEGINNING SOUTH 60 FEET AND NORTH 89 DEGREES EAST 60 FEET FROM THE NORTHWEST CORNER OF SECTION 14; THENCE SOUTH 123 FEET; THENCE NORTH 89 DEGREES EAST 188 FEET; THENCE NORTH 123 FEET; THENCE SOUTH 89 DEGREES WEST 188 FEET TO THE POINT OF BEGINNING. 0.53 ACRES.

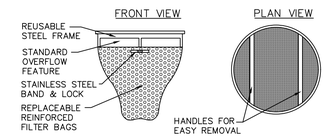
PARCEL 4: PARCEL #83-054-99-0015-701
PART OF THE NORTHWEST 1/4 OF SECTION 14, TOWN 3 SOUTH, RANGE 8 EAST, BEGINNING SOUTH 183 FEET FROM THE NORTHWEST CORNER OF SECTION 14; THENCE NORTH 89 DEGREES 00 MINUTES EAST 248 FEET; THENCE SOUTH 150 FEET; THENCE SOUTH 89 DEGREES 00 MINUTES WEST 248 FEET; THENCE NORTH 150 FEET TO THE POINT OF BEGINNING EXCEPT THE WEST 60 FEET THEREOF. 0.65 ACRES.

PARCEL 5: PARCEL #83-054-99-0016-002
PART OF THE NORTHWEST 1/4 OF SECTION 14, TOWN 3 SOUTH, RANGE 8 EAST, BEGINNING DUE SOUTH 672.10 FEET AND NORTH 90 DEGREES EAST 232 FEET FROM THE NORTHWEST CORNER OF SECTION 14; THENCE NORTH 89 DEGREES EAST 176 FEET; THENCE DUE NORTH 119.23 FEET; THENCE SOUTH 89 DEGREES WEST 176 FEET; THENCE DUE SOUTH 119.23 FEET TO THE POINT OF BEGINNING. 0.48 ACRES.

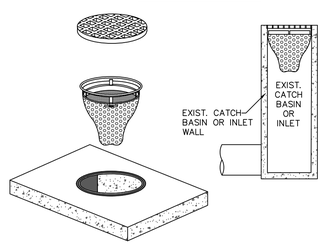
PARCEL 6: PARCEL #83-054-99-0016-003
PART OF THE NORTHWEST 1/4 OF SECTION 14, TOWN 3 SOUTH, RANGE 8 EAST, BEGINNING DUE SOUTH 672.10 FEET AND NORTH 90 DEGREES EAST 408 FEET FROM THE NORTHWEST CORNER OF SECTION 14; THENCE NORTH 89 DEGREES EAST 140 FEET; THENCE DUE NORTH 119.23 FEET; THENCE SOUTH 89 DEGREES WEST 140 FEET; THENCE DUE SOUTH 119.23 FEET TO THE POINT OF BEGINNING



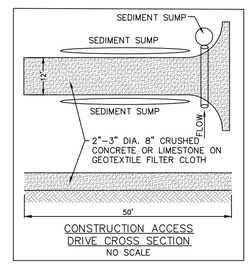
LOCATION MAP
SCALE: 4"=1 MILE



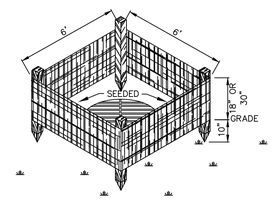
INSTALLATION DETAILS



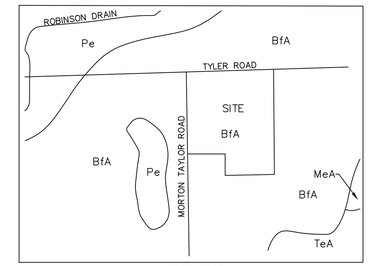
SILT SACK INLET PROTECTOR
NO SCALE



CONSTRUCTION ACCESS DRIVE CROSS SECTION
NO SCALE



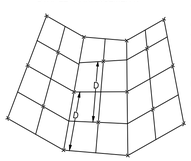
DRAIN GUARD
NO SCALE



SOIL MAP
NO SCALE

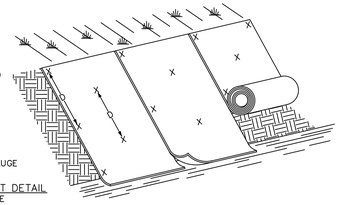
SOIL TYPES
SOIL SURVEY OF WAYNE COUNTY, MICHIGAN
BfA: BLOUNT LOAM, ERIE-HURON LAKE PLAIN, 0 TO 2 PERCENT SLOPES, HYDROLOGIC SOIL GROUP D
MeA : METAMORA SANDY LOAM, 0 TO 3 PERCENT SLOPES, HYDROLOGIC SOIL GROUP C/D
Pe: PEWAMO LOAM, HYDROLOGIC SOIL GROUP C/D
TeA: TEDROW LOAMY FINE SAND, 0 TO 2 PERCENT SLOPES, HYDROLOGIC SOIL GROUP A/D

INSTALLATION INSTRUCTIONS
1. REMOVE PROTECTIVE OUTER WRAPPER.
2. START UNROLLING BLANKET AS INDICATED BY SEPARATOR APPEARING AT THE BEGINNING OF EACH ROLL.
3. BE SURE THAT NETTING IS ON TOP OF THE EXCELSIOR FIBER AND THE EXCELSIOR IS IN DIRECT CONTACT WITH THE SOIL AND REMAINS SP CONTINUOUSLY WHILE UNROLLING.
4. STAPLE BLANKETS SECURELY ACCORDING TO THE FOLLOWING STAPLE ARRANGEMENT:

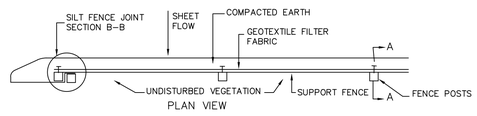


CHANNEL INSTALLATION
THE BLANKET SHOULD BE ROLLED OUT ALONG THE CHANNEL BOTTOM AND SIDE SLOPES IN THE DIRECTION OF THE WATER FLOW. ADJACENT BLANKETS SHOULD BE CLOSELY BUTTED OR SLIGHTLY OVERLAPPED SO THAT ONE ROW OF STAPLES WILL FASTEN BOTH EDGES ALONG THE SEAM. A ROW OF STAPLES SHOULD BE CENTERED DOWN THE BLANKET LOCATED IN BETWEEN THE STAPLES AT THE BLANKETS EDGE.
WHEN COMING TO THE END OF A ROLL, OVERLAP THE BEGINNING OF THE NEXT ROLL BY AT LEAST 6 INCHES.
STAPLE SPACING: (D) – 4 FEET
STAPLE SIZE: MOST SOILS – 6"x1"x6" – 11 GAUGE
APPROXIMATELY 110 STAPLES PER BLANKET (3 BLANKETS WIDE)

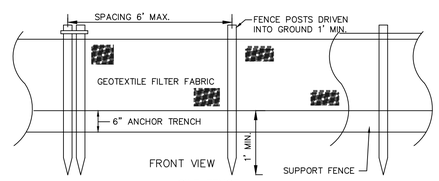
SLOPE INSTALLATION
ON SHORT BANKS THE BLANKET MAY BE ROLLED OUT HORIZONTALLY OF VERTICALLY, WHICHEVER IS MORE CONVENIENT. HOWEVER, ON LONG AND STEEP BANKS, IT IS RECOMMENDED THAT THE BLANKET BE ROLLED DOWN SLOPE VERTICALLY, SO THAT IT CAN CONTRIBUTE TO THE RESTRAINT OF "SLOUGHING".
IN A MANNER SIMILAR TO THE METHODS USED IN THE CHANNEL PROCEDURES, FASTEN THE BLANKETS SECURELY WITH APPROPRIATE SIZED STAPLES AND INDICATED STAPLING ARRAY.
STAPLE SPACING: (D) – 5 FEET
STAPLE SIZE: MOST SOILS – 6"x1"x6" – 11 GAUGE
APPROXIMATELY 80 STAPLE PER BLANKET



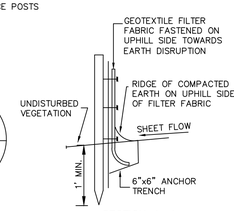
MULCH BLANKET DETAIL
NO SCALE



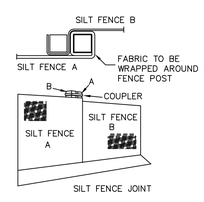
PLAN VIEW



SILT FENCE
NO SCALE



SECTION A–A
NO SCALE



SECTION B–B
NO SCALE

ALL CONSTRUCTION SHALL CONFORM TO THE CURRENT STANDARDS, SPECIFICATIONS AND GENERAL CONDITIONS OF VAN BUREN TOWNSHIP AND WAYNE COUNTY.

THE DEVELOPER IS RESPONSIBLE FOR RESOLVING ANY DRAINAGE PROBLEMS ON ADJACENT PROPERTIES WHICH ARE THE RESULT OF THE DEVELOPERS' ACTIONS.

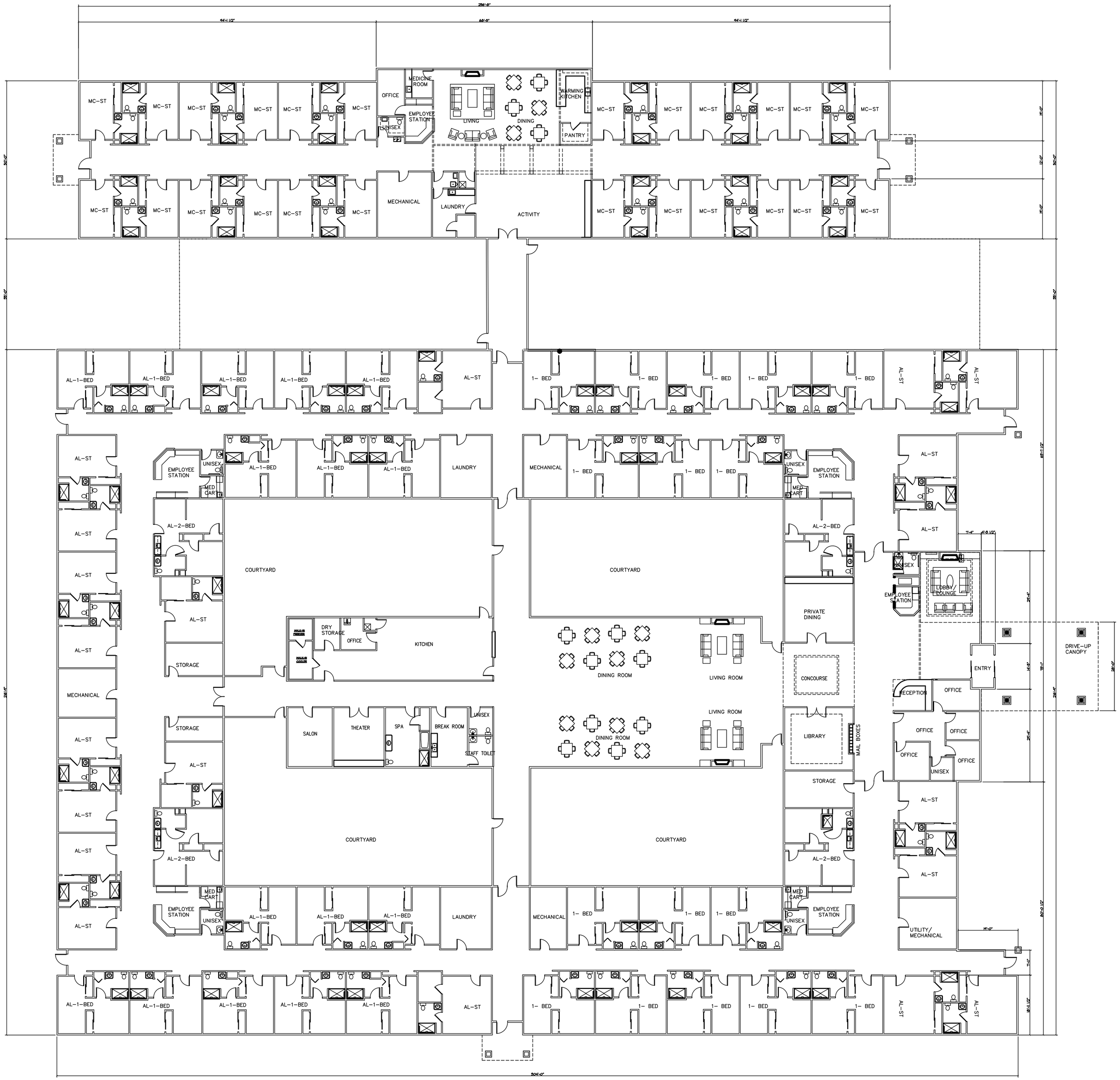
ALL WATER MAINS, SANITARY SEWERS, (AND LEADS) AND STORM SEWERS UNDER PROPOSED OR EXISTING PAVEMENT OR WITHIN INFLUENCE OF PAVEMENT (EXTENDING 3' BEYOND EDGE OF PAVEMENT THEN TAPERING TO ORIGINAL GROUND AT 1:1 SLOPE) SHALL BE SAND BACKFILLED AND COMPACTED TO 95% OPTIMUM (PROCTOR) DENSITY. ALL UTILITY CROSSINGS SHALL BE SAND BACKFILLED. SAND BACKFILLING IS INCIDENTAL TO UNIT PRICES.

811
3 WORKING DAYS
BEFORE YOU DIG
CALL MISS DIG
1-800-482-7171
TOLL FREE FOR THE LOCATION OF UNDERGROUND FACILITIES

BENCHMARKS:
1. RAILROAD SPIKE IN UTILITY POLE
   ELEVATION=682.19 (NAVD88)
2. RAILROAD SPIKE IN UTILITY POLE
   ELEVATION=683.05 (NAVD88)
3. ARROW ON HYDRANT
   ELEVATION=683.56 (NAVD88)
4. ARROW ON HYDRANT
   ELEVATION=683.20 (NAVD88)
5. ARROW ON HYDRANT
   ELEVATION 683.33 (NAVD88)

SUBTRACT 0.44 FT. TO CONVERT TO NGVD 29 DATUM

Revisions: 12-03-19 REV PER TWP L.A.	Lehner Associates, Inc. Civil Engineers | Surveying | Planning | Consulting Serving Michigan Since 1912 17001 Nineteen Mile Road, Suite 3 Clinton Township, Michigan 48038 o: 586.412.7050 | f: 586.412.7114 www.lehnerassociates.com	Scale: 1"=40'
		Paper Size: 24"x36"
		Date: 11-06-19
		Drawn By: L.A.
Client: VAN BUREN INVESTORS LAND HOLDINGS, LLC ZOHAIB SYED 1451 S. GRATIOT AVENUE CLINTON TOWNSHIP, MI 48035 989-708-1878 zohaibsyed2001@yahoo.com	HAMPTON MANOR OF VAN BUREN TOWNSHIP SOIL EROSION AND SEDIMENTATION CONTROL - NOTES AND DETAILS PART OF THE NORTHEAST 1/4 OF SECTION 14, TOWN 3, SOUTH, RANGE 8 EAST, VAN BUREN TOWNSHIP, WAYNE COUNTY, MICHIGAN	Checked By: W.J.T.
		Job No.: 19-249
		Sheet No. 10



Unit Summary

MC STUDIO UNITS (301 S.F.)	24
AL STUDIO UNITS (346 S.F.)	20
AL ONE BED UNITS (433 S.F.)	**32**
AL TWO BED UNITS (537 S.F.)	4
TOTAL UNITS =	80

CONCEPTUAL OVERALL FLOOR PLAN

1/16"=1'-0" 63,880 SQ. FT.

N

SITE PLAN REVIEW
11-25-2019

JOHN K. COSTA, AIA
ARCHITECTURAL DESIGN & CONSULTATION, PLLC
417 OLD MILL DRIVE
FLUSHING, MICHIGAN 48433
810-659-5275 FAX 810-659-5399

PROPOSED NEW HOME FOR THE AGED

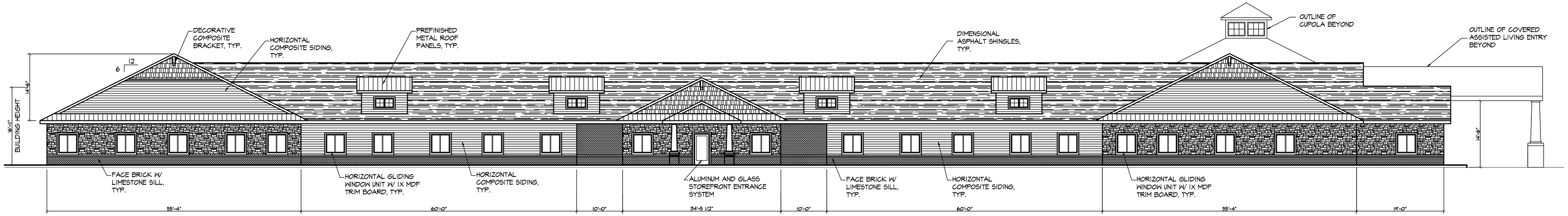
HAMPTON MANOR

OF VAN BUREN TOWNSHIP

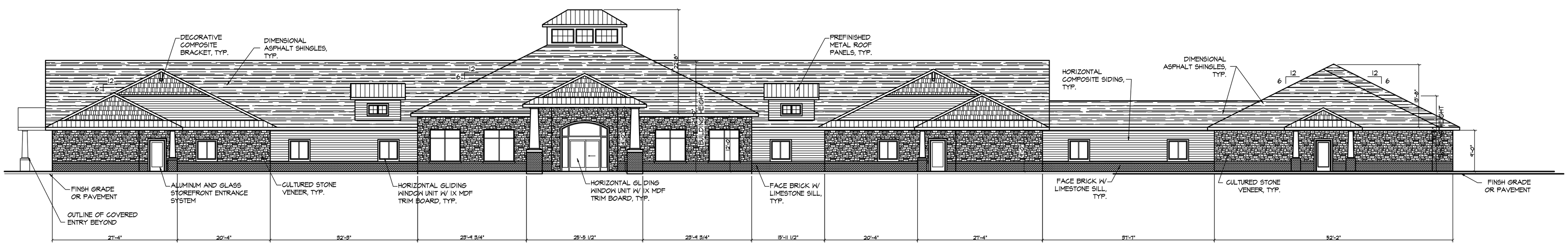
CONCEPTUAL OVERALL FLOOR PLAN

REVISIONS
1 11-8-2019
2
3
4

JOB NO:	019-035
DATE:	11-1-2019
DRAWN BY:	JKC
SCALE:	AS NOTED
SHEET NO:	A1
OF	



CONCEPTUAL
EAST ELEVATION
3/32"=1'-0"



CONCEPTUAL
NORTH ELEVATION
3/32"= 1'-0"

EXTERIOR FINISHES

ROOFING SHINGLES: CERTAINTEED, LANDMARK, ASPHALT ROOFING, COLOR- MOIRE BLACK
COPING AND DRIPS: ALCOA EXTERIORS, ALUMURE 2000, COLOR- WHITE
GUTTERS AND DOWNSPOUTS: AMERIMAX, 5" K STYLE GUTTER SYSTEM, COLOR- WHITE
TRIM BOARDS & FASCIA: FIBER CEMENT OR PVC VINYL, COLOR- WHITE
BRICK: BELDEN BRICK, STANDARD, COLOR- ADMIRAL RED VELOUR
VINYL SIDING: FOUNDRY, CEDAR SHAKE, COLOR- MOON ROCK #826
VINYL SIDING: VARIFORM, HORIZONTAL SIDING, DOUBLE 4", COLOR- BAYOU BLUE
CULTURED STONE VENEER: QUARRY RIDGE STONE, COLOR- CHARCOAL GRAY

SITE PLAN REVIEW
12-1-2019

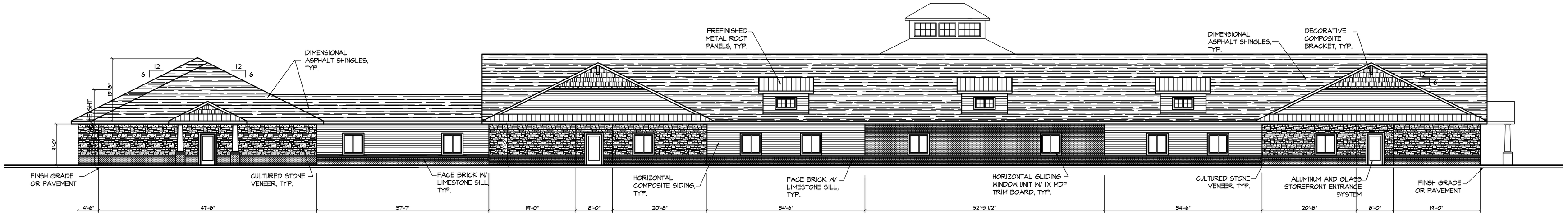
JOHN K. COSTA, AIA
ARCHITECTURAL DESIGN & CONSULTATION, PLLC
417 OLD MILL DRIVE
FLUSHING, MICHIGAN 48433
810-659-5275 FAX 810-659-5399

PROPOSED NEW HOME FOR THE AGED
HAMPTON MANOR
OF VAN BUREN TOWNSHIP

CONCEPTUAL EXTERIOR ELEVATIONS

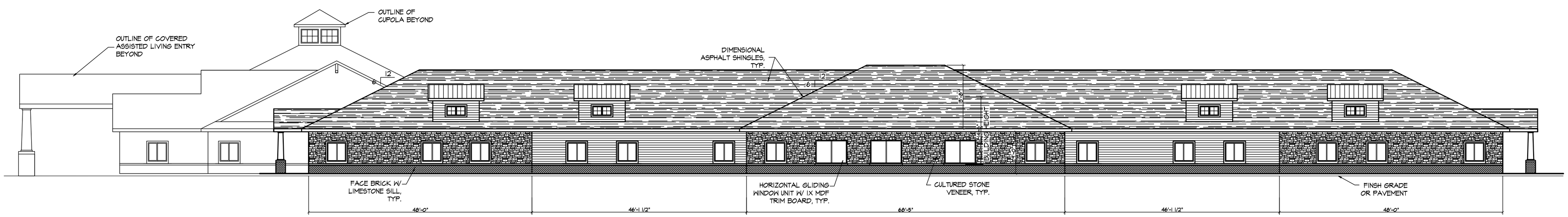
REVISIONS

JOB NO:	019-035
DATE:	11-1-2019
DRAWN BY:	JKC
SCALE:	AS NOTED
SHEET NO:	A2
OF	



CONCEPTUAL SOUTH ELEVATION

3/32"=1'-0"



CONCEPTUAL WEST ELEVATION

3/32"= 1'-0"

EXTERIOR FINISHES

ROOFING SHINGLES: CERTAINTEED, LANDMARK, ASPHALT ROOFING, COLOR- MOIRE BLACK
COPING AND DRIPS: ALCOA EXTERIORS, ALUMURE 2000, COLOR- WHITE
GUTTERS AND DOWNSPOUTS: AMERIMAX, 5" K STYLE GUTTER SYSTEM, COLOR- WHITE
TRIM BOARDS & FASCIA: FIBER CEMENT OR PVC VINYL, COLOR- WHITE
BRICK: BELDEN BRICK, STANDARD, COLOR- ADMIRAL RED VELOUR
VINYL SIDING: FOUNDRY, CEDAR SHAKE, COLOR- MOON ROCK #826
VINYL SIDING: VARIFORM, HORIZONTAL SIDING, DOUBLE 4", COLOR- BAYOU BLUE
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SITE PLAN REVIEW
12-1-2019

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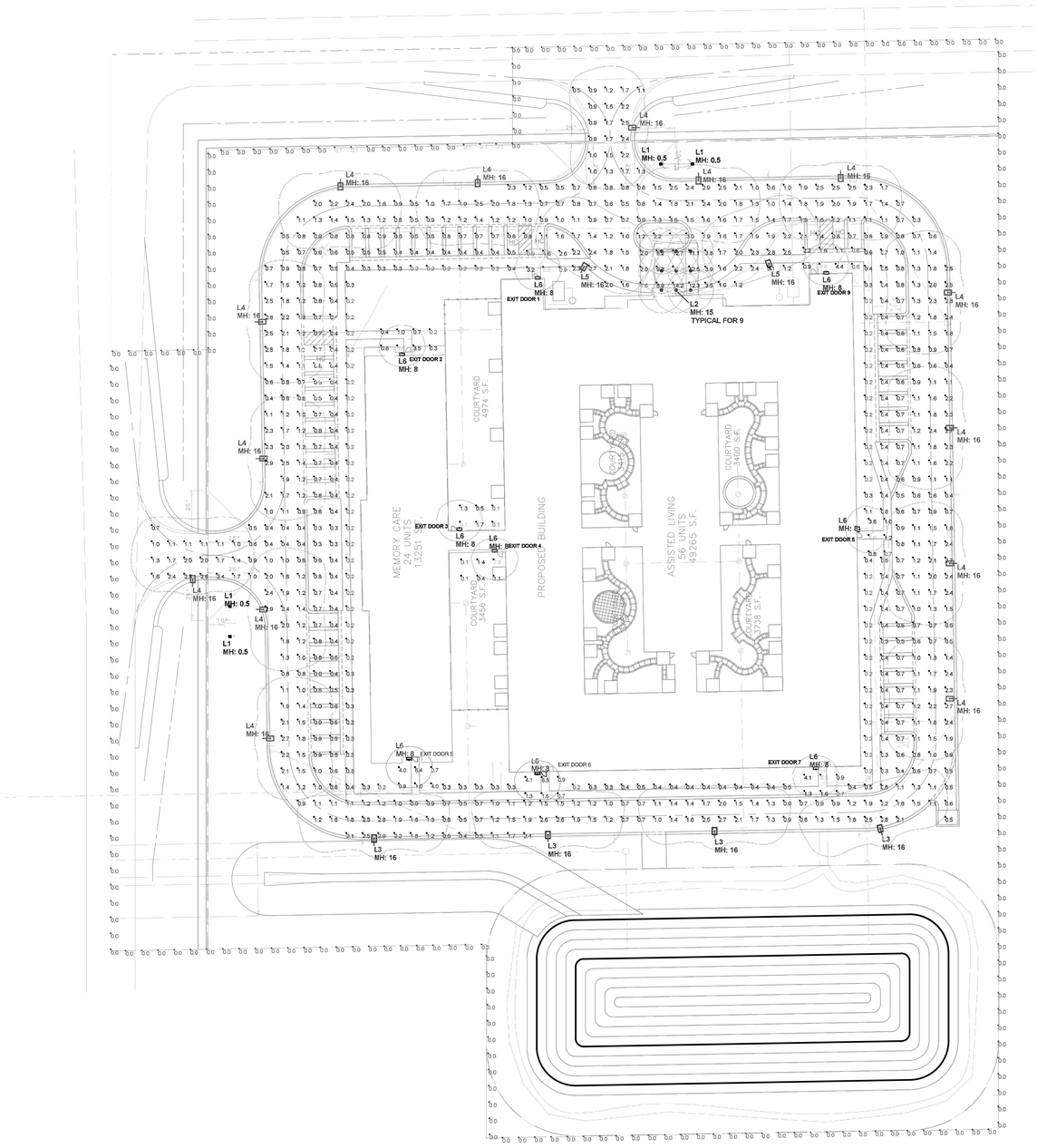
PROPOSED NEW HOME FOR THE AGED
HAMPTON MANOR
OF VAN BUREN TOWNSHIP

CONCEPTUAL EXTERIOR ELEVATIONS

REVISIONS

JOB NO:	019-035
DATE:	11-1-2019
DRAWN BY:	JKC
SCALE:	AS NOTED
SHEET NO:	A3
OF	



Scale: 1 inch = 40 Ft.

NOTE

1. THE ENGINEER AND/OR ARCHITECT MUST DETERMINE APPLICABILITY OF LAYOUT TO EXISTING/FUTURE FIELD CONDITIONS AND ALL MANDATORY BUILDING AND LIFE SAFETY CODES AND COMPLIANCE.
2. LIGHTING LAYOUT REPRESENTS ILLUMINATION LEVELS CALCULATED FROM LABORATORY DATA TAKEN UNDER CONTROLLED CONDITIONS IN ACCORDANCE WITH ILLUMINATING ENGINEERING SOCIETY APPROVED METHODS. ACTUAL PERFORMANCE OF ANY MANUFACTURER'S LUMINAIRE MAY VARY DUE TO VARIATION IN ELECTRICAL VOLTAGE, TOLERANCE IN LAMPS/LEDS, AND OTHER VARIABLE FIELD CONDITIONS.
3. MOUNTING HEIGHTS INDICATED ARE FROM GRADE AND/OR FLOOR UP.
4. CLARUS DOES NOT ACT AS THE ELECTRICAL, CIVIL OR STRUCTURAL ENGINEER AND DOES NOT DETERMINE BASE REQUIREMENTS AND APPLICABLE CODE COMPLIANCE. CLARUS IS NOT LIABLE FOR ANY CODE COMPLIANCE DISCREPANCY.
5. THESE LIGHTING CALCULATIONS ARE NOT A SUBSTITUTE FOR INDEPENDENT ENGINEERING ANALYSIS OF LIGHTING SYSTEM SUITABILITY AND SAFETY. THE ENGINEER AND/OR ARCHITECT OF RECORD IS RESPONSIBLE TO REVIEW FOR CODE COMPLIANCE, INCLUDING AND NOT LIMITED TO – NFPA 101 LIFE SAFETY CODE, MICHIGAN ENERGY CODE, MICHIGAN BUILDING CODE AND/OR IECC CODE AND LIGHTING QUALITY COMPLIANCE.

Luminaire Schedule

Symbol	Qty	Label	LLF	Description	Lum. Watts	Lum. Lumens
	4	L1	0.900	NFFLD-S-C15-D-UNV-66	51.2	5859
	9	L2	0.900	HC620D010-HM612840-61NDH	20	1797
	4	L3	0.900	GLEON-AF-01-LED-E1-SL3	59	6376
	14	L4	0.900	GLEON-AF-01-LED-E1-SL4	59	6058
	2	L5	0.900	GLEON-AF-01-LED-E1-SL4-HSS	59	5175
	9	L6	0.900	XTOR2B-W	18.2	2103

Calculation Summary

Label	Units	Avg	Max	Min	Max/Min	Avg/Min
Exterior Exit Door 1	Fc	2.45	5.5	0.9	6.11	2.72
Exterior Exit Door 2	Fc	1.69	6.6	0.2	33.00	8.45
Exterior Exit Door 3	Fc	2.13	9.1	0.1	91.00	21.30
Exterior Exit Door 4	Fc	1.82	7.8	0.1	78.00	18.20
Exterior Exit Door 5	Fc	2.20	6.4	0.3	21.33	7.33
Exterior Exit Door 6	Fc	2.10	7.1	0.4	17.75	5.25
Exterior Exit Door 7	Fc	2.85	8.5	0.7	12.14	4.07
Exterior Exit Door 8	Fc	2.15	5.6	0.7	8.00	3.07
Exterior Exit Door 9	Fc	2.15	5.8	0.6	9.67	3.58
Main Entrance Canopy Area	Fc	8.03	14.4	1.6	9.00	5.02
Parking Lot and Walkways	Fc	1.09	3.2	0.2	16.00	5.45
Property Line @ 5ft AFG	Fc	0.00	0.1	0.0	N.A.	N.A.
Sign Typical_Side_4	Fc	15.54	19.9	12.4	1.60	1.25

MOUNTING HEIGHTS LISTED NEXT TO LUMINAIRES ON PLAN (MH:XX)

CALCULATION POINTS FOR PROPERTY LINE AT 5'-0" A.F.G., ALL OTHER CALCULATION POINTS TAKEN AT GRADE.

FLOODLIGHT, TYPE L1 IS SETBACK 8'-0" FROM FACE OF SIGN (BOTH SIDES), TWO SIGN LOCATIONS.

LUMINAIRE TYPE L6 SHALL BE WALL MOUNTED 8'-0" A.F.G. AS MEASURED FROM BOTTOM LENS.

DATE

REVISION

XX

CLARUS LIGHTING & CONTROLS
30775 Barrington St.
Madison Heights, MI 48071
P: 248.677.0850
F: 248.677.0512
E: info@clarus-lighting.com

PROJECT TITLE
HAMPTON MANOR OF
VAN BUREN TOWNSHIP
WAYNE COUTY, MICHIGAN

SHEET TITLE
PHOTOMETRIC CALCULATION

DATE
10-28-19
PROJECT No.
CLC19-69000
SHEET No.
L201

F:\19\19-249\Drafting & Engineering\Site Plan\L201-Hampton Manor Van Buren Ltg Calc.dwg, 11/4/2019 9:50:52 AM, DWG To PDF.pc3

landscape requirements:

road frontage landscape

TLYER ROAD R.O.W LIN FT. 488'
(488'-30' WIDE DRIVE = 458' ROAD FRONTAGE)

	REQUIRED	PROVIDED
ONE (1) 3" DECIDUOUS OR EVERGREEN TREE PER 40' OF ROAD FRONTAGE (458' / 40' = 11.45 TREES)	11	12
ONE (1) ORNAMENTAL TREE PER 100' OF ROAD FRONTAGE (458' / 100' = 4.5 TREES)	5	5
EIGHT (8) SHRUBS PER 40' OF ROAD FRONTAGE (458' / 40' = 11.45 X 8= 91.6 SHRUBS)	92	100+

MORTON TAYLOR ROAD R.O.W LIN FT. 493'
(493'-28' WIDE DRIVE = 465' ROAD FRONTAGE)

	REQUIRED	PROVIDED
ONE (1) 3" DECIDUOUS OR EVERGREEN TREE PER 40' OF ROAD FRONTAGE (465' / 40' = 11.6 TREES)	12	12
ONE (1) ORNAMENTAL TREE PER 100' OF ROAD FRONTAGE (465' / 100' = 4.6 TREES)	5	5
EIGHT (8) SHRUBS PER 40' OF ROAD FRONTAGE (465' / 40' = 11.6 X 8=93 SHRUBS)	93	100+

parking lot landscaping

TOTAL PAVEMENT AREA PROVIDED 117,538 S.F.

	REQUIRED	PROVIDED
INTERIOR PARKING LANDSCAPING =15% PAVEMENT AREA (117,538 S.F. X .15 (15%) = 17,630.7 S.F.)	17,631 S.F.	17,631 S.F.
ONE (1) 3"DECIDUOUS OR EVERGREEN TREE PER 300 S.F. OF INTERIOR LANDSCAPE AREA (17,631 S.F. / 300 =58.77 TREES)	59	59

interior parking lot landscaping

TOTAL PAVEMENT AREA PROVIDED 117,538 S.F.

	REQUIRED	PROVIDED
INTERIOR PARKING LANDSCAPING =15% PAVEMENT AREA (117,538 S.F. X .15 (15%) = 17,630.7 S.F.)	17,631 S.F.	17,631 S.F.
ONE (1) 3"DECIDUOUS OR EVERGREEN TREE PER 300 S.F. OF INTERIOR LANDSCAPE AREA (17,631 S.F. / 300 =58.77 TREES)	59	59

greenbelt buffering

TOTAL LIN FT. OF EAST PROPERTY LINE 612'

	REQUIRED	PROVIDED
ONE (1) 3"DECIDUOUS OR EVERGREEN TREE PER 20' (612 / 20' PER TREE =30.6 TREES)	31	31

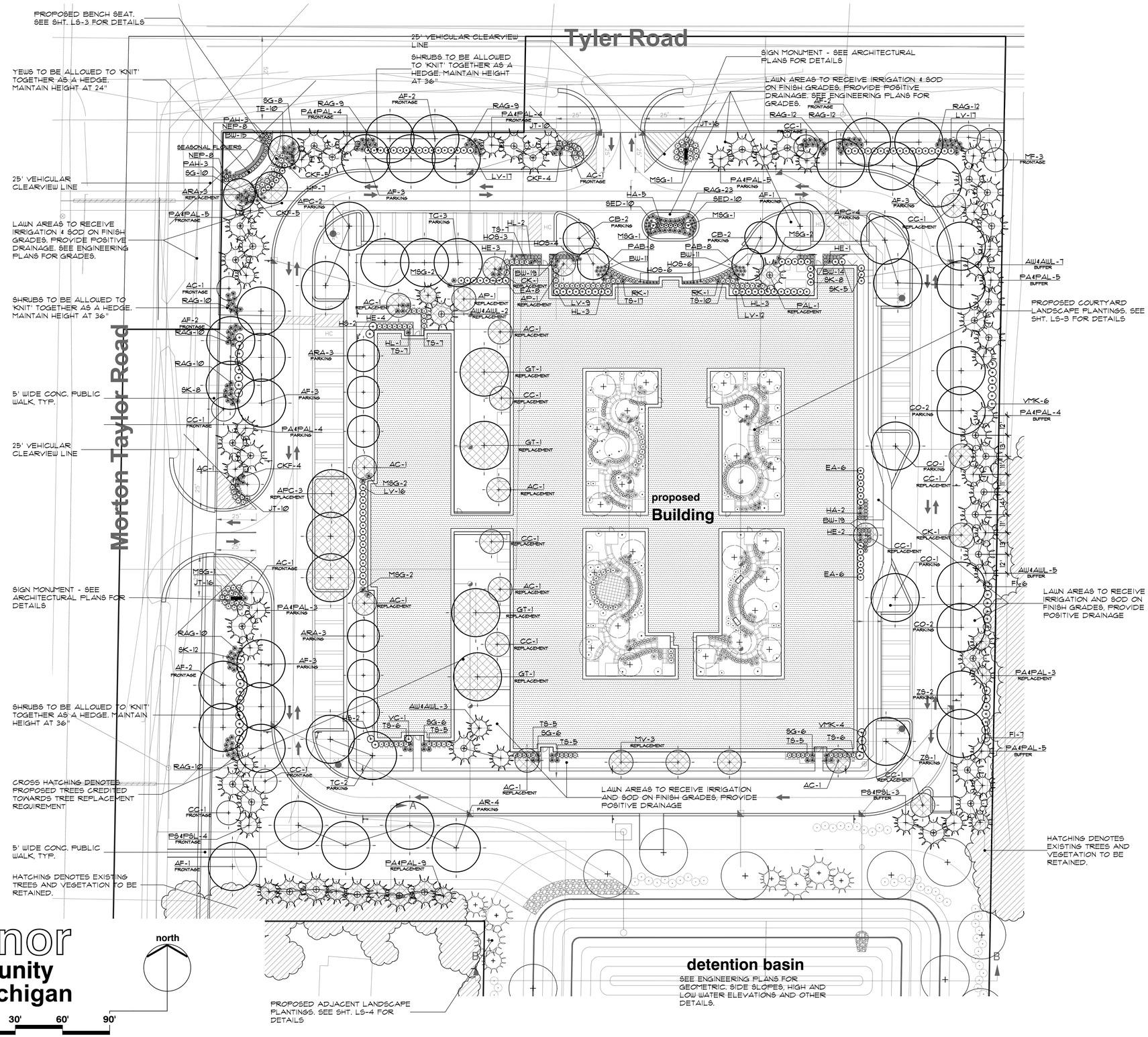
TOTAL LIN FT. OF SOUTH PROPERTY LINE 172'
(LENGTH ADJACENT RESIDENTIAL ONLY)

ONE (1) 3"DECIDUOUS OR EVERGREEN TREE PER 20' (172 / 20' PER TREE =8.6 TREES)	9	EXISTING EVERGREE TREES SAVED

tree removal/replacement summary

TOTAL NO. TREES INVENTORIED 249
(245-TREES ONSITE AND 4-TREES OFFSITE)
TOTAL NO. OF TREES SAVED 38
NO. OF REGULATED TREES SAVED 38
NO. OF NON-REGULATED TREES SAVED 0
TOTAL NO. OF TREES REMOVED 207
NO. OF REGULATED TREES REMOVED 97
NO. OF NON-REGULATED TREES REMOVED 110

TOTAL NO. OF REPLACEMENT TREES REQUIRED 97
TOTAL NO. OF REPLACEMENT TREES PROVIDED 126.5
13- 8' HIGH EVERGREEN TREE EQUAL 2-REP. TREE 26
13- 10' HIGH EVERGREEN TREE EQUAL 2.5-REP. TREE 32.5
45- 2" DECIDUOS TREE EQUAL 1-REP. TREE 45
23- 3" DECIDUOS TREE EQUAL 1-REP. TREE 23



landscape plan for:

Hampton Manor

Senior Living Community
Van Buren Township, Michigan

scale: 0' 15' 30' 60' 90'
1" = 30' - 0"

FPA
FELINO A. PASCUAL and ASSOCIATES
Community Land Planner and registered Landscape Architect
24333 Orchard Lake Rd, Suite G
Farmington Hills, MI 48336
ph. (248) 557-5588
fax. (248) 557-5416

seal:
STATE OF MICHIGAN FELINO A. PASCUAL LANDSCAPE ARCHITECT No. 1433 REGISTERED LANDSCAPE ARCHITECT

client:
S & S HOLDING, LLC
1451 Gratiot Avenue
Clinton Township,
Michigan 48036

project:
HAMPTON MANOR of VAN BUREN TOWNSHIP

project location:
Van Buren Township , Michigan
Morton Taylor Road & Tyler Road

sheet title:
LANDSCAPE PLAN

job no./issue/revision date:
LS 19.123.11 REVIEW 11-5-2019
LS 19.123.11 SPA 11-29-2019

drawn by:
JP, DK
checked by:
FP
date:
10-26-2019

notice:
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For free location of public utility lines

The location and elevations of existing underground utilities as shown on this drawing are only approximate. no guarantee is either expressed or implied as to the completeness of accuracy. contractor shall be exclusively responsible for determining the exact location and elevation prior to the start of construction

project no:
LS19.123.10

sheet no:
LS-1 of 4

plant material list

key	Greenbelt Quant.	Buffer Quant.	Parking Quant.	Replacement Quant.	Supplement Quant.	Total Quant.	botanical name	common name	size	comments
							LARGE AND SMALL DECIDUOUS TREES			
AR	-	-	4	-	-	4	ACER RUBRUM	RED MAPLE (MULTI-STEM)	3' BB	
AF	9	-	13	-	-	22	ACER X FREEMANII 'JEFFERSRED'	AUTUMN BLAZE RED MAPLE	3" BB	
TC	-	-	5	-	-	5	TILIA CORDATA 'GREENSPIRE'	GREENSPIRE LINDEN	3" BB	
CB	-	-	4	-	-	4	CARPINUS BETULUS 'FASTIGIATA'	PYRAMIDAL EUROPENAN HORNBEAN	4" BB	
CO	-	-	6	-	-	6	CELTIS OCCIDENTALIS	NORTHERN HACKBERRY	3" BB	
ZS	-	-	3	-	-	3	ZELKOVA SERRATE 'VILLAGE GREEN'	VILLAGE GREEN ZELKOVA	3" BB	
GT	-	-	-	4	-	4	GLEDITSIA TRI. INERMIS 'SKYCOLE'	SKYLINE LOCUST	3" BB	
APC	-	-	6	3	-	9	ACER P. 'CRIMSON KING'	CRIMSON KING NORWAY MAPLE	3" BB	
AP	-	-	-	2	-	2	ACER P. 'BLOODGOOD'	BLOODGOOD LACE LEAF MAPLE	6' BB	
MF	3	-	-	-	-	3	MALUS FLORIBUNDA	JAPANESE FLOWERING CRABAPPLE	2" BB	
AC	4	-	-	8	-	12	AMELANCHIER CANADENSIS	SHADBLOW SERVICEBERRY	10' BB	(MULTI-STEM)
ARA	-	-	6	3	-	9	ACER R. 'ARMSTRONG'	ARMSTRONG RED MAPLE	3" BB	
CC	4	-	-	7	-	11	CERCIS CANADENSIS	EASTERN REDBUD	10' BB	(MULTI-STEM)
CK	-	-	-	2	-	2	CORNUS KOUSA	KOUSA DOGWOOD	2" BB	
MV	-	-	-	3	-	3	MALUS'RED BARON'	RED BARON CRABAPPLE	2" BB	
							SHRUBS			
SK	20	-	-	-	13	33	SYRINGA PATULA 'MISS KIM'	MISS KIM DWARF LILAC	3' B.B.	
LV	34	-	-	-	37	71	LIGUSTRUM VULGARE 'LODENSE'	LODENSE PRIVET 42" O.C. SPACING	3' BB	
CS	-	-	-	-	-	0	CORNUS STOLONIFERA			
RK	-	-	-	-	2	2	ROSA X. 'OSA EASY DOUBLE RED''	OSA EASY DOUBLE RED ROSE	#5 CONT.	
HA	-	-	-	-	7	7	HYDRANGEA ANNEBELLE	ANNABELLE HYDRANGEA	#5 CONT.	
HE	-	-	-	-	10	10	HYDRANGEA M. 'GLOWING EMBERS'	GLOWING EMBERS HYDRANGEA	#5 CONT.	
SG	18	-	-	-	18	18	SPIREA B. 'GOLD FLAME'	GOLD FLAME SPIREA	#3 CONT.	
EA	-	-	-	-	20	20	EUONYMUS ALATUS 'COMPACTUS'	DWARF WING BURNING BUSH	3' BB	
VC	-	-	-	-	1	1	VIBURNUM X.B. 'MOHAWK'	MOHAWK VIBURNUM	3' 1/2' B.B	
HL	-	-	-	-	9	9	HYDRANGEA 'LINDSEY ANN'	LA DREAMIN HYDRANGEA	#3 CONT.	
VMK	-	6	-	-	4	10	VIBURNUM X BURKWOODII	MOHAWK VIBURNUM	#3 CONT.	
FI	-	13	-	-	-	13	FORSYTHIA X 'INTERMEDIA	BORDER FORSYTHIA	#3 CONT.	
HP	7	-	-	-	-	7	HYDRANGEA PANICULATA	HYDRANGEA LITTLE LIME	#3 CONT.	
HS	-	-	-	-	4	4	HIBISCUS SYRIACUS	APHRODITE	#3 CONT.	
							LARGE AND SMALL EVERGREENS			
TS	-	-	-	-	80	80	TAXUS X M. 'SEBIAN'	SEBIAN YEW	18" BB	24" O.C. SPACING
TE	10	-	-	-	-	10	TAXUS XM. 'EVERLOW'	EVERLOW YEW	24"-30" BB	32" O.C. SPACING
BW	15	-	-	-	74	89	BUXUS S. 'GREEN VELVET	GREEN VELVET BOXWOOD	18" BB	32" O.C. SPACING
JT	52	-	-	-	-	52	JUNIFERUS SABINE'TAMARISCIFOLIA'	TAM JUNIPER	18" BB	32" O.C. SPACING
AW	-	7	-	3	-	10	ABIES CONCOLOR	CONCOLOR WHITE FIR	8' BB	
AWL	-	6	-	2	-	8	ABIES CONCOLOR	CONCOLOR WHITE FIR	10' BB O	
PA	6	11	7	2	-	26	PICEA ABIES	NORWAY SPRUCE	8' BB	
PAL	7	12	5	2	-	26	PICEA ABIES	NORWAY SPRUCE	10' BB O	
PS	2	2	-	-	-	4	PINUS STROBUS	WHITE PINE	8' BB	
PSL	2	3	-	-	-	5	PINUS STROBUS	WHITE PINE	10' BB O	
							PERENNIALS AND GRASSES			
PAH	6	-	-	-	-	6	PENNISETUM ALOPECUROIDES 'HAMELN'	DWARF FOUNTAIN GRASS	#3 CONT.	
CKF	18	-	-	-	-	18	CALAMAGROSTIS ACUTIFLORA 'KARL FOERSTER'	KARL FOERSTER FEATHER REED GRASS	#3 CONT.	
MSG	1	-	-	-	11	12	MISCANTHUS SINENSIS 'MORNING LIGHT'	MORNING LIGHT JAPANESE SILVER GRASS	#3 CONT.	
NEP	16	-	-	-	-	16	NEPATA X.F. 'WALKER'S LOW'	WALKER'S LOW CATMINT	#1 CONT.	
RAG	104	-	-	-	23	127	RHUS AROMATICA 'GRO-LOW'	GRO-LOW FRAGRANT SUMAC	#3 CONT.	
SED	-	-	-	-	20	20	SEDUM SPECTABILE 'NEON'	NEON SEDUM	#1 CONT.	
HOS	-	-	-	-	19	19	HOSTA	REGAL HOSTA	#1 CONT.	
PAB	-	-	-	-	16	16	PENNISETUM ALOPECUROIDES 'LITTLE BUNNY'	LITTLE BUNNY FOUNTAIN GRASS	#1 CONT.	

general landscape notes:

1. LANDSCAPE CONTRACTOR SHALL VISIT THE SITE, INSPECT EXISITNG CONDITIONS, REVIEW PROPOSED PLANTINGS AND RELATED WORK. CONTACT THE OWNER AND/OR LANDSCAPE ARCHITECT WITH ANY CONCERNS OR DISCREPANCY BETWEEN THE PLAN, PLANT MATERIAL LIST, AND/OR SITE CONDITIONS.

2. PRIOR TO BEGINING OF CONSTRUCTION ON ANY WORK, CONTRACTORS SHALL VERIFY LOCATIONS OF ALL ON SITE UTILITIES, GAS, ELECTRIC, TELEPHONE, CABLE TO BE LOCATED BY CONTACTING MISS DIG 1-800-482-7171. ANY DAMAGE OR INTERRUPTION OF SERVICES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. COORDINATE ALL RELATED WORK ACTIVITIES WITH OTHER TRADES AND REPORT ANY UNACCEPTABLE JOB CONDITIONS TO OWNER PRIOR TO COMMENCING

3. NUMERICAL VALUE ON THE LANDSCAPE QUANTITIES SPECIFIED ON THE PLAN TAKE PRECEEDENCE OVER GRAPHIC REPRESENTATION. VERIFY ANY CONCERN-DISCREPANCY WITH LANDSCAPE ARCHITECT.

4. ALL CONSTRUCTION AND PLANT MATERIAL LOCATION TO BE ADJUSTED ON SITE IF NECESSARY

5. ALL SUBSTITUTIONS OR DEVIATIONS FROM THE LANDSCAPE PLAN MUST BE APPROVED BY VAN BUREN TOWNSHIP AND LANDSCAPE ARCHITECT.

6. ALL LARGE TREES AND EVERGREENS TO BE STAKED, GUYED AND WRAPPED AS DETAIL SHOWN ON PLAN.

7. PLANT BEDS TO BE DRESSED WITH MIN. 4" OF FINELY DOUBLE SHREDDED HARDBARK MULCH.

8. DIG SHRUB PITS 1' LARGER THAN SHRUB ROOT BALLS AND TREE PITS 2' LARGER THAN ROOT BALL. BACK FILL WITH ONE PART TOP SOIL AND ONE PART SOIL FROM EXCAVATED PLANTING HOLE.

9. NATURAL COLOR, FINELY SHREDDED HARDWOOD BARK MULCH REQUIRED FOR ALL PLANTINGS.

10. REMOVE ALL TWINE, WIRE AND BURLAP FROM TREE AND SHRUB EARTH BALLS, AND FROM TREE TRUNKS, 4" THICK BARK MULCH FOR TREES IN 4' DIA. CIRCLE WITH 3" PULLED AWAY FROM TRUNK , 4" THICK BARK MULCH FOR SHRUBS AND 4" THICK BARK MULCH FOR PERENNIALS.

11. PLANT MATERIAL QUALITY & INSTALLATION SHALL BE IN ACCORDANCE WITH THE CURRENT AMERICAN ASSOCIATION OF NURSERYMEN LANDSCAPE STANDARDS.

12. PROVIDE PEAT SOD FOR ALL NEW AND DISTURBED LAWN AREAS UNLESS NOTED OTHERWISE.

13. ALL PLANTING AREAS TO BE PREPARED WITH APPROPRIATE SOIL MIXTURES AND FERTILIZER BEFORE PLANT INSTALLATION.

14. PLANT TREES AND SHRUBS GENERALLY NO CLOSER THEN THE FOLLOWING DISTANCES FROM SIDEWALKS, CURBS AND PARKING STALLS:
   a). SHADE TREES _____ 5 FT.
   b). ORNAMENTAL AND EVERGREEN TREES (CRAB, PINE, SPRUCE, ETC.) _____ 10 FT.
   c). SHRUBS THAT ARE LESS THAN 1 FOOT TALL AND WIDE AT MATURITY _____ 2 FT.

15. NO TREES OR EVERGREENS TO BE INSTALLED OVER ANY PROPOSED OR EXISTING UTILITY LINES AS SHOWN ON THE OVERALL LANDSCAPE PLAN. SEE ENGINEERING PLANS FOR LOCATION AND DETAILS.

16. ALL LAWN AREAS AND LANDSCAPE BEDS TO BE FULLY IRRIGATED WITH A AUTOMATIC UNDERGROUND SYSTEMS. IRRIGATION SYSTEM TO HAVE SEPARTE ZONES FOR LAWN AREAS, PARKING ISLANDS, AND SHRUB BEDS WITH DIFFERENT CONTROL MOISTURE LEVEL ADJUSTMENT PER ZONE AS REQUIRED

17. UNLESS NOTED OTHERWISE, LANDSCAPE BEDS ADJACENT TO LAWN TO RECIEVE EDGING. EDGING SHALL BE 4" X 1/8" METAL (FINISH BLACK OR GREEN) OR APPROVED EQUAL AND TO BE INSTALLED WITH HORIZONTAL METAL STAKES AT 32" O.C. OR PER MANUFACTERER'S SPECIFICATION.

18. ALL NEW PARKING ISLANDS AND LANDSCAPE BEDS ADJACENT AND NEXT TO BUILDING SHALL BE EXCAVATED OF ALL BUILDING MATERIALS AND POOR SOILS A MIN. OF 12"-16" DEPTH. BACK FILL WITH GOOD, MEDIUM TEXTURED PLANTING SOILS. ADD A MIN. 4" OF TOPSOIL OVERFILL TO FINISH GRADE. PROVIDE POSITIVE DRAINAGE.

19. WATERING OF ALL PLANTS AND TREES TO BE PROVIDED IMMEDIATELY AND MULCHING WITHIN 24 HOURS AFTER INSTALLATION.

20. ALL TREE PITS TO BE TESTED FOR PROPER DRAINAGE PRIOR TO TREE PLANTING. PROVIDE APPROPERATES DRAINAGE SYSTEM AS REQUIRED IF THE TREE PIT DOES NOT DRAIN SUFFICIENTLY.

21. THE LANDSCAPE CONTRACTOR SHALL GUARANTEE ALL LANDSCAPE PLANT MATERIALS AND IRRIGATION INSTALLATION FOR A PERIOD OF TWO YEAR BEGINNING AFTER THE COMPLETION OF LANDSCAPE INSTALLTION DATE APPROVED BY THE CITY OR LANDSCAPE ARCHITECT. THE CONTRACTOR SHALL REPLACE DURING AND AT THE END OF THE GUARANTEE PERIOD, ANY DEAD OR UNACCEPTABLE PLANTS, AS DETERMINED BY THE TOWNSHIP OR LANDSCAPE ARCHITECT, WITHOUT COST TO THE OWNER.

landscape maintenance notes:

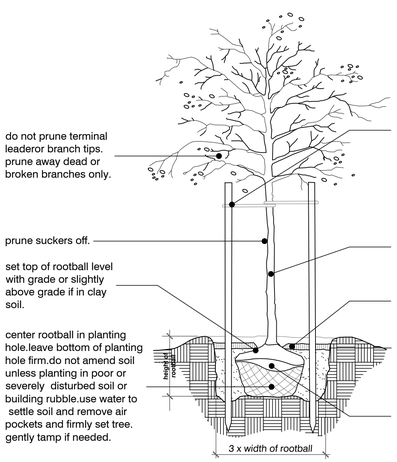
LANDSCAPE MAINTENANCE PROCEDURES AND FREQUENCIES TO BE FOLLOWED SHALL BE SPECIFIED ON THE LANDSCAPE PLAN, ALONG WITH THE MANNER IN WHICH THE EFFECTIVENESS, HEALTH AND INTENDED FUNCTIONS OF THE VARIOUS LANDSCAPE AREAS ON THE SITE WILL BE ENSURED.

1. LANDSCAPING SHALL BE KEPT IN A NEAT, ORDERLY AND HEALTHY GROWING CONDITION, FREE FROM DEBRIS AND REFUSE.

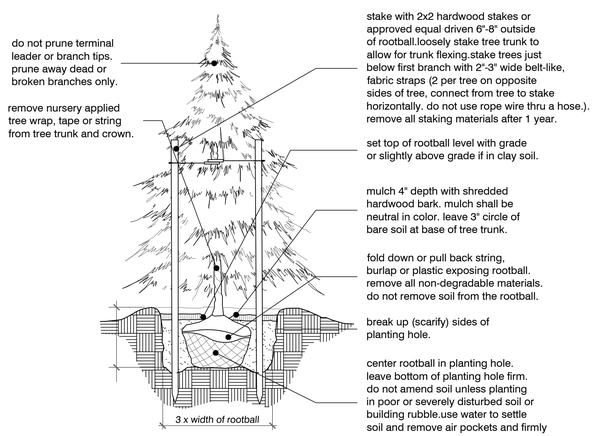
2. PRUNING SHALL BE MINIMAL AT THE TIME OF INSTALLATION, ONLY TO REMOVE DEAD OR DISEASED BRANCHES. SUBSEQUENT PRUNING SHALL ASSURE PROPER MATURATION OF PLANTS TO ACHIEVE THEIR APPROVED PURPOSE.

3. ALL DEAD OR DISEASED PLANT MATERIAL SHALL BE REMOVED AND REPLACED WITHIN SIX (6) MONTHS AFTER IT DIES OR IN THE NEXT PLANTING SEASON, WHICHEVER OCCURS FIRST. THE PLANTING SEASON FOR DECIDUOUS PLANTS SHALL BE BETWEEN MARCH 15 AND NOVEMBER 15 OR UNTIL THE PREPARED SOIL BECOMES FROZEN. THE PLANTING SEASON FOR EVERGREEN PLANTS SHALL BE BETWEEN MARCH 1 AND JUNE 1. PLANT MATERIAL INSTALLED TO REPLACE DEAD OR DISEASED MATERIAL SHALL BE AS CLOSE AS PRACTICAL TO THE SIZE OF THE MATERIAL IT IS INTENDED TO REPLACE.

4. THE APPROVED LANDSCAPE PLAN SHALL BE CONSIDERED A PERMANENT RECORD AND INTEGRAL PART OF THE SITE PLAN APPROVAL. UNLESS OTHERWISE APPROVED IN ACCORDANCE WITH THE AFOREMENTIONED PROCEDURES, ANY REVISIONS TO, OR REMOVAL OF, PLANT MATERIALS WILL PLACE THE PARCEL IN NON-CONFORMITY WITH THE APPROVED LANDSCAPE PLAN, AND SHALL BE VIEW AS A VIOLATION OF THIS ORDINANCE AND THE AGREED UPON TERMS OF THE FINAL SITE PLAN APPROVAL.



tree planting detail
no scale



evergreen planting detail
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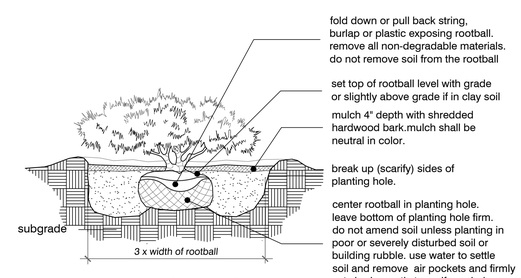
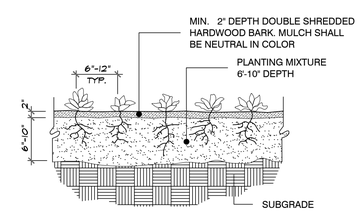


shrub planting detail
no scale



perennial planting detail
no scale

FPA
FELINO A. PASCUAL and ASSOCIATES
Community Land Planner and registered Landscape Architect
24333 Orchard Lake Rd, Suite G
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project no:
LS19.123.10

sheet no:
LS-2 of 4

plant material list

key	3A	3B	3C	3D	botanical name	common name	size	comments
					SMALL ORNAMENTAL TREES			
AP	1	1	1	2	ACER P. 'BLOODGOOD'	BLOODGOOD LACE LEAF MAPLE	6" BB	
AC	2	1	2	3	AMELANCHIER CANADENSIS	SHADBLOW SERVICEBERRY	10' BB	(MULTI-STEM)
CP	-	-	-	-	CRATAEGUS PHAENOPYRUM	WASHINGTON HAWTHORN	10' BB	(MULTI-STEM)
CC	-	1	-	-	CERCIS CANADENSIS	EASTERN REDBUD	10' BB	(MULTI-STEM)
CK	2	1	1	-	CORNUS KOUSA	KOUSA DOGWOOD	2" BB	
MJ	1	1	1	2	MAGNOLIA LILLIFLORA 'JANE'	JANE MAGNOLIA	10' BB	(MULTI-STEM)
					SHRUBS			
HE	5	5	5	9	HYDRANGEA M. 'GLOWING EMBERS'	GLOWING EMBERS HYDRANGEA	#3 CONT.	
HA	11	3	5	7	HYDRANGEA ANNEBELLE	ANNABELLE HYDRANGEA	#3 CONT.	
TS	9	-	17	-	TAXUS X.M. 'SEBIAN'	EVERLOW SEBIAN	24"-30" BB	32" O.C. SPACING
AZ	-	-	-	-	AZALEA 'STEWARTSTONIAN'	STEWARTSTONIAN AZALEA	#3 CONT.	
VC	2	2	1	3	VIBURNUM CARLESII	KOREAN SPICE VIBURNUM	3 1/2' BB	
VMK	1	-	3	2	VIBURNUM X.B 'MOHAWK	MOHAWK VIBURNUM	3 1/2' BB	
HL	2	2	-	3	HYDRANGEA 'LINDSEY ANN'	LA DREAMIN HYDRANGEA	#3 CONT.	
WF	4	-	6	2	WEIGLA FLORIDA 'ALEXANDRA'	WINE & ROSES WEIGELA	2'-2 1/2' BB	
BW	48	60	41	58	BUXSUS M. 'GREEN VELVET'	GREEN VELVET BOXWOOD	18" BB	24" O.C. SPACING
SG	6	11	8	-	SPIRAEA X.B. BUMALDA 'GOLDFLAME'	GOLDFLAME SPIREA	#3 CONT	36" O.C. SPACING
SK	4	6	2	-	SYRINGA PATULA 'MISS KIM'	MISS KIM DWARF LILAC	3' B.B.	
RK	3	11	5	5	ROSA X. 'OSA EASY DOUBLE RED''	OSA EASY DOUBLE RED ROSE	#5 CONT.	
					PERENNIALS AND GRASSES			
PAH	6	8	6	8	PENNISETUM ALOPECUROIDES 'HAMELN'	DWARF FOUNTAIN GRASS	#3 CONT.	
MSG	1	1	1	-	MISCANTHUS SINENSIS 'MORNING LIGHT'	MORNING LIGHT JAPANESE SILVER GRASS	#3 CONT.	

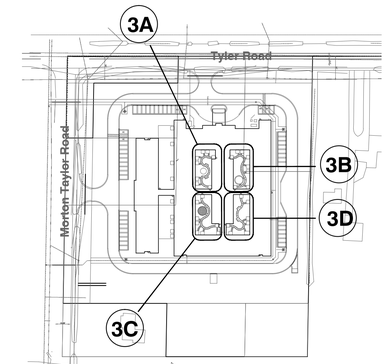
A decorative planter urn
(9-CONDITIONS)
MANUFACTURER:
HADDONSTONE LTD. 32207 UNITED AVE.
PUEBLO, CO 81001
WEB:WWW.HADDONSTONE.COM
PH. 866-733-8225
MODEL:
STONE PLANTER URNS
PER OWNER SELECTIONS

B outdoor wicker lounge chairs
(1-CONDITIONS)
DESCRIPTION:
5-PIECE RESIN WICKER PATIO FURNITURE
WITH CUSHION
FINISH SELECTION BY OWNER

C outdoor wicker table / chairs
(4-CONDITIONS)
DESCRIPTION:
RESIN WICKER CHAIRS AND TEMPERED
ROUND TABLE WITH CUSHION
FINISH SELECTION BY OWNER

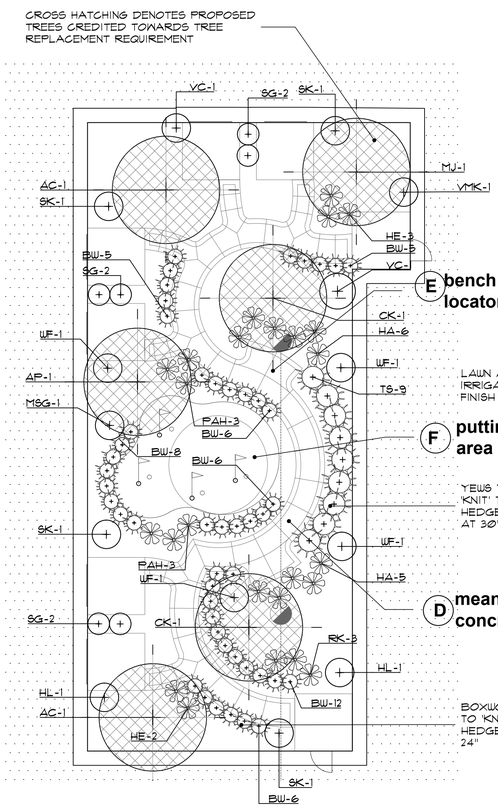
D concrete walk or patio
BROOM FINISH WITH 4" WITH TROWEL
SMOOTH EDGE

E bench seat
(6-CONDITIONS)
MANUFACTURER:
ANOVA, INC. OR EQUAL
211 NORTH LINDBERGH BLVD. SUITE 200
ST. LOUIS, MISSOURI 63141-1809
TOLL FREE NO. (800)731-1327
WWW.ANOVAFURNISHINGS.COM
MODEL NO. LEXC6 or EQUAL
DESCRIPTION: 6' WIDE CONTOUR BENCH
FINISH: TEXTURE PEWTER

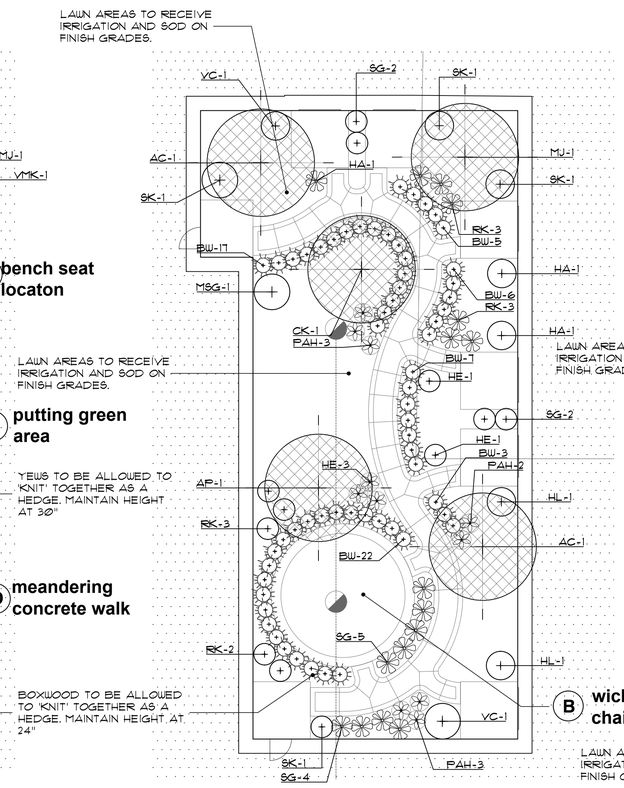


key reference location map
NO SCALE

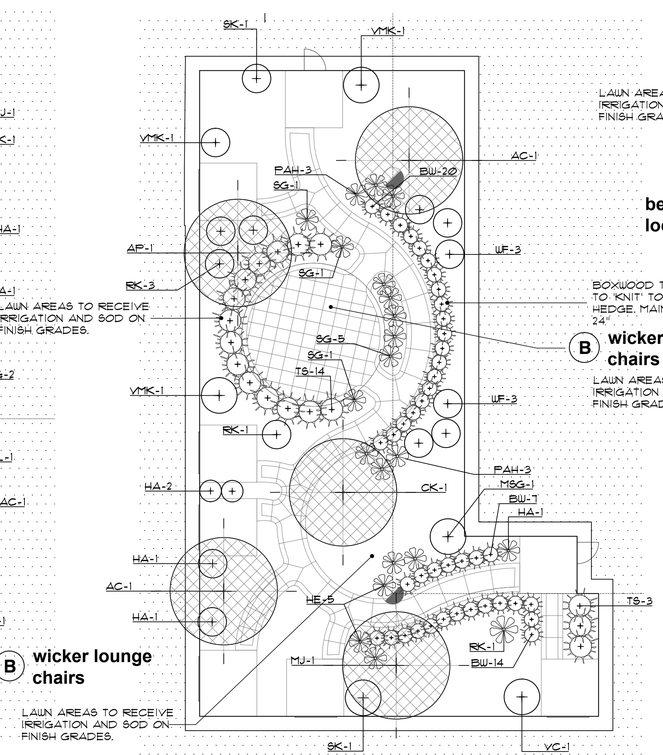
F artificial grass mini putting green
(1-CONDITIONS)



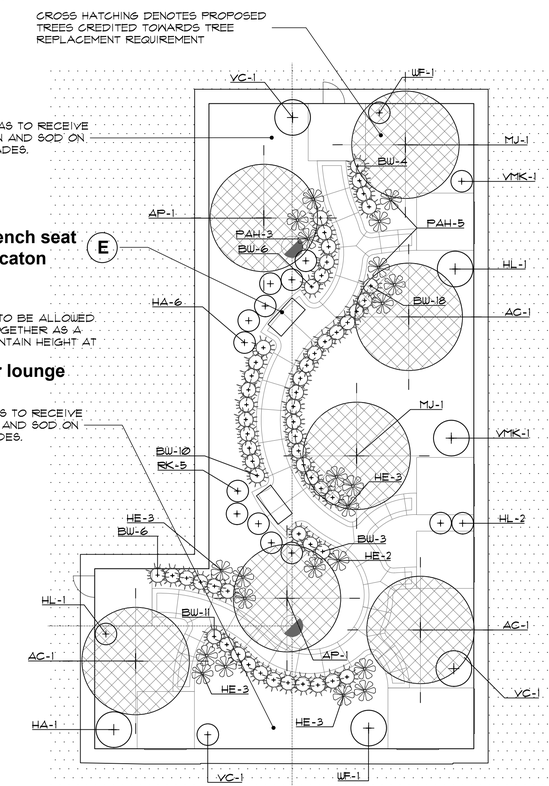
3A courtyard planting detail
SCALE: 1"= 10'-0"



3B courtyard planting detail
SCALE: 1"= 10'-0"



3C courtyard planting detail
SCALE: 1"= 10'-0"



3D courtyard planting detail
SCALE: 1"= 10'-0"

FPA
FELINO A. PASCUAL and ASSOCIATES
Community Land Planner and registered Landscape Architect
24333 Orchard Lake Rd, Suite G
Farmington Hills, MI 48336
ph. (248) 557-5588
fax. (248) 557-5416

seal:

client:
S & S HOLDING, LLC
1451 Gratiot Avenue
Clinton Township,
Michigan 48036

project:
HAMPTON MANOR of VAN BUREN TOWNSHIP

project location:
Van Buren Township , Michigan
Morton Taylor Road & Tyler Road

sheet title:
COURTYARD LANDSCAPE PLANTING DETAIL

job no./issue/revision date:
LS 19.123.11 REVIEW 11-5-2019
LS 19.123.11 SPA 11-29-2019

drawn by: JP, DK
checked by: FP
date: 10-26-2019

notice:
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For free location of public utility lines

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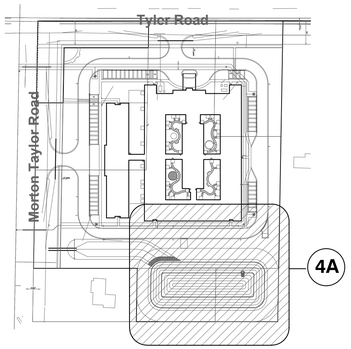
project no: LS19.123.10

sheet no: LS-3 of 4



reference location map

NO SCALE

basin vegetation notes

A landscaping plan is required for open detention basins, due to the importance of the vegetation to the function on of the entire system. Vegetation should be specified for each zone within the detention basin as follows:

Pond zone (permanent water depths from 0 to 3 ft deep):Vegetation in the pond zone is entirely or partially submerged and should consist of a combination of native plant plugs and bare-root stock.

Edge zone (permanent water elevation to bank full elevation). Vegetation in the edge zone must withstand periods of inundation and drought. This vegetation also stabilizes the side slopes of the facility.

Upland zone (bank full elevation to 100-year flood elevation and beyond): Vegetation in the upland zone may have little or no inundation by storm water, and must withstand periods of drought. This vegetation also stabilizes the side slopes of the system. Note that the buffer strip lies within the upland zone.

basin construction notes

1. Proper construction techniques, particularly installation of vegetation, are important to the successful functioning of open detention basins, especially for constructed wetland type open detention basins in order to establish a dense and diverse emergent wetland plant community. General guidelines for vegetation installation include:

2. If emergent plant stock is proposed in the pond zone, the supplied plug material must have sufficient vegetative growth extending out of the water once planted.

3. Seed must be planted above the permanent water elevation.

4. All seeded areas to be properly stabilized with a much blanket pegged in place.

5. Additional guidance on seed and sod specifications and installation is provided in Section 8.5.1 of this manual.

6. Depending on the type of vegetation, barriers may be required for one year to protect the plantings (e.g., snow fence or netting to deter wildlife, prevent mowing).

7. If detention basin are compacted, the slopes must be rototilled. 4" (four) of compost or topsoil must be added

8. If detention basin are compacted, the slopes must be rototilled. 4" (four) of compost or topsoil must be added

9. "No mow zone" signs must be placed around the basin

10. Detention basin native seeding to be performed in early spring or late fall. aquatic plants should be installed in the summer after the cover crop has established

basin maintenance notes

A. Maintenance activities for open detention basins are listed below. These activities must be identified in the maintenance plan that the applicant must submit with an application for storm water construction approval. Additionally, provision for maintenance access should be shown on the plan; it is recommended that the maintenance access to the storm water management system be a minimum of 15-feet wide. The landscape plan should be designed to prevent obstruction of the access by trees and shrubs.

B. Inspect and clean the storm sewer system and catch basins upstream from the detention basin (every five years or as needed).

C. Inspect for sediment accumulation at the inlet pipes and remove sediment which may be impeding flow (semiannually and after rain events).

D. Inspect inlets, outlets, and appurtenances (e.g., grates) annually for structural integrity.

E. Check the outlets regularly for clogging and clean when necessary, especially after large storm events.

F. Inspect the stone around riser-type outlet structures semiannually and after rain events. If stone has accumulated sediment, vegetation and/or debris to an extent that water is not flowing through the stone and out of the pond as originally designed, then the stone should be replaced.

G. Check for floatables and debris and remove as necessary.

H. Remove dead vegetation that obstructs flow (early spring).

I. Check banks and bottom for erosion and correct as necessary (annually).

J. Remove sediment when accumulation reaches six to twelve inches or if resuspension is observed

K. Reseed banks near inlet/outlet and stabilize eroded banks as necessary.

L. Ensure that no mowing, chemical application, or construction has occurred in the buffer strip (annually).

M. Inspect detention basin and buffer strip zone for invasive species such as purple loosestrife, phragmites, buckthorn (common & glossy), honeysuckle and autumn olive that out-compete native vegetation (annually - July).

N. Have a professional selectively remove invasive species (annually, July-August). Purple loosestrife flower heads can be clipped off to reduce seed production until plant removal may be achieved. If woody debris is cut, the cut should be four inches above the ground surface and the stumps should be treated with herbicide immediately after cutting. Monitor for sucker growth.

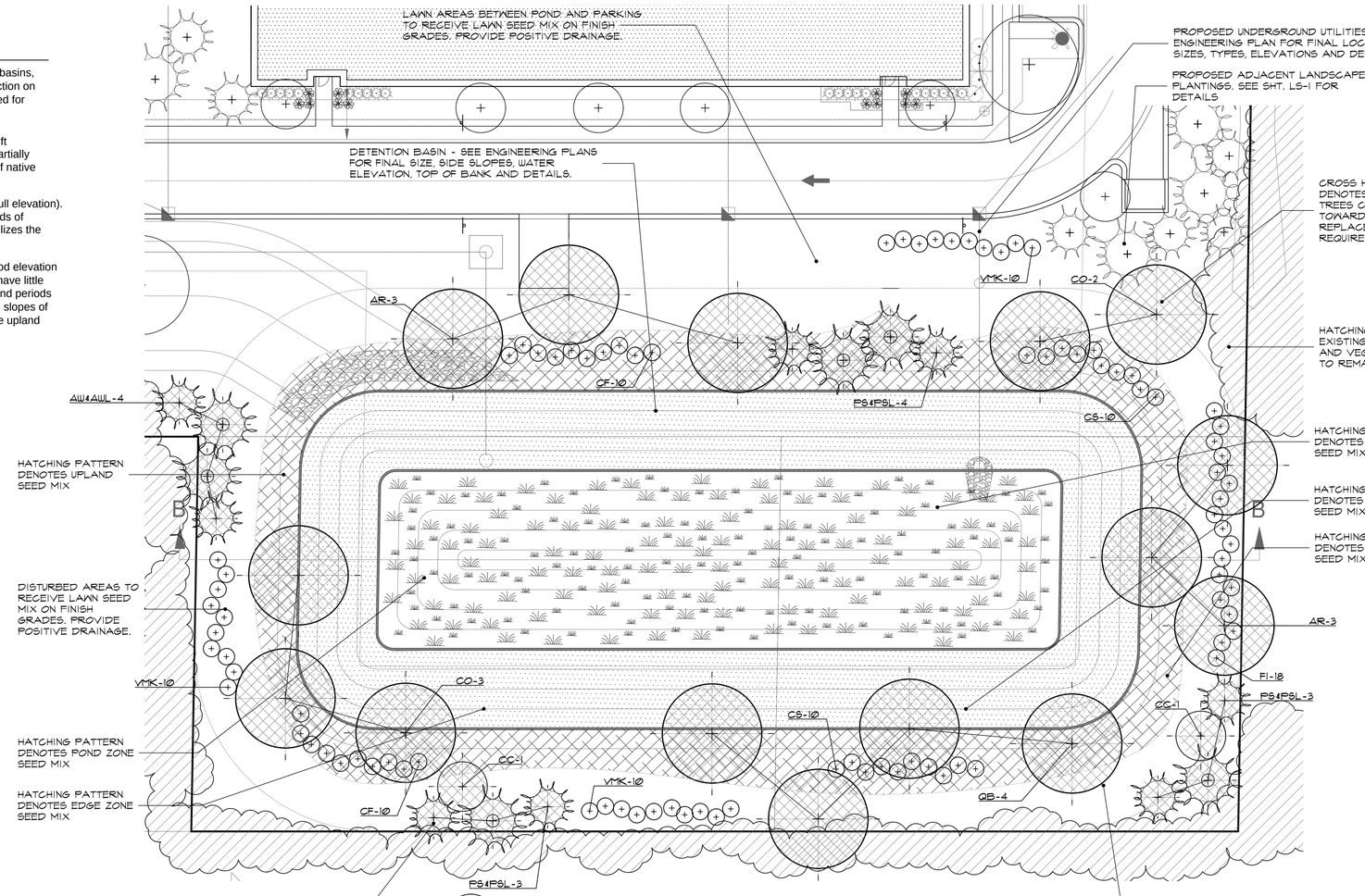
O. Planting must be monitored for two years after establishment. Replacement will be necessary as determined by the agency having jurisdiction over the system.

P. During the first two growing seasons, all areas planted with native prairie seed mix should be mowed three times at a height of 6-8 inches in order to control weeds. Beginning in the third year, a burning or mowing regimen should be instituted, either burning or mowing once in spring, or once in the fall.

THE PROPOSED VARIETIES AND QUANTITIES OF SEEDS AND PLANTING MATERIALS FOR THE FOREBAYS-DETENTION BASIN SYSTEM MEET OR EXCEED THE MINIMUM REQUIREMENTS OF THE "WAYNE COUNTY STORM WATER ORDINACE"

plant material list

key		botanical name	common name	size	comments
		LARGE AND SMALL DECIDUOUS TREES			
QB	4	QUERCUS 'BICOLOR'	SWAMP WHITE OAK	3" BB	
AR	6	ACER R. 'FRANKSRED'	RED SUNSET RED MAPLE	14' BB	MULTI-STEM 4-CANES
CO	5	CELTIS OCCIDENTALIS	HACKBERRY TREE	3" BB	
AC	3	AMELANCHIER CANADENSIS	SHADBOW SERVICEBERRY	8' BB	MULTI-STEM 4-CANES
CC	2	CERCIS CANADENSIS	EASTERN REDBUD	8' BB	MULTI-STEM 4-CANES
		SHRUBS			
CS	20	CORNUS STOLONIFERA	REDTWIG DOGWOOD	3' BB	60" O.C. SPACING
CF	20	CORNUS FLAVIRAMEA	YELLOWTWIG DOGWOOD	3' BB	60" O.C. SPACING
VMK	30	VIBURNUM X.B. 'MOHAWK'	MOHAWK VIBURNUM	3' B.B	60" O.C. SPACING
FI	18	FORSYTHIA X. INTERMEDIA	BORDER FORSYHTIA	3' B.B	60" O.C. SPACING
		LARGE AND SMALL EVERGREEN TREES			
AW	2	ABIES CONCOLOR	CONCOLOR WHITE FIR	8' BB	
AWL	2	ABIES CONCOLOR	CONCOLOR WHITE FIR	10' BB O	
PS	6	PINUS STROBUS	WHITE PINE	8' BB	
PSL	4	PINUS STROBUS	WHITE PINE	10' BB O	



4A detention pond planting detail

SCALE: 1" = 20'-0"

upland zone seed mix

Natural Basin: Dry Upland Zone:Permanent Grasses (Minimum 5 species)

Scientific Name	Common Name	Scientific Name	Common Name
Andropogon gerardii	Big bluestem grass	*Koeleria cristata*	June grass
Andropogon scoparius	Little bluestem grass	*Panicum virgatum*	Switch grass
Bouteloua curtipendula	Side-oats gramma	*Sorghastrum nutans*	Indian grass
Elymus canadensis	Canada wild rye	*Sporobolius heterolepis*	Prairie dropseed

Natural Basin: Dry Upland Zone: Native Forbs (Minimum 9 species)

Scientific Name	Common Name	Scientific Name	Common Name
Amorpha canescens	Lead plant	Lupinus perennis	Wild lupine
Anemone cylindrica	Thimbleweed	Monarda fistulosa	Wild bergamot
Aquilegia canadensis	Wild columbine	Parthenium integrifolium	Wild quinine
Asclepias tuberosa	Butterfly weed	Petalostemum purpureum	Purple prairie clover
Aster ericoides	Heath aster	Physostegia virginiana arenaria	Prairie obedient plant
Aster laevis	Smooth blue aster	Pycnanthemum virginianum	Common mountain mint
Aster novae-angliae	New England aster	Ratibida pinnata	Yellow coneflower
Baptista leucantha	White wild indigo	Rudbeckia hirta	Black-eyed susan
Cassia fasciculata	Partridge pea	Rudbeckia subtomentosa	Sweet black-eyed susan
Coreopsis lanceolata	Sand coreopsis	Silphium laciniatum	Compass plant
Coreopsis tripteris	Tall coreopsis	Solidago juncea	Early goldenrod
Echinacea purpurea	Broad-leaved purple coneflower	Solidago nemoralis	Old-field goldenrod
Eryngium yuccifolium	Rattlesnake master	Solidago rigida	Stiff goldenrod
Helianthus mollis	Downy sunflower	Tradescantia ohiensis	Common spiderwort
Heliopsis helianthoides	False sunflower	Vernonia altissima taeniotricha	Hairy tall ironweed
Lespedeza capitata	Round-headed bush clover	Veronicastrum virginicum	Culver's root
Liatris aspera	Rough blazing star		

Note: These native plants are appropriate for areas surrounding basins categorized as natural basins and recommended within areas that have elevations higher than the 100-year flood elevation. This seed selection consists of dry-to-mesic prairie, basic prairie, and low-profile prairie plant species.

edge zone seed mixtures

OPEN DETENTION BASINS: EDGE ZONE VEGETATION

A variety of trees, shrubs, wildflowers, and grasses may be planted in the edge zone along the banks of detention basins. A native wetland edge or native sedge meadow seed mix is recommended.

Edge Zone: Native Seed Mixes

Grasses/Sedges/Rushes (Minimum 5 species)

Scientific Name	Common Name	Scientific Name	Common Name
Carex 'lunida	Bottlebrush sedge	Leersia oryzoides	Rice cut grass
Carex vulpinoidea	Brown fox sedge	Scirpus acutus	Hard-stemmedbulrush
Echinochloa crusgalli	Barnyard grass	Scirpus atrovirens	Dark green rush
Elymus Canadensis	Canada wild rye	Scirpus pungens	Chairmaker's rush
Glyceria striata	Fowl manna grass	Scirpus validus creber	Great bulrush (softstem)
Juncus effusus	Common rush		

Native Forbs (Minimum 9 species)

Scientific Name	Common Name	Scientific Name	Common Name
Acorus calamus	Sweet flag	Mimulus ringens	Monkey flower
Actinomeris alternifolia	Wingstem	Peltandra virginica	Arrow arrum
Alisma subcordatum	Common water plantain	Polygonum pensylvanicum	Pinkweed
Asclepias incarnate	Swamp milkweed	Pontederia cordata	Pickerel weed
Aster simplex	Panicled aster	Rosa palustris	Swamp rose
Bidens spp.	Bidens, various	Rudbeckia laciniata	Wild golden glow
Cassia hebecarpa	Wild senna	*Sagittaria latifolia*	*Common arrowhead*
Eupatorium perfoliatum	Common boneset	Spiraea alba	Meadowsweet
Helenium autumnale	Sneezeweed	Verbena hastata	Blue vervain
Iris virginica shrevei	Blue flag iris	Vernonia fasciculata	Common ironweed
Ludwigia alternifolia	Seedbox		

Note: A quick growing species such as annual rye grass (Illium multiflorum))and species which will provide the permanent cover (e.g., seed oats) should also be included in all Edge Zone seed mixes.

pond zone plant list (plugs and bare root)

Native Plants for Pond Zone (min. 4-species)

Scientific Name	Common Name	Spacing (inches O.C.)	Scientific Name	Common Name	Spacing (inches O.C.)
Acorus calamus	Sweet flag	24	Polygonum amphibium	Water knotweed	36
Carex lacustris	Common lake sedge	24	Pontederia cordata	Pickerel weed	24
Cephalanthus occidentalis	Buttonbush	5 feet	Potamogeton natans	Common pondweed	36
Decodon verticillatus	Swamp Loosestrife	24	Potamogeton pectinatus	Sago pondweed	36
Elodea canadensis	Common waterweed	36	Sagittaria latifolia	Common arrowhead	24
Hibiscus laevis	Halberd-leaved rose mallow	24	Scirpus acutus	Hard-stemmed bulrush	18
Hibiscus palustris	Swamp rose mallow	24	Scirpus atrovirens	Dark green rush	18
Iris virginica shrevei	Blue flag iris	18	Scirpus cyperinus	Wool grass	24
Justicia americana	Water willow	5 feet	Scirpus fluviatilis	River bulrush	18
Nelumbo lutea	Lotus	48	Scirpus validus creber	Great bulrush	18
Nuphar advena	Yellow pond lily	36	Sparganium americanum	American bur reed	18
Nymphaea tuberosa	White water lily	36	Sparganium eurycarpum	Common bur reed	18
Peltandra virginica	Arrow arum	18	Vallisneria americana	Tape grass	36

Note: Plant species selected should cover 25% of the pond zone and should also cover the range of water depths within the pond zone(2ft to 3ft). (For example, 4 plant species may not all be placed at an 18ft water depth covering 25% of the pond zone.)

FPA
FELINO A. PASCUAL and ASSOCIATES
Community Land Planner and registered Landscape Architect
24333 Orchard Lake Rd, Suite G
Farmington Hills, MI 48336
ph. (248) 557-5588
fax. (248) 557-5416

seal:

STATE OF MICHIGAN FELINO A. PASCUAL LANDSCAPE ARCHITECT No. 4331 REGISTERED

client:

S & S HOLDING, LLC
1451 Gratiot Avenue
Clinton Township,
Michigan 48036

project:

HAMPTON MANOR of VAN BUREN TOWNSHIP

project location:

Van Buren Township , Michigan
Morton Taylor Road & Tyler Road

sheet title:

DETENTION PLANTING DETAIL

job no./issue/revision date:

LS 19.123.11 REVIEW 11-5-2019
LS 19.123.11 SPA 11-29-2019

drawn by:
JP, DK

checked by:
FP

date:
10-26-2019

notice:

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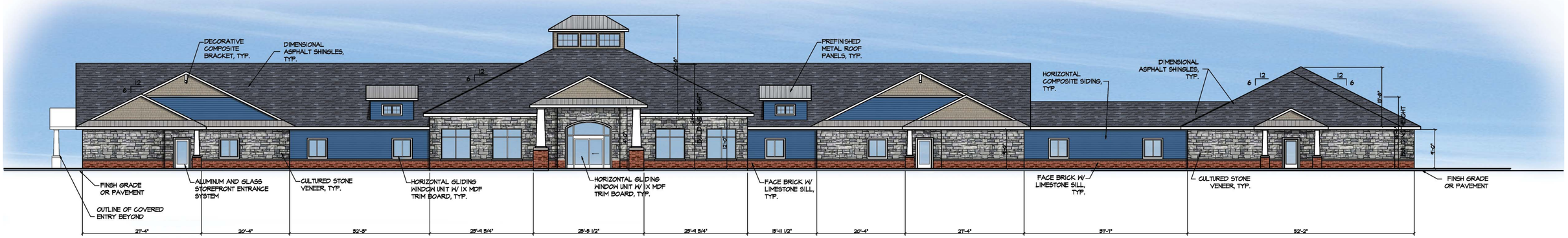
project no:
LS19.123.10

sheet no:
LS-4 of 4


DECORATIVE COMPOSITE BRACKET, TYP.
DIMENSIONAL ASPHALT SHINGLES, TYP.
PREFINISHED METAL ROOF PANELS, TYP.
HORIZONTAL COMPOSITE SIDING, TYP.
DIMENSIONAL ASPHALT SHINGLES, TYP.
6 12
6 12
6 12
6 12
24'-8"
BUILDING HEIGHT
12'-9"
12'-9"
21'-3"
BUILDING HEIGHT
8'-0"
FINISH GRADE OR PAVEMENT
OUTLINE OF COVERED ENTRY BEYOND
ALUMINUM AND GLASS STOREFRONT ENTRANCE SYSTEM
CULTURED STONE VENEER, TYP.
HORIZONTAL GLIDING WINDOW UNIT W/ 1X MDF TRIM BOARD, TYP.
HORIZONTAL GLIDING WINDOW UNIT W/ 1X MDF TRIM BOARD, TYP.
FACE BRICK W/ LIMESTONE SILL, TYP.
FACE BRICK W/ LIMESTONE SILL, TYP.
CULTURED STONE VENEER, TYP.
FINISH GRADE OR PAVEMENT
27'-4"
20'-4"
52'-3"
23'-4 3/4"
23'-5 1/2"
23'-4 3/4"
15'-11 1/2"
20'-4"
27'-4"
57'-1"
52'-2"

Lumark

DESCRIPTION

Combining value and performance in a compact, robust design, the Night Falcon low wattage LED floodlight luminaire delivers superior uniformity and excellent illumination to the targeted application. The rugged, die-cast housing is IP66 rated for exceptional durability and long term reliability. Available in several mounting configurations and weighing less than 14 pounds, this fixture provides you with design flexibility while simplifying installation. The low wattage LED floodlight can be wall, ground, or pole mounted, making it ideal for all commercial, industrial, and residential low wattage floodlighting applications.

Catalog #		**Type**
Project		L1
Comments		**Date**
Prepared by		

SPECIFICATION FEATURES

Construction
Heavy-duty, die-cast aluminum housing, driver compartment and driver housing door. The housing, driver compartment and optical chamber are IP66 rated. Access to the driver for maintenance is achieved with a removable driver door using pan head screws. A one-piece silicone gasket seals the door to the fixture housing. Suitable for mounting within 4' (1.2m) of the ground.

Optics
The LED chamber incorporates a vacuum metalized reflector that provides high-efficiency illumination. Optics are precisely designed to shape the wide NEMA type 6H x 6V distribution, maximizing efficiency and application spacing. A 3H x 3V distribution is available for lighting tall, narrow surfaces. Clear glass tempered lens with full circumference form-in-place silicone gasket protects the optics from damage. Offered standard in 4000K (+/- 275K) CCT and minimum 70 CRI optional. Optional 5700K CCT, 3000K CCT, 5000K CCT minimum 70 CRI are available.

Electrical
LED driver is mounted to the removable die-cast aluminum door for optimal heat sinking and ease of maintenance. 120-277V 50/60Hz, 347V 60Hz or 480V 60Hz operation. Integral 3kV surge is standard. 10kV MOV surge protection is available. 0-10V dimming driver is standard. Button photocontrols are available in 120V and 208-277V. Suitable for ambient temperatures from -40°C to 40°C. Optional 50°C HA (high ambient) available. 93% lumen maintenance greater than 50,000 hours per IESNA TM-21.

Accessories
Heavy-duty steel top and side visors control glare and spill light. 1/8" thick UV stabilized vandal guard shields glass lens from impact when mounted at low levels. Easy to install wire guard features a heavy-gauge welded construction with corrosion resistant polyester powder coat finish to protect glass from projected objects.

Mounting
Heavy-gauge steel trunnion-mount utilizes interlocking slide adjustment and is supplied with 3 feet of pre-wired SOW, wet location rated cord. Trunnion base can be lag bolted to any surface and is 3G vibration rated (ANSI C136.31). Heavy-duty, die-cast aluminum knuckle base utilizes tooth-lock adjustment with visual 5° adjustment indicators that allow for 180° rotation of the luminaire. Knuckle fits 1/2" NPT available mounting junction box cover (supplied by others) and is secured with supplied locking nut and is 1.5G vibration rated. A die-cast aluminum slipfitter with a tooth lock adjustment that can be adjusted in 5° increments is available and is 1.5G vibration rated.

Finish
Housing and cast parts finished in five-stage super TGIC polyester powder coat paint, 2.5 mil nominal thickness for superior protection against fade and wear. Standard color is carbon bronze. Additional colors available in summit white, white, grey, bronze, black, dark platinum and graphite metallic. Consult your lighting representitive at Eaton for a complete selection of standard colors.

Warranty
Five-year warranty.

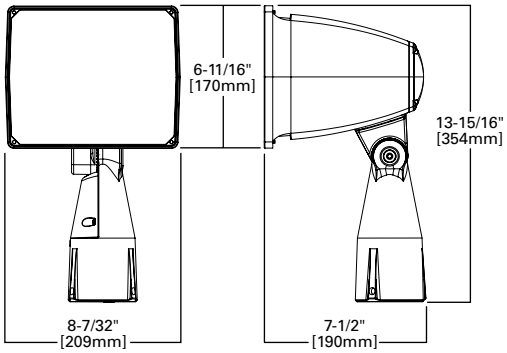
NFFLD-S
NIGHT FALCON SMALL

Solid State LED

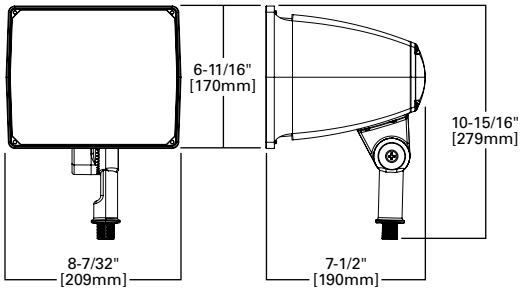
FLOODLIGHT

DIMENSIONS

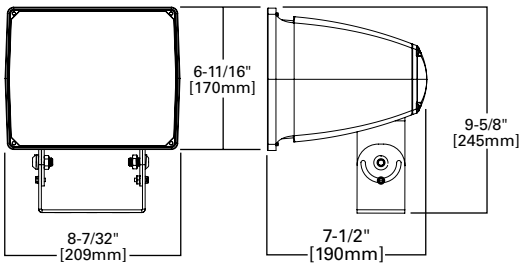
Slipfitter Mount



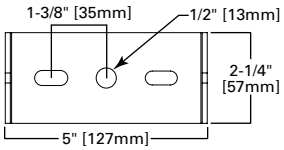
Knuckle Mount



Trunnion Mount



TRUNNION DRILLING PATTERN



CERTIFICATION DATA
UL/cUL Wet Location Listed
IP66 Fixture and Optical Chamber
LM79/LM80 Compliant
1.5G Vibration Rated - Knuckle Mount
3.0G Vibration Rated - Slipfitter Mount
3.0G Vibration Rated - Trunnion Mount
RoHS Compliant
DesignLights Consortium® Qualified*

ENERGY DATA
Electronic LED Driver
> 0.9 Power Factor
< 20% Total Harmonic Distortion
120V 50/60Hz, 347V/60Hz and 480V/60Hz
-40°C Min. Ambient Temperature Rating
+40°C Max. Ambient Temperature Rating

EPA
Effective Projected Area (Sq. Ft.): 0.55

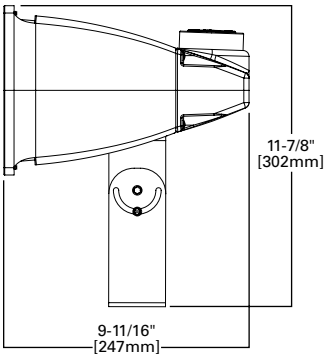
SHIPPING DATA
Approximate Net Weight:
13 lbs. (6 kgs.)

Powering Business Worldwide

*www.designlights.org

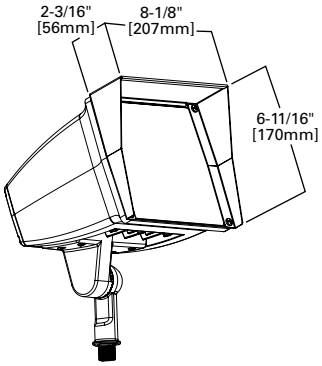
OPTION

NEMA Twistlock Photocontrol Receptacle

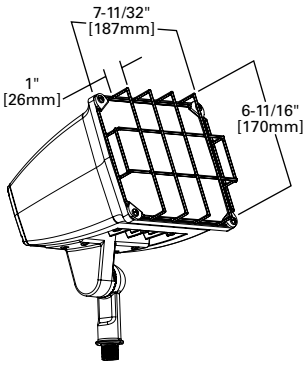


ACCESSORIES

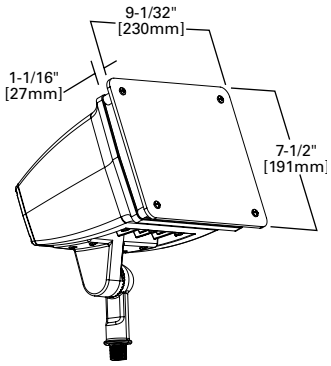
Top and Side Visors



Wire Guard



Vandal Shield



POWER AND LUMENS

	6 x 6				3 x 3			
C70 LED	**NFFLD-S-C70**	**NFFLD-S-C70-7060**	**NFFLD-S-C70-7050**	**NFFLD-S-C70-7030**	**NFFLD-S-C70**	**NFFLD-S-C70-7060**	**NFFLD-S-C70-7050**	**NFFLD-S-C70-7030**
Delivered Lumens	2,682	2,656	2,760	2,632	2,883	2,824	2,935	2,799
CCT (Kelvin)	4000K	5700K	5000K	3000K	4000K	5700K	5000K	3000K
CRI (Color Rendering Index)	70	70	70	70	70	70	70	70
NEMA Distribution (H x V)	6H x 6V	6H x 6V	6H x 6V	6H x 6V	3H x 3V	3H x 3V	3H x 3V	3H x 3V
Power Consumption (Watts)	20	20	20	20	26	26	26	26
C15 LED	**NFFLD-S-C15**	**NFFLD-S-C15-7060**	**NFFLD-S-C15-7050**	**NFFLD-S-C15-7030**	**NFFLD-S-C15**	**NFFLD-S-C15-7060**	**NFFLD-S-C15-7050**	**NFFLD-S-C15-7030**
Delivered Lumens	5,797	5,741	6,066	5,785	5,499	5,386	5,596	5,337
CCT (Kelvin)	4000K	5700K	5000K	3000K	4000K	5700K	5000K	3000K
CRI (Color Rendering Index)	70	70	70	70	70	70	70	70
NEMA Distribution (H x V)	6H x 6V	6H x 6V	6H x 6V	6H x 6V	3H x 3V	3H x 3V	3H x 3V	3H x 3V
Power Consumption (Watts)	51	51	51	51	52	52	52	52

LUMEN MAINTENANCE

Ambient Temperature	**TM-21 Lumen Maintenance** (50,000 Hours)	**Theoretical L70** (Hours)
NFFLD-S-C15-33 (3 x 3 Spot)		
25°C	> 94.74%	> 336,000
40°C	> 93.37%	> 264,000
NFFLD-S-C15-66 (6 x 6 Wide)		
25°C	> 95.53%	> 399,000
40°C	> 95.10%	> 362,000
50°C	> 94.60%	> 324,000

CURRENT DRAW

Voltage (V)	**6 x 6**		**3 x 3**	
	NFFLD-S-C70	**NFFLD-S-C15**	**NFFLD-S-C70**	**NFFLD-S-C15**
	Current (A)	**Current (A)**	**Current (A)**	**Current (A)**
120V	0.15	0.45	0.21	0.46
208V	0.09	0.25	0.13	0.26
240V	0.08	0.22	0.11	0.23
277V	0.07	0.19	0.10	0.20
347V	0.06	0.16	0.10	0.21
480V	0.05	0.13	0.07	0.22

LUMEN MULTIPLIER

Ambient Temperature	**Lumen Multiplier**
10°C	1.03
15°C	1.02
25°C	1.00
40°C	0.97
50°C	0.96

CONTROL OPTIONS

0-10V (D)
This fixture is offered standard with 0-10V dimming driver(s). The dimming option provides 0-10V dimming wire leads for use with a lighting control panel or other control method.

Photocontrol (PER and PER7)
Photocontrol receptacles (PER and PER7) provide a flexible solution to enable "dusk-to-dawn" lighting by sensing light levels. Advanced control systems compatible with NEMA 7-pin standards can be utilized with the PER7 receptacle.

WaveLinx Wireless Outdoor Lighting Control Module (WOLC-7P-10A)
The 7-pin wireless outdoor lighting control module enables WaveLinx to control outdoor area, site and flood lighting. WaveLinx controls outdoor lighting using schedules to provide ON, OFF and dimming controls based on astronomic or time schedules based on a 7 day week.

VERIFY DESIRED MOUNTING

ORDERING INFORMATION

Sample Number: NFFLD-S-C15-D-UNV-66-S-CB-PC1

Product Family [1]	Light Engine [2]	Driver [3]	Voltage	Distribution	Mounting	Color
NFFLD-S=Night Falcon Small	**C70**=2,700 Nominal Lumens **C15**=5,900 Nominal Lumens	**D**=Dimming (0-10V)	**UNV**=Universal 120-277V **347**=347V [4] **480**=480V [3,5]	**33**=NEMA 3H x 3V [6] **66**=NEMA 6H x 6V Wide	**S**=Slipfitter [7] **T**=Trunnion **KNC**=Knuckle	**CB**=Carbon Bronze (Standard) **BK**=Black **BZ**=Bronze **AP**=Grey **WH**=White **WHT**=Summit White **DP**=Dark Platinum **GM**=Graphite Metallic

Options (Add as Suffix)	**Accessories** (Order Separately) [13]
7030=70 CRI / 3000K [8] **7050**=70 CRI / 5000K [8] **7060**=70 CRI / 5700K [8] **10MSP**=10kV MOV Surge Protection **HA**=50°C High Ambient Temperature [9] **PC1**=Button Type Photocontrol - 120V [10] **PC2**=Button Type Photocontrol - 208-277V [10] **PER**= 3-PIN Twistlock Photocontrol Receptacle [11] **PER7**=7-PIN Twistlock Photocontrol Receptacle [11, 12]	**RAB-XX**=Right Angle Pipe Bracket for Slipfitter **SAB-XX**=Steel Angle Bracket for Trunnion **TS2LW-NFFLD-XX**=Top and Side Visors [14] **VSLW-NFFLD**=Vandal Shield [14] **WGLW-NFFLD**=Wire Guard [14] **WOLC-7P-10A**=WaveLinx Outdoor Control Module (7-pin) [15]

NOTES:
1. DesignLights Consortium® Qualified and classified for both DLC Standard and DLC Premium, refer to www.designlights.org for details.
2. Standard 4000K CCT and minimum 70 CRI. Consult IES file for actual lumen output.
3. Consult factory for driver surge protection values.
4. 347V only available with PC2.
5. Only for use with 480V Wye systems. Per NEC, not for use with ungrounded systems, impedance grounded systems or corner grounded systems (commonly known as Three Phase Three Wire Delta, Three Phase High Leg Delta and Three Phase Corner Grounded Delta systems).
6. Nominal lumen values are lower for the spot optic distribution see lumen table.
7. Fits 2-3/8" O.D. tenon, wire leads runs through bottom of slipfitter.
8. Extended lead times apply. Use dedicated IES files for 3000K, 5000K and 5700K when performing layouts. These files are published on the Night Falcon Small luminaire product page on the website.
9. HA option not available with 3x3 configurations.
10. Cannot order button photocontrol with C15 lumen package and 480V (PC1 or PC2).
11. Requires extended back box.
12. Require 0-10V dimming driver.
13. Replace XX with color designation. Additional brackets and adaptors available on the poles product page on the website.
14. Cannot combine TS2LW (Top and Side Visor), VSLW (Vandal Shield), or WGLW (Wire Guard), limited to one external guard per fixture.
15. Requires 7-pin NEMA twistlock photocontrol receptacle.

STOCK ORDERING INFORMATION

Stock Sample Number: NFFLD-S-C15-T-UNV

Series	Light Engine	Mounting	Voltage	**Options** (Add as Suffix)
NFFLD-S=Night Falcon Small	**C70**=2,700 Nominal Lumens **C15**=5,900 Nominal Lumens	**T**=Trunnion **KNC**=Knuckle	**UNV**=Universal 120-277V **347**=347V	**PC1**=Button Type Photocontrol - 120V **PC2**=Button Photocontrol - 207-277V

NOTES: Options not available with stock products. Order accessories as separate items for field installation. Refer to standard ordering information to add options. Refer to In-Stock Guide for availability. Stock fixture is 4000K, dimming, 6x6 distribution, 120-277V or 347V, carbon bronze only. 347V only available with PC2.

Halo Commercial

DESCRIPTION

Recessed 6-inch LED downlight provides narrow, medium or wide distribution patterns ideal for general area lighting. Lumen options range from 1000 to 4000 lumens in color temperatures of 2700K, 3000K, 3500K, and 4000K; in 80 or 90CRI. Luminaire is airtight and can be installed in new construction or below the finished ceiling in remodeling applications. Intended for healthcare, hospitality, office spaces, and institutional applications.

Catalog #		Type
Project		L2
Comments		Date
Prepared by		

SPECIFICATION FEATURES

Housing Frame
- Boat shaped galvanized steel plaster frame with adjustable plaster lip accommodates 1/2" to 1-1/2" thick ceilings
- May be installed in new construction; may be installed from below the finished (non-accessible) ceiling in remodeling (with mounting bars removed).
- Provided with (2) old work remodel clips to secure the frame to the ceiling

Universal Mounting Bracket
- Mounting bracket adjusts 2" vertically from above the ceiling or thru the aperture
- Use with the included mounting bars or with ½" EMT
- Removable to facilitate installation from below the finished ceiling

Mounting Bars
- Captive pre-installed No Fuss™ mounting bars lock to tee grid with screwdriver or pliers
- Centering mechanism allows for consistent positioning of fixtures

LED Module
- Proximity phosphors over chip on board LEDs provide a uniform source with high efficiency and no pixilation
- Available in 80 or 90 CRI minimum, accuracy within 3 SDCM provides color uniformity
- 90 CRI option: R9>50 (refer to photometry section)
- Correlated color temperature options
  - 2700K
  - 3000K
  - 3500K
  - 4000K
- Passive thermal management achieves L70 at 50,000 hours in IC and non IC applications
- Integral diffuse lens provides visual shielding
- Integral connector allows quick connection to housing flex

Lumen Options
- Nominal lumen values
  - 1000 lm
  - 1500 lm
  - 2000 lm
  - 3000 lm
  - 4000 lm

Reflector
- Self-flanged aluminum reflectors are available in narrow, medium or wide distribution patterns
- Medium distribution polymer non-conductive matte white reflector may be used to meet local codes for 'dead front' applications (Non-IC, 3000 lumen max.)
- Wall wash reflector features a rotatable insert assembly with integral linear spread lens for precise alignment of vertical illumination.
- Reflector attaches to LED module with (3) speed clamps
- Multiple painted or plated finishes are available

Reflector / Module Retention
- Reflector / module assembly is securely retained in the housing with (2) torsion springs

Driver
- Field replaceable constant current driver provides low noise operation
- UNV 120-277VAC 50/60Hz input standard
- 347VAC 50/60Hz input option (Canada only)
- Continuous, flicker-free 1% dimming with 0 -10V analog control
- Optional low voltage DC driver for use with Eaton's DLVP distributed low voltage power system combines power and control

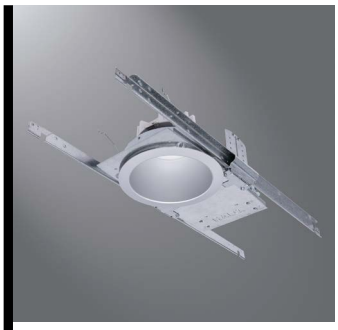
Emergency Option
- Provides 90 minutes of standby lighting meeting most life safety codes for egress lighting
- Available with integral or remote charge indicator and test switch

Connected Lighting System Options
- WaveLinx tile mount daylight sensor includes control module, sensor and cable providing comprehensive lighting control
- LumaWatt Pro (powered by Enlighted) wireless tile mount sensor and control kit

Junction Box
- Galvanized steel junction box
- 20 in^3 internal volume excluding voltage barrier
- 25 in^3 internal total volume
- Voltage divider for 0-10V dimming wires [occupies (1) ½" pry-out space]
- Listed for (8) #12 AWG (four in, four out) 90˚ C conductors and feed-thru branch wiring
- (3) ½" and (2) ¾" trade size pry-outs available
- (3) 4-port push wire nuts for mains voltage, with 1-port for fixture connection

Compliance
- cULus Listed/Classified, wet location labeled for covered ceilings
- IP20 - Above finished ceiling; IP65 - Below finished ceiling
- Non-IC rated 3000, 4000 lumen models. Insulation must be kept 3" from top and sides.
- IC rated 1000, 1500, 2000 lumen models, and suitable for direct contact to air permeable insulation
- Not for use in direct contact with spray foam insulation, consult NEMA LSD57-2013
- Airtight per ASTM-E283-04
- Suitable for use in clothes closets when installed in accordance with the NEC 410.16 spacing requirements
- EMI/RFI emissions FCC CFR Title 47 Part 15 Class A at 120/277V & Class B at 120V
- Contains no mercury or lead and RoHS compliant
- Photometric testing in accordance with IES LM-79-08
- Lumen maintenance projections in accordance with IES LM-80-08 and TM-21-11
- 1000, 1500 and 2000 lumen 90CRI ICAT models may be used to comply with State of California Title 24 residential code, with JA8-2016-E database certification
- May be used to comply with State of California Title 24 non-residential code, as a dimmable LED luminaire
- ENERGY STAR® certified, reference certified light fixtures database

Warranty
- Five year limited warranty, consult website for details. www.eaton.com/lighting/legal



HC6
Frame

HM6
LED Module

61
61PS
Series Reflectors

6-inch Lens Downlight and Lens Wall Wash

1000/1500/2000/ 3000/4000 Lumen

ENERGY STAR

Efficiency Standards T24 California Title 24 Residential and Non-Residential Compliant

Powering Business Worldwide

Halo Commercial

ENERGY DATA

Series	1000 lumen	
Input Voltage (VAC)	120V	277V
Input Current (A)	0.085	0.042
Input Power (W)	10.1	10.9
In-rush Current (A)	0.644	1.95
In-rush Duration (ms)	0.125	0.24
THDi (%)	8.6	15.6
PF:	≥ 0.90	
(Nominal input 120-277VAC & 100% of rated output power)		
Minimum starting temperature -40°C (-40°F)		
Sound Rating: Class A standards		

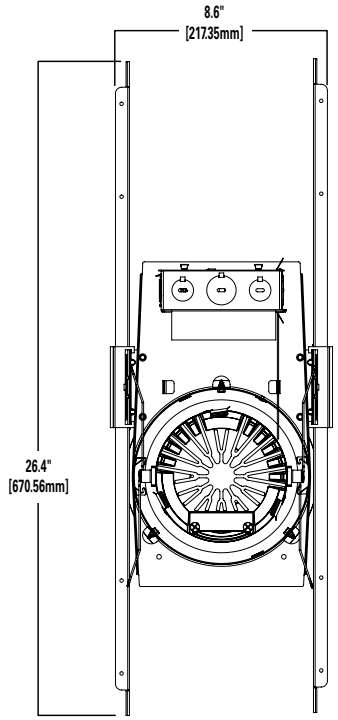
Series	1500 lumen	
Input Voltage (VAC)	120V	277V
Input Current (A)	0.119	0.055
Input Power (W)	14.2	14.9
In-rush Current (A)	0.212	0.85
In-rush Duration (ms)	0.28	0.32
THDi (%)	7.8	16.3
PF:	≥ 0.90	
(Nominal input 120-277VAC & 100% of rated output power)		
Minimum starting temperature -40°C (-40°F)		
Sound Rating: Class A standards		

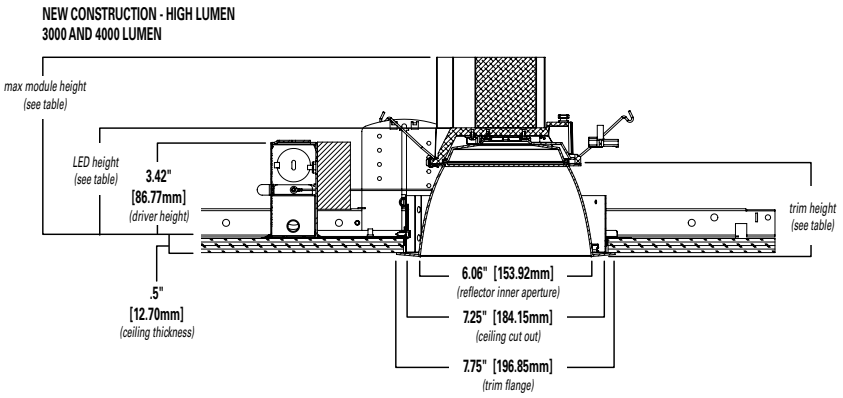
Series	2000 lumen	
Input Voltage (VAC)	120V	277V
Input Current (A)	0.176	0.082
Input Power (W)	21.1	21.4
In-rush Current (A)	0.588	0.624
In-rush Duration (ms)	0.3	0.38
THDi (%)	8.8	11.2
PF:	≥ 0.90	
(Nominal input 120-277VAC & 100% of rated output power)		
Minimum starting temperature -40°C (-40°F)		
Sound Rating: Class A standards		

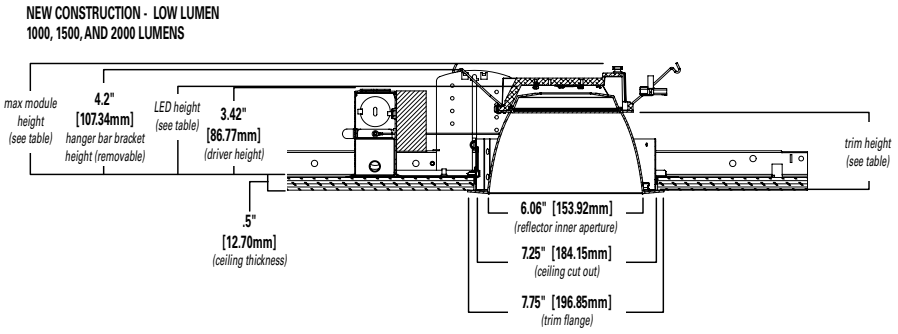
Series	3000 lumen	
Input Voltage (VAC)	120V	277V
Input Current (A)	0.228	0.102
Input Power (W)	27.2	27
In-rush Current (A)	0.898	1.7
In-rush Duration (ms)	0.36	0.38
THDi (%)	9.7	9.3
PF:	≥ 0.90	
(Nominal input 120-277VAC & 100% of rated output power)		
Minimum starting temperature -40°C (-40°F)		
Sound Rating: Class A standards		

Series	4000 lumen	
Input Voltage (VAC)	120V	277V
Input Current (A)	0.345	0.15
Input Power (W)	41.3	40.7
In-rush Current (A)	1.05	2.23
In-rush Duration (ms)	0.32	0.34
THDi (%)	10.06	14.01
PF:	≥ 0.90	
(Nominal input 120-277VAC & 100% of rated output power)		
Minimum starting temperature -40°C (-40°F)		
Sound Rating: Class A standards		

DIMENSIONS







Distribution	High Lumen (3000 & 4000 Lumens) Max. Module Height	Trim Height	LED Height	Low Lumen (1000, 1500 & 2000 Lumens)* Max. Module Height	Trim Height	LED Height
Narrow	6.6"	3.4″	3.8″	4.5"	3.4″	3.8″
Medium	6.7″	3.5″	3.9″	4.6″	3.5″	3.9″
Wide	6.5″	3.3″	3.7″	4.4″	3.3″	3.7″
Baffle	6.5″	3.3″	3.7″	4.4″	3.3″	3.7″

*Max. height w/hanger bar bracket 4.2″

Ordering Information

Sample Number: HC620D010REM7 – HM612835 - 61MDC
A complete luminaire consists of a housing frame, LED module, and reflector (ordered separately)

Mounting Frame	Lumens	Input / Control	Options	Accessories
HC6 = 6" new construction and remodeler housing **HC6CP** = 6" new construction and remodeler housing, CCEA Chicago Plenum rated	**10** = 1000 lumens (nominal) **15 =** 1500 lumens (nominal) **20 =** 2000 lumens (nominal) **30 =** 3000 lumens (nominal) **40 =** 4000 lumens (nominal)	**D010** = 120-277VAC 50/60Hz 0-10V analog 1%-100% dimming **D010347** = 347VAC 50/60Hz 0-10V analog 1%-100% dimming (Canada only) [1]	**REM7** = 7 watt emergency module with remote test / indicator light, use with D010 only [1] **REM14** = 14 watt emergency module with remote test / indicator light, use with D010 only [1] **IEM7** = integral 7 watt emergency module with integral test / indicator light, use with D010 only [1] **IEM14** = integral 14 watt emergency module with integral test / indicator light, use with D010 only [1] **LWTPD1** = factory installed LumaWatt Pro wireless tile mount sensor kit, use with D010 only [1] **SWPD1** = factory installed WaveLinx tile mount daylight sensor, includes control module, sensor, and cable, use with D010 only [1]	**HB128APK** = L channel hanger bar, 26" pair (replacement) **RMB22** = Adjustable wood joist mounting bars, pair, extend to 22" long **H347** = 347 to 120V step down transformer, 75VA **H347200** = 347 to 120V step down transformer, 200VA **PORLWTPD1** = Field installed LumaWatt Pro wireless sensor kit, use with D010 only [1] **TMSWPD1** = Field installed WaveLinx wireless sensor kit, use with D010 only [1]
		DLV = Distributed Low Voltage driver, 1%-100% dimming DLV for use with Eaton's DLVP system only. Refer to DLVP low-voltage power module and DLVP specifications for details. [1]	**REMV7** = 7 watt emergency module with remote test / indicator light, use with DLV only [1, 2] **REMV14** = 14 watt emergency module with remote test / indicator light, use with DLV only [1, 2] **IEMV7** = integral 7 watt emergency module with integral test / indicator light, use with DLV only [1, 2] **IEMV14** = integral 14 watt emergency module with integral test / indicator light, use with DLV only [1, 2]	

LED Module	Lumens	CRI/CCT
HM6 = 6" LED module	**12**=1000, 1500 and 2000 lumens (nominal), use with HC610*, HC615*, HC620* housings **34**=3000 and 4000 lumens (nominal), use with HC630*, HC640* housings	**827** = 80 CRI (minimum), 2700K CCT **830** = 80 CRI (minimum), 3000K CCT **835** = 80 CRI (minimum), 3500K CCT **840** = 80 CRI (minimum), 4000K CCT **927** = 90 CRI (minimum), 2700K CCT **930** = 90 CRI (minimum), 3000K CCT **935** = 90 CRI (minimum), 3500K CCT **940** = 90 CRI (minimum), 4000K CCT

Reflector	Distribution[3]	Finish	Flange	Accessories
61 = 6" conical reflector	**ND** = narrow 55° beam angle 0.97 SC **MD** = medium 60° beam angle 1.10 SC **WD** = wide 65° beam angle 1.28 SC **RWW** = rotatable wall wash with linear spread lens	**C** = Specular clear **H** = Semi-specular clear **W** = White (white flange)	**Blank** = Polished flange standard with C & H reflectors **Blank** = White flange standard with W reflector **WF** = White flange option available with C & H reflectors	**61RWWPK** = rotatable wall wash insert for 6" reflector –replacement part kit

Baffle	Distribution[3]	Finish	Flange	Accessories
61 = 6" baffle reflector	**WD** = wide 65° beam angle 1.28 SC (nominal) **RWW** = rotatable wall wash with linear spread lens	**BB** = Black baffle (white flange) **WB** = White baffle (white flange)	**Blank** = White flange standard with BB, & WB	**61RWWPK** = rotatable wall wash insert for 6" reflector –replacement part kit

IEM Reflector	Distribution[3]	Finish	Flange	Integral Emergency
61 = 6" IEM reflector for integral emergency only	**ND** = narrow 55° beam angle 0.97 SC **MD** = medium 60° beam angle 1.10 SC **WD** = wide 65° beam angle 1.28 SC	**C** = Specular clear **H** = Semi-specular clear **W** = White (white flange)	**Blank** = Polished flange standard with C & H reflectors **Blank** = White flange standard with W reflector **WF** = White flange option available with C & H reflectors	**IEM** = Reflector for integral emergency only

IEM Baffle	Distribution[3]	Finish	Flange	Integral Emergency
61 = 6" IEM baffle reflector for integral emergency only	**WD** = wide 65° beam angle 1.28 SC (nominal)	**BB** = Black baffle (white flange) **WB** = White baffle (white flange)	**Blank** = White flange standard with BB, & WB	**IEM** = Reflector for integral emergency only

Reflector	Distribution[3]	Finish	Flange
61PS = 6" non-conductive polymer 'dead front' conical reflector[4]	**MD** = medium 60° beam angle 1.10 SC (nominal)	**W** = White (white flange)	**Blank** = White flange standard with W reflector

Notes:
1. Not available with CP version
2. ULus for U.S. only
3. Values are nominal, with specular clear reflector, other finishes and field results may vary.
4. 61PS reflector is for Non-IC environment only, and up to 3000 lumens only.

Powering Business Worldwide

Eaton
1121 Highway 74 South
Peachtree City, GA 30269
P: 770-486-4800
www.eaton.com/lighting

Specifications and dimensions subject to change without notice.

Halo Commercial

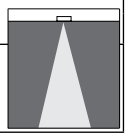
HC6
HM6
61 / 61PS

PHOTOMETRY

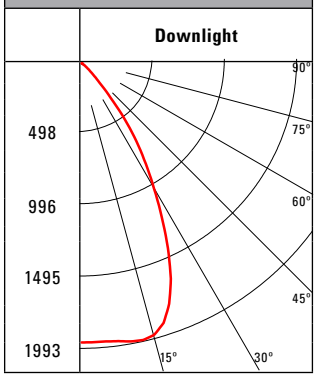
NARROW DISTRIBUTION - SPECULAR CLEAR FINISH, 2000 LUMEN MODEL, 80 CRI, 3500K

NARROW (55° BEAM*)

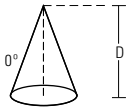
Test Number	P285970
Housing	HC620D010
Module	HM612835
Reflector	61NDC
Lumens	1920 Lm
Efficacy	96 Lm/W
SC	0.97
UGR	11.7



CANDLEPOWER DISTRIBUTION



CONE OF LIGHT



MH	FC	L	W
5.5'	64.9	5.2	5.2
7'	40	6.8	6.8
8'	30.7	7.6	7.6
9'	24.2	8.6	8.6
10'	19.6	9.6	9.6
12'	13.6	11.6	11.6

CANDELA TABLE

Degrees Vertical	Candela
0	1962
5	1962
15	1975
25	1434
35	671
45	112
55	13
65	3
75	3
85	0
90	0

ZONAL LUMEN SUMMARY

Zone	Lumens	% Fixture
0-30	1385	72.1
0-40	1796	93.5
0-60	1915	99.7
0-90	1920	100
90-180	0	0
0-180	1920	100

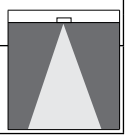
LUMINANCE

Average Candela Degrees	Average 0° Luminance
45	8706
55	1223
65	337
75	551
85	0

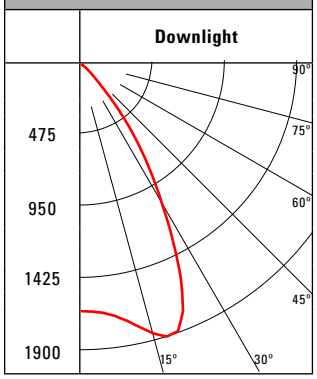
MEDIUM DISTRIBUTION - SPECULAR CLEAR FINISH, 2000 LUMEN MODEL, 80 CRI, 3500K

MEDIUM (60° BEAM*)

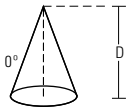
Test Number	P286170
Housing	HC620D010
Module	HM612835
Reflector	61MDC
Lumens	1959 Lm
Efficacy	97.9 Lm/W
SC	1.10
UGR	11.8



CANDLEPOWER DISTRIBUTION



CONE OF LIGHT



MH	FC	L	W
5.5'	55.2	5.8	5.8
7'	34.1	7.6	7.6
8'	26.1	8.6	8.6
9'	20.6	9.6	9.6
10'	16.7	10.8	10.8
12'	11.6	13	13

CANDELA TABLE

Degrees Vertical	Candela
0	1642
5	1660
15	1854
25	1576
35	699
45	120
55	15
65	5
75	3
85	0
90	0

ZONAL LUMEN SUMMARY

Zone	Lumens	% Fixture
0-30	1387	70.8
0-40	1821	93
0-60	1951	99.6
0-90	1959	100
90-180	0	0
0-180	1959	100

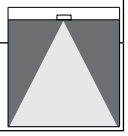
LUMINANCE

Average Candela Degrees	Average 0° Luminance
45	9296
55	1462
65	662
75	551
85	0

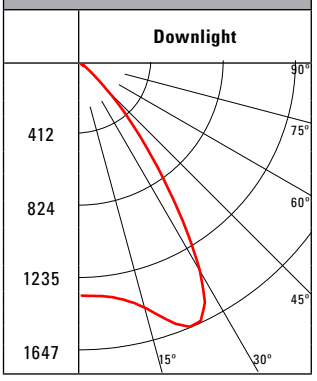
WIDE DISTRIBUTION - SPECULAR CLEAR FINISH, 2000 LUMEN MODEL, 80 CRI, 3500K

WIDE (65° BEAM*)

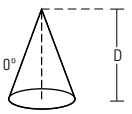
Test Number	P286370
Housing	HC620D010
Module	HM612835
Reflector	61WDC
Lumens	2045 Lm
Efficacy	102.3 Lm/W
SC	1.28
UGR	11.6



CANDLEPOWER DISTRIBUTION



CONE OF LIGHT



MH	FC	L	W
5.5'	44.3	7	7
7'	27.4	8.8	8.8
8'	21	10.2	10.2
9'	16.6	11.4	11.4
10'	13.4	12.6	12.6
12'	9.3	15.2	15.2

CANDELA TABLE

Degrees Vertical	Candela
0	1341
5	1349
15	1466
25	1642
35	877
45	201
55	28
65	5
75	2
85	0
90	0

ZONAL LUMEN SUMMARY

Zone	Lumens	% Fixture
0-30	1282	62.7
0-40	1835	89.7
0-60	2037	99.6
0-90	2045	100
90-180	0	0
0-180	2045	100

LUMINANCE

Average Candela Degrees	Average 0° Luminance
45	15614
55	2676
65	662
75	530
85	0

*Value are nominal with specular clear reflectors, other finishes and field results may vary.
SC = Spacing Criteria
UGR = Unified Glare Rating

Photometric Multipliers (nominal lumen values)

1000 Lumen	1500 Lumen	2000 Lumen	3000 Lumen	4000 Lumen
0.52	0.72	1.00	1.44	2.02

Multipliers for relative lumen values with other series models.

CCT Multipliers – 80CRI

2700K	3000K	3500K	4000K
0.93	0.95	1.00	1.05

Multipliers for relative lumen values with other series color temperatures.

Color Finish Multipliers

Finish code	C	H	W/WB	BB
Finish	Specular Clear	Semi-Specular	Matte White White Baffle	Black Baffle
Multiplier	1.00	0.91	0.92	0.84

Multipliers for relative lumen values with other color finishes.

CCT Multipliers – 90CRI

2700K	3000K	3500K	4000K
0.75	0.82	0.90	0.89

Multipliers for relative lumen values with other series color temperatures.

Halo Commercial

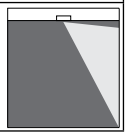
HC6
HM6
61 / 61PS

PHOTOMETRY

WALL WASH DISTRIBUTION - SPECULAR CLEAR FINISH, 2000 LUMEN MODEL, 80 CRI, 3500K

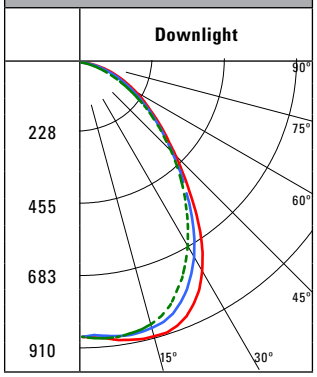
WALL WASH

Test Number	P286650
Housing	HC620D010
Module	HM612835
Reflector	61RWWC
Lumens	1798 Lm
Efficacy	89.9 Lm/W
SC	1.23



SC = Spacing Criteria, nominal for specular clear reflector, other finishes and field results may vary.

CANDLEPOWER DISTRIBUTION



CANDELA TABLE

Degrees Vertical	Candela
0	882
5	890
15	910
25	854
35	665
45	431
55	270
65	161
75	74
85	10
90	0

ZONAL LUMEN SUMMARY

Zone	Lumens	% Fixture
0-30	696	38.7
0-40	1079	60
0-60	1629	90.6
0-90	1798	100
90-180	0	0
0-180	1798	100

LUMINANCE

Average Candela Degrees	Average 0° Luminance
45	33399
55	25825
65	20832
75	15653
85	6416

SINGLE UNIT FOOTCANDLES

2.5' from wall (distance from fixture along wall)

1	16.8	12	5.4	2	0.7	0.2	0.1
2	24.7	19.2	10.5	4.9	2.2	1	0.5
3	22.8	18.6	11.4	6.2	3.2	1.7	0.9
4	17.5	15	10.3	6.2	3.6	2	1.2
5	11.9	10.7	8.2	5.5	3.4	2.1	1.3
6	8	7.4	6.1	4.5	3.1	2	1.3
7	5.5	5.2	4.5	3.6	2.6	1.9	1.3
8	3.9	3.7	3.3	2.8	2.2	1.6	1.2
9	2.8	2.7	2.5	2.2	1.8	1.4	1.1
10	2.1	2	1.9	1.7	1.5	1.2	0.9

MULTIPLE UNIT FOOTCANDLES

	2.5' from wall (distance from fixture along wall) 3			2.5' from wall (distance from fixture along wall) 4		
1	18.8	16.6	18.8	17.5	10.7	17.5
2	29.5	29.2	29.5	26.8	20.9	26.8
3	29	29.8	29	26	22.9	26
4	23.7	25.3	23.7	21	20.5	21
5	17.4	19.2	17.4	15.4	16.3	15.4
6	12.5	13.7	12.5	11.1	12.2	11.1
7	9.1	9.8	9.1	8.1	9	8.1
8	6.7	7.1	6.7	6.1	6.7	6.1
9	5	5.3	5	4.6	5	4.6
10	3.8	4	3.8	3.5	3.8	3.5

Photometric Multipliers (nominal lumen values)

1000 Lumen	1500 Lumen	2000 Lumen	3000 Lumen	4000 Lumen
0.52	0.72	1.00	1.44	2.02

Multipliers for relative lumen values with other series models.

CCT Multipliers – 80CRI

2700K	3000K	3500K	4000K
0.93	0.95	1.00	1.05

Multipliers for relative lumen values with other series color temperatures.

Color Finish Multipliers

Finish code	C	H	W/WB	BB
Finish	Specular Clear	Semi-Specular	Matte White White Baffle	Black Baffle
Multiplier	1.00	0.91	0.92	0.84

Multipliers for relative lumen values with other color finishes.

CCT Multipliers – 90CRI

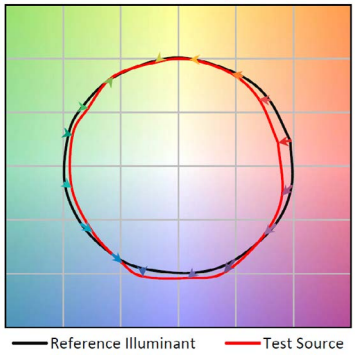
2700K	3000K	3500K	4000K
0.75	0.82	0.90	0.89

Multipliers for relative lumen values with other series color temperatures.

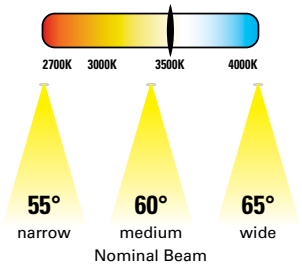
COLOR METRICS

TM-30-15 & CRI/CIE (3500K)

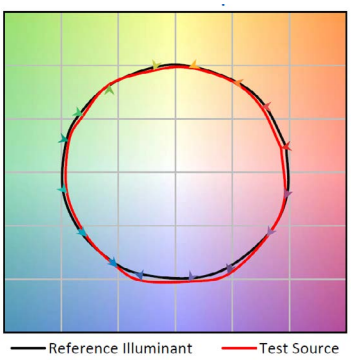
80 CRI Color Metric Summary - 3500K*



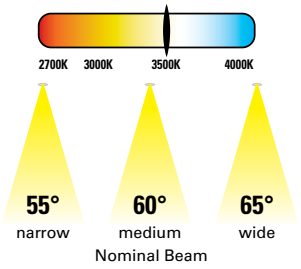
TM-30-15	R_f = 84.7
	R_g = 95.7
CRI/CIE	R_a = 85.2
	R_9 = 16.9



90 CRI Color Metric Summary - 3500K*



TM-30-15	R_f = 90.1
	R_g = 98.7
CRI/CIE	R_a = 92.5
	R_9 = 66.2



Eaton
1121 Highway 74 South
Peachtree City, GA 30269
P: 770-486-4800
www.eaton.com/lighting

Specifications and dimensions subject to change without notice.

* Color values are based on 61WDWB reflector, other finishes and field results may vary.

McGraw-Edison

DESCRIPTION

The Galleon™ LED luminaire delivers exceptional performance in a highly scalable, low-profile design. Patented, high-efficiency AccuLED Optics™ system provides uniform and energy conscious illumination to walkways, parking lots, roadways, building areas and security lighting applications. IP66 rated and UL/cUL Listed for wet locations.

Catalog #		Type
Project		L3
Comments		Date
Prepared by		

SPECIFICATION FEATURES

Construction
Extruded aluminum driver enclosure thermally isolated from Light Squares for optimal thermal performance. Heavy-wall, die-cast aluminum end caps enclose housing and die-cast aluminum heat sinks. A unique, patent pending interlocking housing and heat sink provides scalability with superior structural rigidity. 3G vibration tested and rated. Optional tool-less hardware available for ease of entry into electrical chamber. Housing is IP66 rated.

Optics
Patented, high-efficiency injection-molded AccuLED Optics technology. Optics are precisely designed to shape the distribution maximizing efficiency and application spacing. AccuLED Optics create consistent distributions with the scalability to meet customized application requirements. Offered standard in 4000K (+/- 275K) CCT 70 CRI. Optional 3000K, 5000K and 6000K CCT.

Electrical
LED drivers are mounted to removable tray assembly for ease of maintenance. 120-277V 50/60Hz, 347V 60Hz or 480V 60Hz operation. 480V is compatible for use with 480V Wye systems only. Standard with 0-10V dimming. Shipped standard with Eaton proprietary circuit module designed to withstand 10kV of transient line surge. The Galleon LED luminaire is suitable for operation in -40°C to 40°C ambient environments. For applications with ambient temperatures exceeding 40°C, specify the HA (High Ambient) option. Light Squares are IP66 rated. Greater than 90% lumen maintenance expected at 60,000 hours. Available in standard 1A drive current and optional 600mA, 800mA and 1200mA drive currents (nominal).

Mounting
STANDARD ARM MOUNT: Extruded aluminum arm includes internal bolt guides allowing for easy positioning of fixture during mounting. When mounting two or more luminaires at 90° and 120° apart, the EA extended arm may be required. Refer to the arm mounting requirement table. Round pole adapter included. For wall mounting, specify wall mount bracket option. QUICK MOUNT ARM: Adapter is bolted directly to the pole. Quick mount arm slide into place on the adapter and is secured via two screws, facilitating quick and easy installation. The versatile, patent pending, quick mount arm accommodates multiple drill patterns ranging from 1-1/2" to 4-7/8". Removal of the door on the quick mount arm enables wiring of the fixture without having to access the driver compartment. A knock-out enables round pole mounting.

Finish
Housing finished in super durable TGIC polyester powder coat paint, 2.5 mil nominal thickness for superior protection against fade and wear. Heat sink is powder coated black. Standard housing colors include black, bronze, grey, white, dark platinum and graphite metallic. RAL and custom color matches available.

Warranty
Five-year warranty.

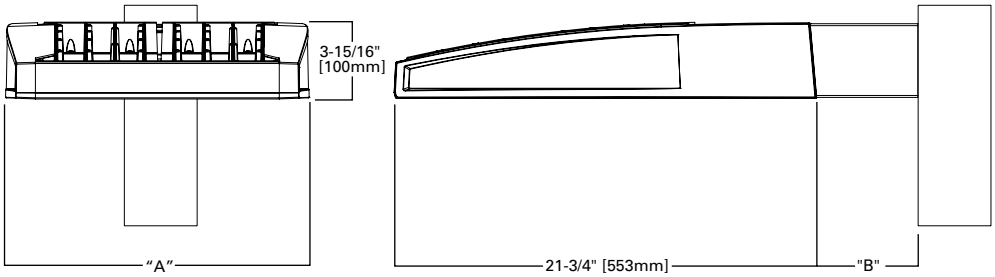
GLEON
GALLEON LED

1-10 Light Squares
Solid State LED

AREA/SITE LUMINAIRE

LumenSafe Technology
CLICK HERE

DIMENSIONS



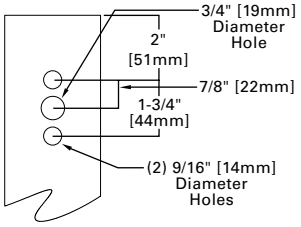
DIMENSION DATA

Number of Light Squares	"A" Width	"B" Standard Arm Length	"B" Optional Arm Length [1]	Weight with Arm (lbs.)	EPA with Arm [2] (Sq. Ft.)
1-4	15-1/2" (394mm)	7" (178mm)	10" (254mm)	33 (15.0 kgs.)	0.96
5-6	21-5/8" (549mm)	7" (178mm)	10" (254mm)	44 (20.0 kgs.)	1.00
7-8	27-5/8" (702mm)	7" (178mm)	13" (330mm)	54 (24.5 kgs.)	1.07
9-10	33-3/4" (857mm)	7" (178mm)	16" (406mm)	63 (28.6 kgs.)	1.12

NOTES: 1. Optional arm length to be used when mounting two fixtures at 90° on a single pole. **2.** EPA calculated with optional arm length.

DRILLING PATTERN

TYPE "N"



CERTIFICATION DATA
UL/cUL Wet Location Listed
ISO 9001
LM79 / LM80 Compliant
3G Vibration Rated
IP66 Rated
DesignLights Consortium® Qualified*

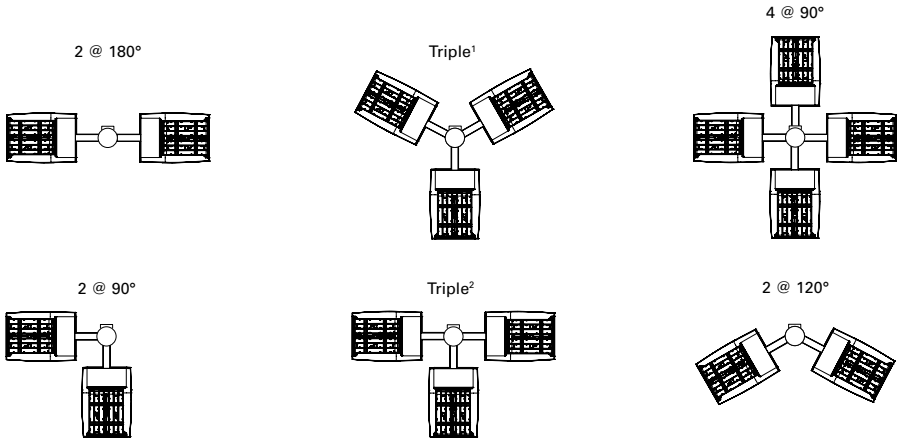
ENERGY DATA
Electronic LED Driver
>0.9 Power Factor
<20% Total Harmonic Distortion
120V-277V 50/60Hz
347V & 480V 60Hz
-40°C Min. Temperature
40°C Max. Temperature
50°C Max. Temperature (HA Option)

EATON
Powering Business Worldwide

*www.designlights.org

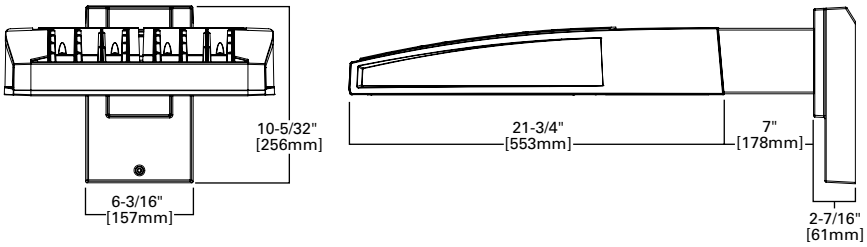
ARM MOUNTING REQUIREMENTS

Configuration	90° Apart	120° Apart
GLEON-AF-01	7" Arm (Standard)	7" Arm (Standard)
GLEON-AF-02	7" Arm (Standard)	7" Arm (Standard)
GLEON-AF-03	7" Arm (Standard)	7" Arm (Standard)
GLEON-AF-04	7" Arm (Standard)	7" Arm (Standard)
GLEON-AF-05	10" Extended Arm (Required)	7" Arm (Standard)
GLEON-AF-06	10" Extended Arm (Required)	7" Arm (Standard)
GLEON-AF-07	13" Extended Arm (Required)	13" Extended Arm (Required)
GLEON-AF-08	13" Extended Arm (Required)	13" Extended Arm (Required)
GLEON-AF-09	16" Extended Arm (Required)	16" Extended Arm (Required)
GLEON-AF-10	16" Extended Arm (Required)	16" Extended Arm (Required)

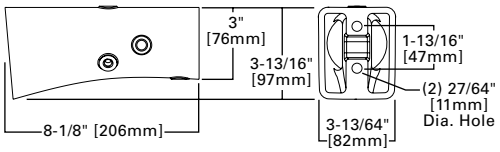


NOTES: 1 Round poles are 3 @ 120°. Square poles are 3 @ 90°. **2** Round poles are 3 @ 90°.

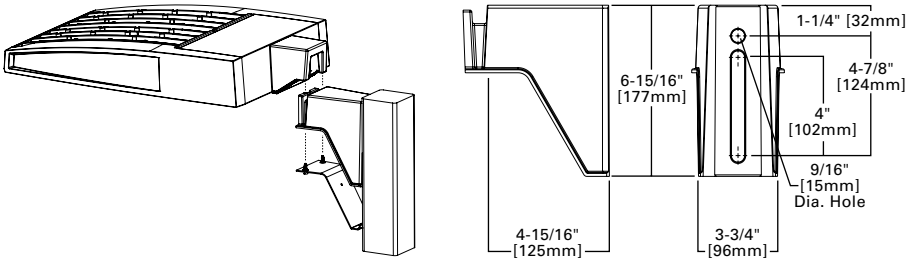
STANDARD WALL MOUNT

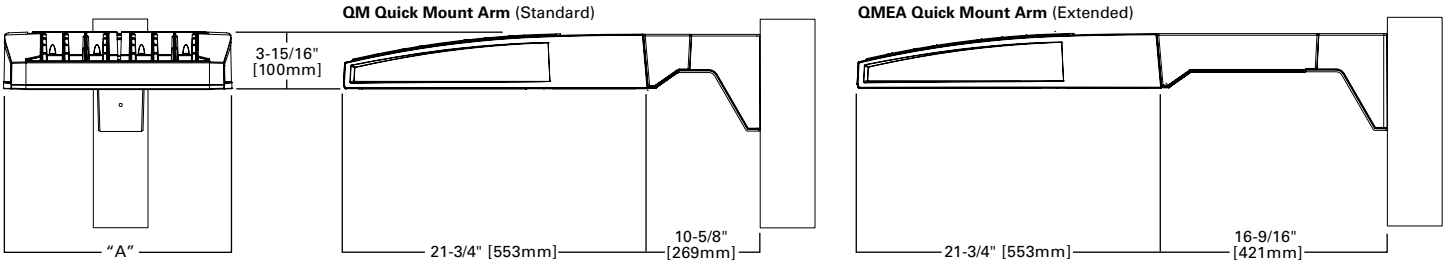


MAST ARM MOUNT



QUICK MOUNT ARM (INCLUDES FIXTURE ADAPTER)



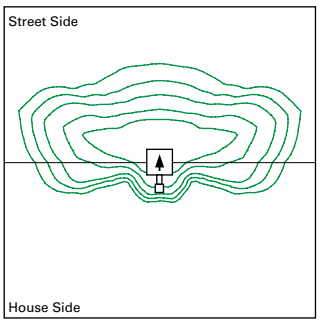


QUICK MOUNT ARM DATA

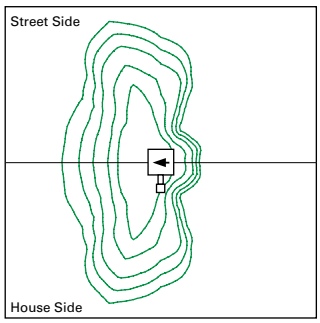
Number of Light Squares [1, 2]	"A" Width	Weight with QM Arm (lbs.)	Weight with QMEA Arm (lbs.)	EPA (Sq. Ft.)
1-4	15-1/2" (394mm)	35 (15.91 kgs.)	38 (17.27 kgs.)	1.11
5-6 [3]	21-5/8" (549mm)	46 (20.91 kgs.)	49 (22.27 kgs.)	
7-8	27-5/8" (702mm)	56 (25.45 kgs.)	59 (26.82 kgs.)	

NOTES: 1 QM option available with 1-8 light square configurations. **2** QMEA option available with 1-6 light square configurations. **3** QMEA arm to be used when mounting two fixtures at 90° on a single pole.

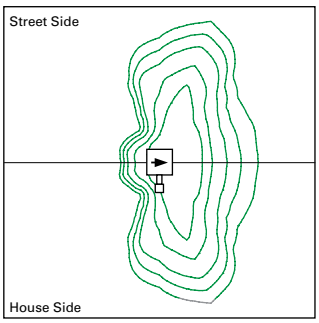
OPTIC ORIENTATION



Standard

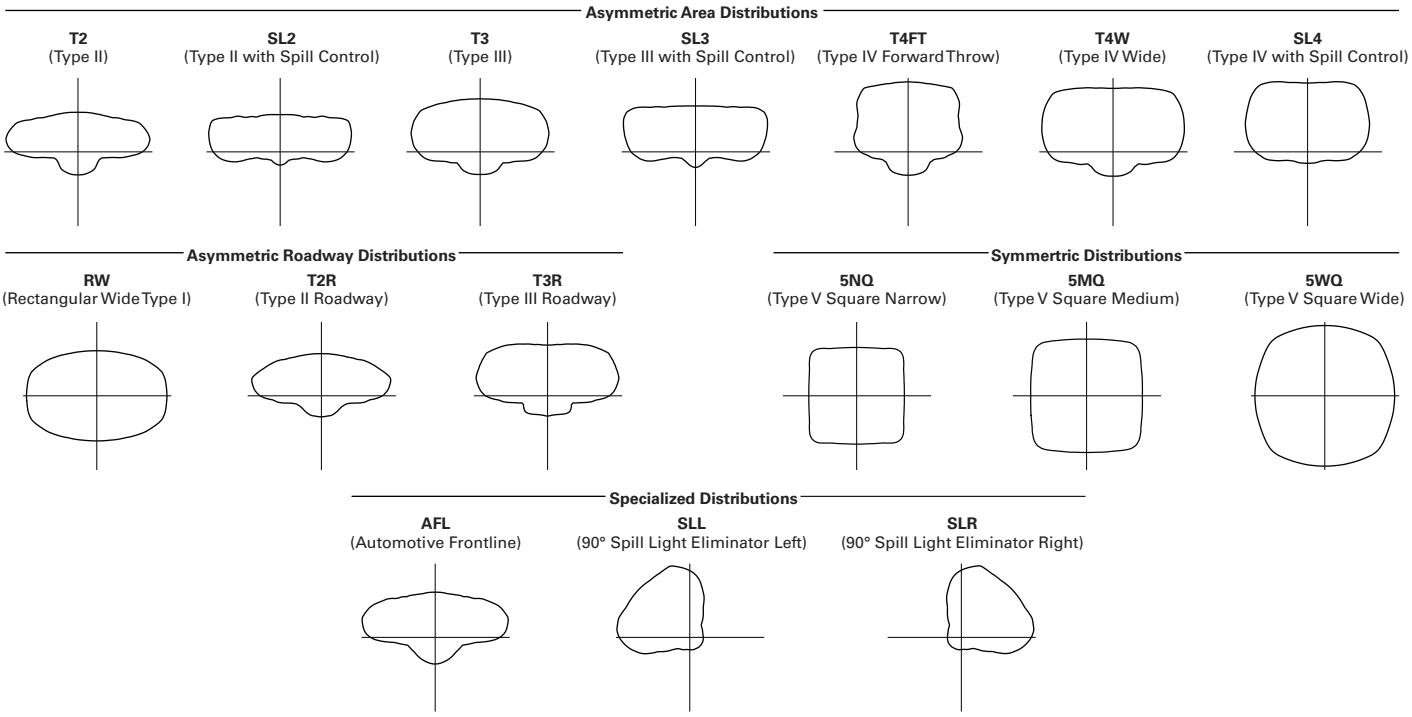


Optics Rotated Left @ 90° [L90]



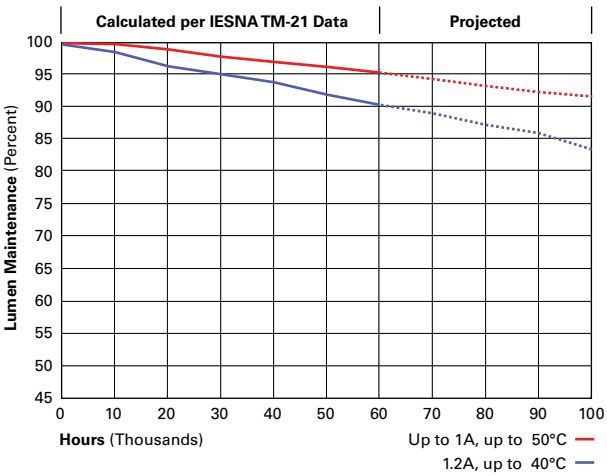
Optics Rotated Right @ 90° [R90]

OPTICAL DISTRIBUTIONS



LUMEN MAINTENANCE

Drive Current	Ambient Temperature	TM-21 Lumen Maintenance (60,000 Hours)	Projected L70 (Hours)
Up to 1A	Up to 50°C	> 95%	416,000
1.2A	Up to 40°C	> 90%	205,000



LUMEN MULTIPLIER

Ambient Temperature	Lumen Multiplier
0°C	1.02
10°C	1.01
25°C	1.00
40°C	0.99
50°C	0.97

NOMINAL POWER LUMENS (1A)

Number of Light Squares		1	2	3	4	5	6	7	8	9	10
Nominal Power (Watts)		59	113	166	225	279	333	391	445	501	558
Input Current @ 120V (A)		0.51	1.02	1.53	2.03	2.55	3.06	3.56	4.08	4.60	5.07
Input Current @ 208V (A)		0.29	0.56	0.82	1.11	1.37	1.64	1.93	2.19	2.46	2.75
Input Current @ 240V (A)		0.26	0.48	0.71	0.96	1.19	0.41	1.67	1.89	2.12	2.39
Input Current @ 277V (A)		0.23	0.42	0.61	0.83	1.03	1.23	1.45	1.65	1.84	2.09
Input Current @ 347V (A)		0.17	0.32	0.50	0.64	0.82	1.00	1.14	1.32	1.50	1.68
Input Current @ 480V (A)		0.14	0.24	0.37	0.48	0.61	0.75	0.91	0.99	1.12	1.28
Optics											
T2	4000K/5000K Lumens	6,256	12,225	18,242	24,104	29,865	35,739	42,265	47,888	53,420	59,144
	3000K Lumens	5,915	11,559	17,248	22,789	28,236	33,790	39,960	45,277	50,506	55,919
	BUG Rating	B1-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
T2R	4000K/5000K Lumens	6,642	12,979	19,366	25,589	31,705	37,941	44,870	50,840	56,711	62,789
	3000K Lumens	6,280	12,271	18,311	24,193	29,976	35,872	42,423	48,068	53,619	59,365
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5
T3	4000K/5000K Lumens	6,377	12,461	18,593	24,568	30,439	36,426	43,077	48,810	54,447	60,282
	3000K Lumens	-	-	-	-	-	-	-	-	-	-
	BUG Rating	B1-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
T3R	4000K/5000K Lumens	6,518	12,739	19,006	25,113	31,116	37,235	44,036	49,895	55,658	61,622
	3000K Lumens	6,029	11,781	17,579	23,229	28,779	34,440	40,729	46,148	51,478	56,995
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
T4FT	4000K/5000K Lumens	6,414	12,533	18,702	24,710	30,616	36,637	43,328	49,093	54,763	60,631
	3000K Lumens	6,064	11,849	17,681	23,363	28,946	34,638	40,966	46,417	51,776	57,325
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
T4W	4000K/5000K Lumens	6,331	12,372	18,459	24,391	30,221	36,163	42,769	48,459	54,056	59,849
	3000K Lumens	5,986	11,697	17,452	23,061	28,572	34,192	40,436	45,817	51,108	56,585
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
SL2	4000K/5000K Lumens	6,245	12,205	18,212	24,062	29,813	35,677	42,192	47,807	53,326	59,042
	3000K Lumens	5,904	11,539	17,218	22,750	28,187	33,732	39,891	45,199	50,418	55,822
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
SL3	4000K/5000K Lumens	6,376	12,460	18,591	24,564	30,436	36,421	43,072	48,803	54,439	60,273
	3000K Lumens	6,028	11,780	17,578	23,224	28,776	34,435	40,723	46,141	51,471	56,986
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
SL4	4000K/5000K Lumens	6,058	11,838	17,664	23,340	28,918	34,605	40,924	46,370	51,727	57,269
	3000K Lumens	5,727	11,193	16,701	22,067	27,341	32,718	38,692	43,841	48,906	54,146
	BUG Rating	B1-U0-G2	B1-U0-G3	B2-U0-G4	B2-U0-G4	B2-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
5NQ	4000K/5000K Lumens	6,577	12,851	19,176	25,336	31,392	37,566	44,426	50,337	56,151	62,170
	3000K Lumens	6,218	12,151	18,131	23,955	29,680	35,517	42,003	47,592	53,089	58,779
	BUG Rating	B2-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4
5MQ	4000K/5000K Lumens	6,697	13,088	19,528	25,803	31,970	38,258	45,243	51,264	57,185	63,313
	3000K Lumens	6,332	12,374	18,463	24,395	30,227	36,171	42,776	48,468	54,066	59,861
	BUG Rating	B3-U0-G1	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5
5WQ	4000K/5000K Lumens	6,715	13,122	19,580	25,871	32,055	38,360	45,365	51,401	57,337	63,482
	3000K Lumens	6,348	12,406	18,513	24,461	30,307	36,268	42,891	48,599	54,210	60,021
	BUG Rating	B3-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5
SLL/SLR	4000K/5000K Lumens	5,604	10,949	16,337	21,586	26,745	32,004	37,850	42,886	47,838	52,965
	3000K Lumens	5,298	10,351	15,446	20,409	25,287	30,258	35,786	40,547	45,229	50,077
	BUG Rating	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
RW	4000K/5000K Lumens	6,517	12,735	19,002	25,107	31,109	37,227	44,025	49,883	55,644	61,607
	3000K Lumens	6,162	12,040	17,965	23,738	29,413	35,197	41,623	47,163	52,609	58,247
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4
AFL	4000K/5000K Lumens	6,541	12,781	19,072	25,199	31,221	37,362	44,185	50,065	55,846	61,831
	3000K Lumens	6,184	12,084	18,032	23,825	29,519	35,325	41,775	47,334	52,801	58,459
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4

* Nominal data for 70 CRI.

CONTROL OPTIONS

0-10V (DIM)
This fixture is offered standard with 0-10V dimming driver(s). The DIM option provides 0-10V dimming wire leads for use with a lighting control panel or other control method.

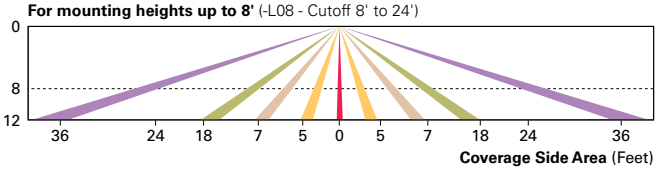
Photocontrol (P, R and PER7)
Optional button-type photocontrol (P) and photocontrol receptacles (R and PER7) provide a flexible solution to enable "dusk-to-dawn" lighting by sensing light levels. Advanced control systems compatible with NEMA 7-pin standards can be utilized with the PER7 receptacle.

After Hours Dim (AHD)
This feature allows photocontrol-enabled luminaires to achieve additional energy savings by dimming during scheduled portions of the night. The dimming profile will automatically take effect after a "dusk-to-dawn" period has been calculated from the photocontrol input. Specify the desired dimming profile for a simple, factory-shipped dimming solution requiring no external control wiring. Reference the After Hours Dim supplemental guide for additional information.

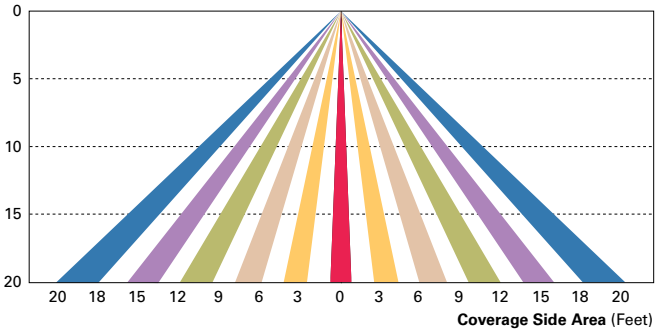
Dimming Occupancy Sensor (MS/DIM-LXX, MS/X-LXX and MS-LXX)
These sensors are factory installed in the luminaire housing. When the MS/DIM-LXX sensor option is selected, the occupancy sensor is connected to a dimming driver and the entire luminaire dims when there is no activity detected. When activity is detected, the luminaire returns to full light output. The MS/DIM sensor is factory preset to dim down to approximately 50 percent power with a time delay of five minutes. The MS-LXX sensor is factory preset to turn the luminaire off after five minutes of no activity. The MS/X-LXX is also preset for five minutes and only controls the specified number of light engines to maintain steady output from the remaining light engines.

These occupancy sensors includes an integral photocell that can be activated with the FSIR-100 accessory for "dusk-to-dawn" control or daylight harvesting - the factory preset is OFF. The FSIR-100 is a wireless tool utilized for changing the dimming level, time delay, sensitivity and other parameters. A variety of sensor lens are available to optimize the coverage. pattern for mounting heights from 8'-40'.

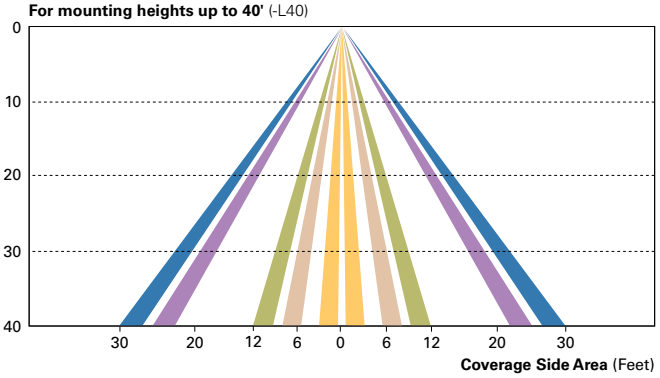
For mounting heights up to 8' (-L08 - Cutoff 8' to 24')



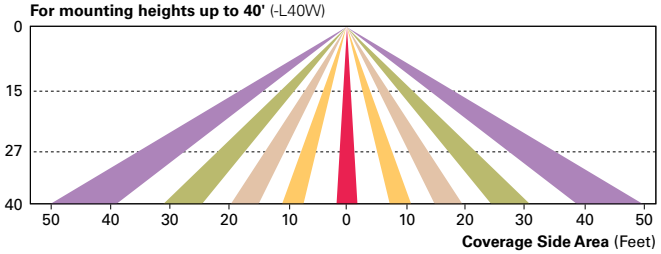
For mounting heights up to 20' (-L20)



For mounting heights up to 40' (-L40)

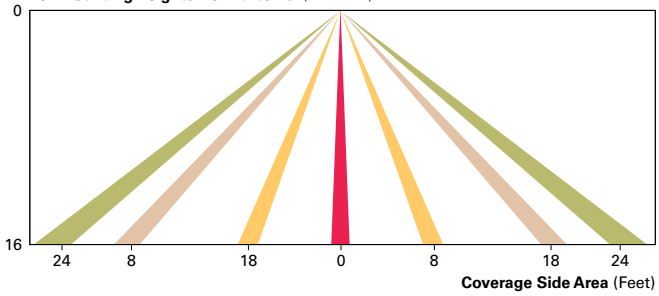


For mounting heights up to 40' (-L40W)

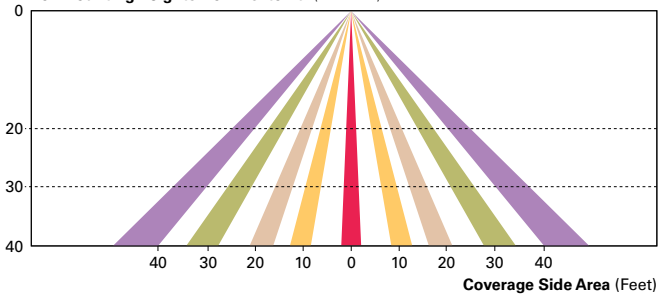


LumaWatt Pro Wireless Control and Monitoring System (LWR-LW and LWR-LN)
The Eaton's LumaWatt Pro powered by Enlighted is a connected lighting solution that combines a broad selection of energy-efficient LED luminaires with a powerful integrated wireless sensor system. The sensor controls the lighting system in compliance with the latest energy codes and collects valuable data about building performance and use. Software applications turn the granular data into information through energy dashboards and specialized apps that make it simple and help optimize the use of building resources, beyond lighting.

For mounting heights from 8' to 16' (LWR-LW)



For mounting heights from 16' to 40' (LWR-LN)



WaveLinx Wireless Outdoor Lighting Control Module (WOLC-7P-10A)
The 7-pin wireless outdoor lighting control module enables WaveLinx to control outdoor area, site and flood lighting. WaveLinx controls outdoor lighting using schedules to provide ON, OFF and dimming controls based on astronomic or time schedules based on a 7 day week.

LumenSafe Integrated Network Security Camera (LD)
Eaton brings ease of camera deployment to a whole new level. No additional wiring is needed beyond providing line power to the luminaire. A variety of networking options allows security integrators to design the optimal solution for active surveillance. As the ideal solution to meet the needs for active surveillance, the LumenSafe integrated network camera is a streamlined, outdoor-ready fixed dome that provides HDTV 1080p video. This IP camera is optimally designed for deployment in the video management system or security software platform of choice.

ORDERING INFORMATION

Sample Number: GLEON-AF-04-LED-E1-T3-GM-QM

Product Family [1, 2]	Light Engine	Number of Light Squares [3]	Lamp Type	Voltage	Distribution	Color	Mounting
GLEON=Galleon	**AF**=1A Drive Current	**01**=1 **02**=2 **03**=3 **04**=4 **05**=5 [4] **06**=6 **07**=7 [5] **08**=8 [5] **09**=9 [6] **10**=10 [6]	**LED**=Solid State Light Emitting Diodes	**E1**=120-277V **347**=347V [7] **480**=480V [7, 8]	**T2**=Type II **T2R**=Type II Roadway **T3**=Type III **T3R**=Type III Roadway **T4FT**=Type IV Forward Throw **T4W**=Type IV Wide **5NQ**=Type V Narrow **5MQ**=Type V Square Medium **5WQ**=Type V Square Wide **SL2**=Type II w/Spill Control **SL3**=Type III w/Spill Control **SL4**=Type IV w/Spill Control **SLL**=90° Spill Light Eliminator Left **SLR**=90° Spill Light Eliminator Right **RW**=Rectangular Wide Type I **AFL**=Automotive Frontline	**AP**=Grey **BZ**=Bronze **BK**=Black **DP**=Dark Platinum **GM**=Graphite Metallic **WH**=White	**[Blank]**=Arm for Round or Square Pole **EA**=Extended Arm [9] **MA**=Mast Arm Adapter [10] **WM**=Wall Mount **QM**=Quick Mount Arm (Standard Length) [11] **QMEA**=Quick Mount Arm (Extended Length) [12]

Options (Add as Suffix)

7027=70 CRI 2700K [13]
7030=70 CRI 3000K [13]
8030=80 CRI 3000K [14]
7050=70 CRI 5000K [13]
7060=70 CRI 6000K [13]
600=Drive Current Factory Set to Nominal 600mA [15]
800=Drive Current Factory Set to Nominal 800mA [15]
1200=Drive Current Factory Set to Nominal 1200mA [15, 16]
F=Single Fuse (120, 277 or 347V. Must Specify Voltage)
FF=Double Fuse (208, 240 or 480V. Must Specify Voltage)
2L=Two Circuits [17, 18]
DIM=External 0-10V Dimming Leads [19, 20]
P=Button Type Photocontrol (120, 208, 240 or 277V. Must Specify Volatage) [21]
PER7=NEMA 7-PIN Twistlock Photocontrol Receptacle [21]
R=NEMA Twistlock Photocontrol Receptacle [21]
AHD145=After Hours Dim, 5 Hours [22]
AHD245=After Hours Dim, 6 Hours [22]
AHD255=After Hours Dim, 7 Hours [22]
AHD355=After Hours Dim, 8 Hours [22]
HA=50°C High Ambient [23]
MS/DIM-L08=Motion Sensor for Dimming Operation, Maximum 8' Mounting Height [24, 25]
MS/DIM-L20=Motion Sensor for Dimming Operation, 9' - 20' Mounting Height [24, 26]
MS/DIM-L40=Motion Sensor for Dimming Operation, 21' - 40' Mounting Height [24, 27]
MS/DIM-L40W=Motion Sensor for Dimming Operation, 21' - 40' Mounting Height (Wide Range) [24, 28]
MS/X-L08=Bi-Level Motion Sensor, Maximum 8' Mounting Height [24, 25, 29]
MS/X-L20=Bi-Level Motion Sensor, 9' - 20' Mounting Height [24, 26, 29]
MS/X-L40=Bi-Level Motion Sensor, 21' - 40' Mounting Height [22, 27, 29]
MS/X-L40W=Bi-Level Motion Sensor, 21' - 40' Mounting Height (Wide Range) [24, 28, 29]
MS-L08=Motion Sensor for ON/OFF Operation, Maximum 8' Mounting Height [24, 25]
MS-L20=Motion Sensor for ON/OFF Operation, 9' - 20' Mounting Height [24, 26]
MS-L40=Motion Sensor for ON/OFF Operation, 21' - 40' Mounting Height [24, 27]
MS-L40W=Motion Sensor for ON/OFF Operation, 21' - 40' Mounting Height (Wide Range) [24, 28]
LWR-LW=LumaWatt Pro Wireless Sensor, Wide Lens for 8' - 16' Mounting Height [30]
LWR-LN=LumaWatt Pro Wireless Sensor, Narrow Lens for 16' - 40' Mounting Height [30]
L90=Optics Rotated 90° Left
R90=Optics Rotated 90° Right
MT=Factory Installed Mesh Top
TH=Tool-less Door Hardware
LCF=Light Square Trim Plate Painted to Match Housing [31]
HSS=Factory Installed House Side Shield [32]
CE=CE Marking [33]

Accessories (Order Separately)

OA/RA1016=NEMA Photocontrol Multi-Tap - 105-285V
OA/RA1027=NEMA Photocontrol - 480V
OA/RA1201=NEMA Photocontrol - 347V
OA/RA1013=Photocontrol Shorting Cap
OA/RA1014=120V Photocontrol
MA1252=10kV Surge Module Replacement
MA1036-XX=Single Tenon Adapter for 2-3/8" O.D. Tenon
MA1037-XX=2@180° Tenon Adapter for 2-3/8" O.D. Tenon
MA1197-XX=3@120° Tenon Adapter for 2-3/8" O.D. Tenon
MA1188-XX=4@90° Tenon Adapter for 2-3/8" O.D. Tenon
MA1189-XX=2@90° Tenon Adapter for 2-3/8" O.D. Tenon
MA1190-XX=3@90° Tenon Adapter for 2-3/8" O.D. Tenon
MA1191-XX=2@120° Tenon Adapter for 2-3/8" O.D. Tenon
MA1038-XX=Single Tenon Adapter for 3-1/2" O.D. Tenon
MA1039-XX=2@180° Tenon Adapter for 3-1/2" O.D. Tenon
MA1192-XX=3@120° Tenon Adapter for 3-1/2" O.D. Tenon
MA1193-XX=4@90° Tenon Adapter for 3-1/2" O.D. Tenon
MA1194-XX=2@90° Tenon Adapter for 3-1/2" O.D. Tenon
MA1195-XX=3@90° Tenon Adapter for 3-1/2" O.D. Tenon
FSIR-100=Wireless Configuration Tool for Occupancy Sensor [24]
GLEON-MT1=Field Installed Mesh Top for 1-4 Light Squares
GLEON-MT2=Field Installed Mesh Top for 5-6 Light Squares
GLEON-MT3=Field Installed Mesh Top for 7-8 Light Squares
GLEON-MT4=Field Installed Mesh Top for 9-10 Light Squares
GLEON-QM=Quick Mount Arm Kit [10]
GLEON-QMEA=Quick Mount Extended Arm Kit [11]
LS/HSS=Field Installed House Side Shield [32, 33]
WOLC-7P-10A=WaveLinx Outdoor Control Module (7-pin) [35]

NOTES:
1 Customer is responsible for engineering analysis to confirm pole and fixture compatibility for all applications. Refer to our white paper WP513001EN for additional support information. **2** DesignLights Consortium® Qualified. Refer to www.designlights.org Qualified Products List under Family Models for details. **3** Standard 4000K CCT and minimum 70 CRI. **4** Not compatible with MS/4-LXX or MS/1-LXX sensors. **5** Not compatible with extended quick mount arm (QMEA). **6** Not compatible with standard quick mount arm (QM) or extended quick mount arm (QMEA). **7** Requires the use of an internal step down transformer when combined with sensor options. Not available with sensor at 1200mA. Not available in combination with the HA high ambient and sensor options at 1A. **8** Only for use with 480V Wye systems. Per NEC, not for use with ungrounded systems, impedance grounded systems or corner grounded systems (commonly known as Three Phase Three Wire Delta, Three Phase High Leg Delta and Three Phase Corner Grounded Delta systems). **9** May be required when two or more luminaires are oriented on a 90° or 120° drilling pattern. Refer to arm mounting requirement table. **10** Factory installed. **11** Maximum 8 light squares. **12** Maximum 6 light squares.
13 Extended lead times apply. Use dedicated IES files for 2700K, 3000K, 5000K and 6000K when performing layouts. These files are published on the Galleon luminaire product page on the website. **14** Extended lead times
apply. Use dedicated IES files for 2700K, 3000K, 5000K and 6000K when performing layouts. These files are published on the Galleon luminaire product page on the website. **15** 1 Amp standard. Use dedicated IES files for 600mA, 800mA and 1200mA when performing layouts. These files are published on the Galleon luminaire product page on the website. **16** Not available with HA option. **17** 2L is not available with MS, MS/X or MS/DIM at 347V or 480V. 2L in AF-02 through AF-04 requires a larger housing, normally used for AF-05 or AF-06. Extended arm option may be required when mounting two or more fixtures per pole at 90° or 120°. Refer to arm mounting requirement table. **18** Not available with LumaWatt Pro wireless sensors. **19** Cannot be used with other control options. **20** Low voltage control lead brought out 18" outside fixture. **21** Not available if any "MS" sensor is selected. Motion sensor has an integral photocell. **22** Requires the use of P photocontrol or the PER7 or R photocontrol receptacle with photocontrol accessory. See After Hours Dim supplemental guide for additional information. **23** 50°C lumen maintenance data applies to 600mA, 800mA and 1A drive currents. **24** The FSIR-100 configuration tool is required to adjust parameters including high and low modes, sensitivity, time delay, cutoff and more. Consult your lighting representative at Eaton for more information. **25** Approximately 22' detection diameter at 8' mounting height. **26** Approximately 40' detection diameter at 20' mounting height. **27** Approximately 60' detection diameter at 40' mounting height. **28** Approximately 100' detection diameter at 40' mounting height. **29** Replace X with number of Light Squares operating in low output mode. **30** LumaWatt Pro wireless sensors are factory installed only requiring network components LWP-EM-1, LWP-GW-1 and LWP-PoE8 in appropriate quantities. See www.eaton.com/lighting for LumaWatt Pro application information. **31** Not available with house side shield (HSS). **32** Only for use with SL2, SL3, SL4 and AFL distributions. The Light Square trim plate is painted black when the HSS option is selected. **33** CE is not available with the LWR, MS, MS/X, MS/DIM, P, R or PER7 options. Available in 120-277V only. **34** One required for each Light Square. **35** Requires 7-pin NEMA twistlock photocontrol receptacle. The WOLC-7 cannot be used in conjunction with additional sensors or controls.

LumenSafe Integrated Network Security Camera Technology Options (Add as Suffix)

Product Family	Camera Type	Data Backhaul	
L=LumenSafe Technology* LumenSafe Technology CLICK HERE	**D**=Dome Camera	**C**=Cellular, Customer Installed SIM Card **A**=Cellular, Factory Installed AT&T SIM Card **V**=Cellular, Factory Installed Verizon SIM Card **S**=Cellular, Factory Installed Sprint SIM Card	**R**=Cellular, Factory Installed Rogers SIM Card **W**=Wi-Fi Networking w/ Omni-Directional Antenna **E**=Ethernet Networking

*Consult LumenSafe system pages for additional details and compatibility. Not available with 9-10 light square housing. Not available with 347V, 480V or high ambient options.

McGraw-Edison

DESCRIPTION

The Galleon™ LED luminaire delivers exceptional performance in a highly scalable, low-profile design. Patented, high-efficiency AccuLED Optics™ system provides uniform and energy conscious illumination to walkways, parking lots, roadways, building areas and security lighting applications. IP66 rated and UL/cUL Listed for wet locations.

Catalog #		Type
Project		L3
Comments		Date
Prepared by		

SPECIFICATION FEATURES

Construction
Extruded aluminum driver enclosure thermally isolated from Light Squares for optimal thermal performance. Heavy-wall, die-cast aluminum end caps enclose housing and die-cast aluminum heat sinks. A unique, patent pending interlocking housing and heat sink provides scalability with superior structural rigidity. 3G vibration tested and rated. Optional tool-less hardware available for ease of entry into electrical chamber. Housing is IP66 rated.

Optics
Patented, high-efficiency injection-molded AccuLED Optics technology. Optics are precisely designed to shape the distribution maximizing efficiency and application spacing. AccuLED Optics create consistent distributions with the scalability to meet customized application requirements. Offered standard in 4000K (+/- 275K) CCT 70 CRI. Optional 3000K, 5000K and 6000K CCT.

Electrical
LED drivers are mounted to removable tray assembly for ease of maintenance. 120-277V 50/60Hz, 347V 60Hz or 480V 60Hz operation. 480V is compatible for use with 480V Wye systems only. Standard with 0-10V dimming. Shipped standard with Eaton proprietary circuit module designed to withstand 10kV of transient line surge. The Galleon LED luminaire is suitable for operation in -40°C to 40°C ambient environments. For applications with ambient temperatures exceeding 40°C, specify the HA (High Ambient) option. Light Squares are IP66 rated. Greater than 90% lumen maintenance expected at 60,000 hours. Available in standard 1A drive current and optional 600mA, 800mA and 1200mA drive currents (nominal).

Mounting
STANDARD ARM MOUNT: Extruded aluminum arm includes internal bolt guides allowing for easy positioning of fixture during mounting. When mounting two or more luminaires at 90° and 120° apart, the EA extended arm may be required. Refer to the arm mounting requirement table. Round pole adapter included. For wall mounting, specify wall mount bracket option. QUICK MOUNT ARM: Adapter is bolted directly to the pole. Quick mount arm slide into place on the adapter and is secured via two screws, facilitating quick and easy installation. The versatile, patent pending, quick mount arm accommodates multiple drill patterns ranging from 1-1/2" to 4-7/8". Removal of the door on the quick mount arm enables wiring of the fixture without having to access the driver compartment. A knock-out enables round pole mounting.

Finish
Housing finished in super durable TGIC polyester powder coat paint, 2.5 mil nominal thickness for superior protection against fade and wear. Heat sink is powder coated black. Standard housing colors include black, bronze, grey, white, dark platinum and graphite metallic. RAL and custom color matches available.

Warranty
Five-year warranty.

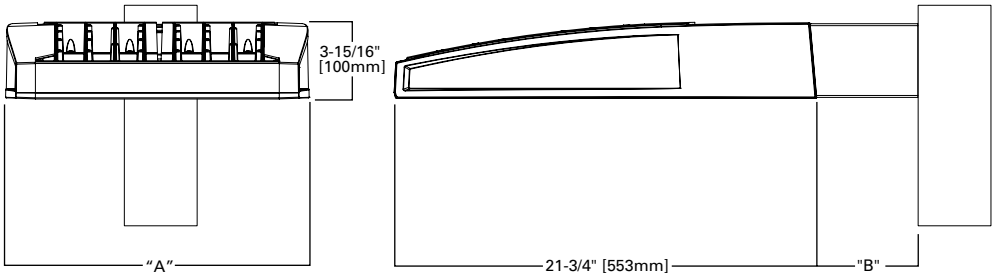
GLEON
GALLEON LED

1-10 Light Squares
Solid State LED

AREA/SITE LUMINAIRE

LumenSafe Technology
CLICK HERE

DIMENSIONS



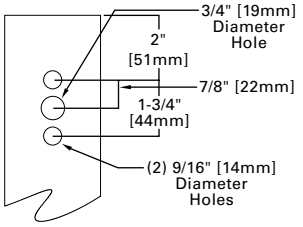
DIMENSION DATA

Number of Light Squares	"A" Width	"B" Standard Arm Length	"B" Optional Arm Length [1]	Weight with Arm (lbs.)	EPA with Arm [2] (Sq. Ft.)
1-4	15-1/2" (394mm)	7" (178mm)	10" (254mm)	33 (15.0 kgs.)	0.96
5-6	21-5/8" (549mm)	7" (178mm)	10" (254mm)	44 (20.0 kgs.)	1.00
7-8	27-5/8" (702mm)	7" (178mm)	13" (330mm)	54 (24.5 kgs.)	1.07
9-10	33-3/4" (857mm)	7" (178mm)	16" (406mm)	63 (28.6 kgs.)	1.12

NOTES: 1. Optional arm length to be used when mounting two fixtures at 90° on a single pole. **2.** EPA calculated with optional arm length.

DRILLING PATTERN

TYPE "N"



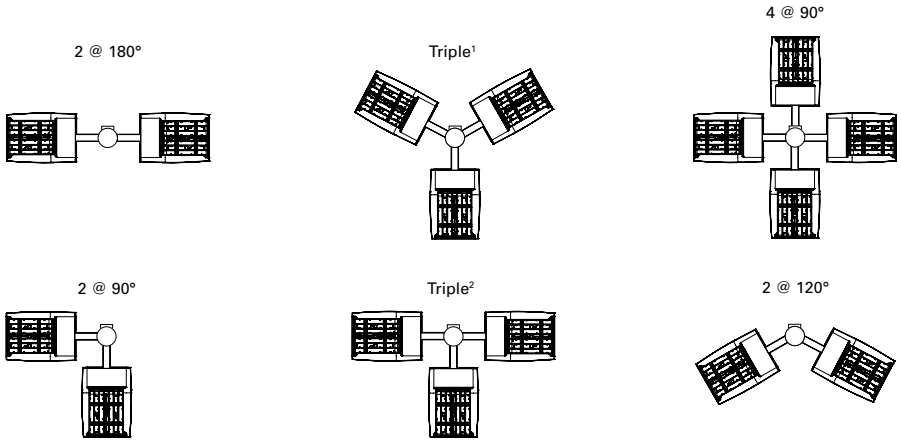
CERTIFICATION DATA
UL/cUL Wet Location Listed
ISO 9001
LM79 / LM80 Compliant
3G Vibration Rated
IP66 Rated
DesignLights Consortium® Qualified*

ENERGY DATA
Electronic LED Driver
>0.9 Power Factor
<20% Total Harmonic Distortion
120V-277V 50/60Hz
347V & 480V 60Hz
-40°C Min. Temperature
40°C Max. Temperature
50°C Max. Temperature (HA Option)

*www.designlights.org

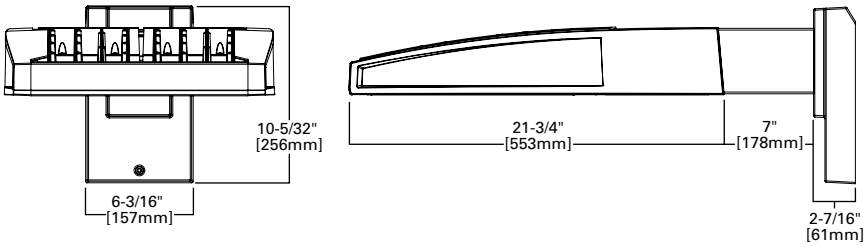
ARM MOUNTING REQUIREMENTS

Configuration	90° Apart	120° Apart
GLEON-AF-01	7" Arm (Standard)	7" Arm (Standard)
GLEON-AF-02	7" Arm (Standard)	7" Arm (Standard)
GLEON-AF-03	7" Arm (Standard)	7" Arm (Standard)
GLEON-AF-04	7" Arm (Standard)	7" Arm (Standard)
GLEON-AF-05	10" Extended Arm (Required)	7" Arm (Standard)
GLEON-AF-06	10" Extended Arm (Required)	7" Arm (Standard)
GLEON-AF-07	13" Extended Arm (Required)	13" Extended Arm (Required)
GLEON-AF-08	13" Extended Arm (Required)	13" Extended Arm (Required)
GLEON-AF-09	16" Extended Arm (Required)	16" Extended Arm (Required)
GLEON-AF-10	16" Extended Arm (Required)	16" Extended Arm (Required)

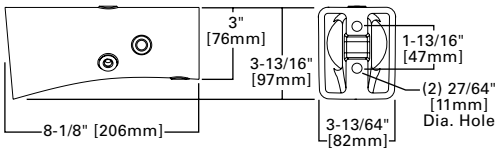


NOTES: 1 Round poles are 3 @ 120°. Square poles are 3 @ 90°. **2** Round poles are 3 @ 90°.

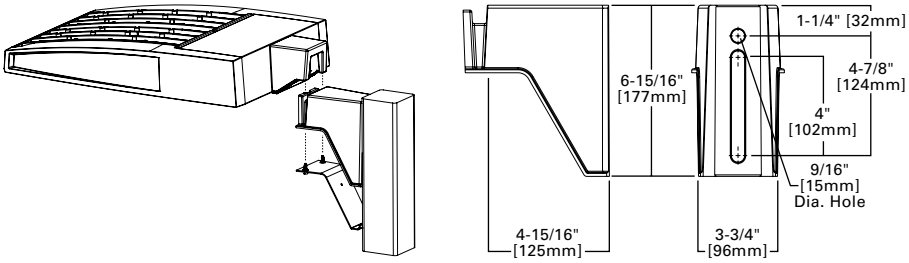
STANDARD WALL MOUNT

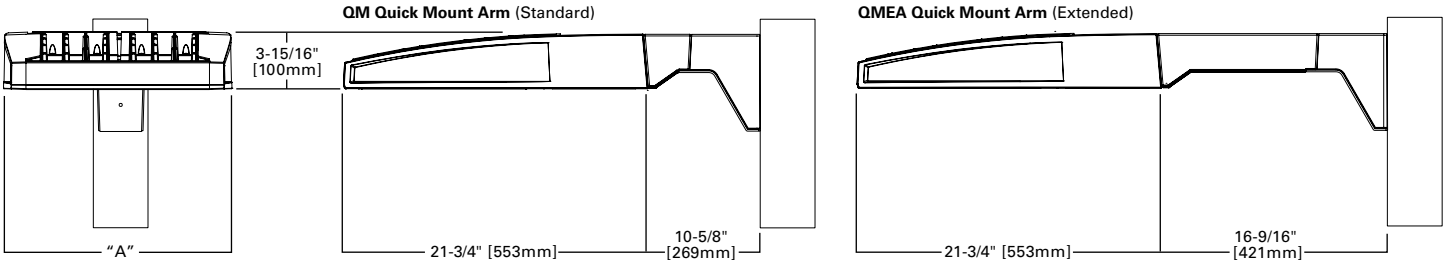


MAST ARM MOUNT



QUICK MOUNT ARM (INCLUDES FIXTURE ADAPTER)



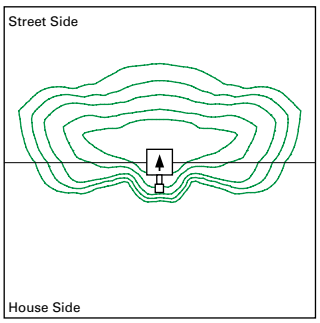


QUICK MOUNT ARM DATA

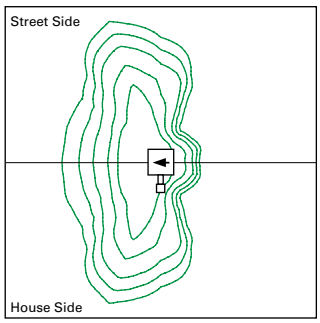
Number of Light Squares [1, 2]	"A" Width	Weight with QM Arm (lbs.)	Weight with QMEA Arm (lbs.)	EPA (Sq. Ft.)
1-4	15-1/2" (394mm)	35 (15.91 kgs.)	38 (17.27 kgs.)	1.11
5-6 [3]	21-5/8" (549mm)	46 (20.91 kgs.)	49 (22.27 kgs.)	
7-8	27-5/8" (702mm)	56 (25.45 kgs.)	59 (26.82 kgs.)	

NOTES: 1 QM option available with 1-8 light square configurations. **2** QMEA option available with 1-6 light square configurations. **3** QMEA arm to be used when mounting two fixtures at 90° on a single pole.

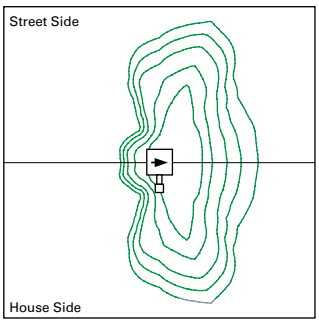
OPTIC ORIENTATION



Standard

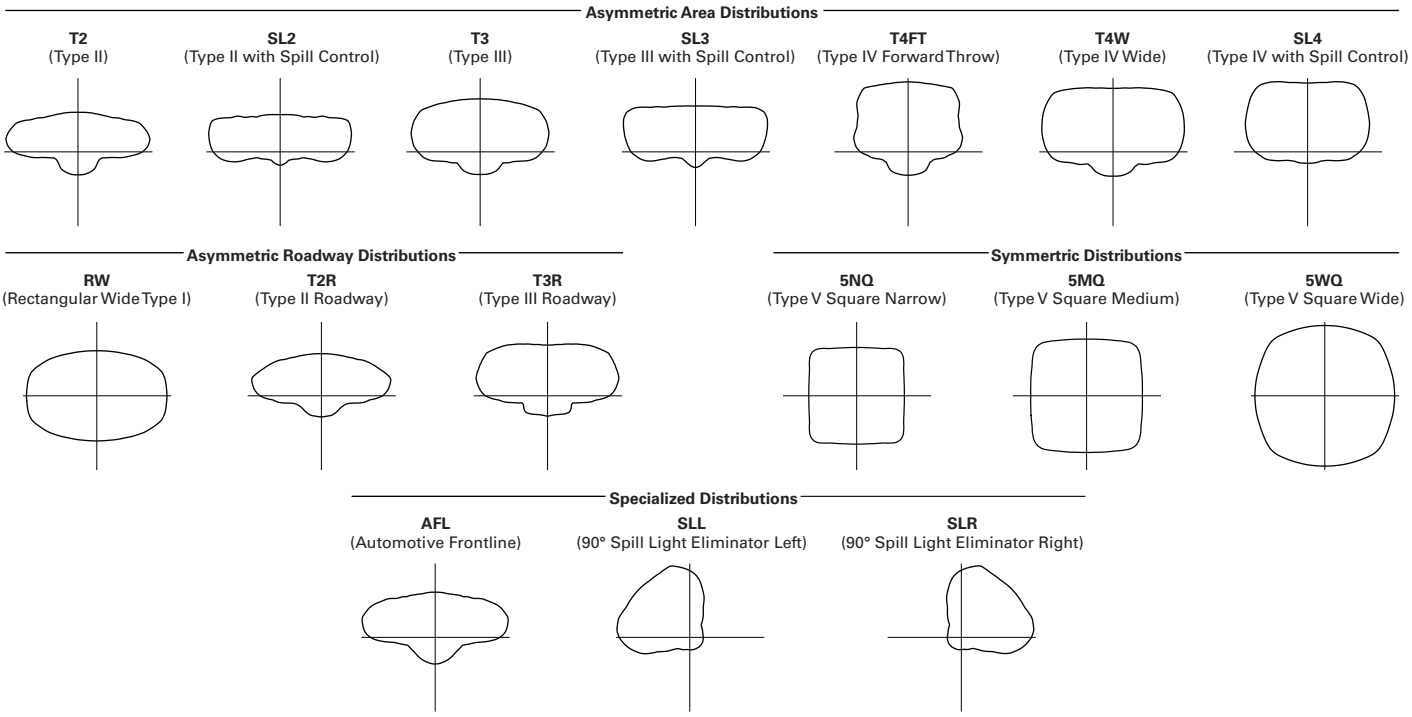


Optics Rotated Left @ 90° [L90]



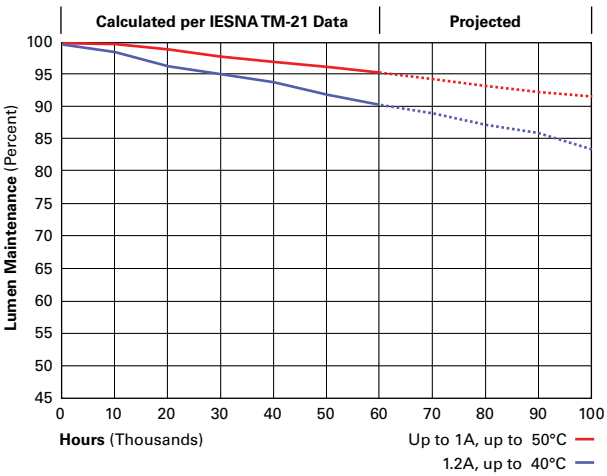
Optics Rotated Right @ 90° [R90]

OPTICAL DISTRIBUTIONS



LUMEN MAINTENANCE

Drive Current	Ambient Temperature	TM-21 Lumen Maintenance (60,000 Hours)	Projected L70 (Hours)
Up to 1A	Up to 50°C	> 95%	416,000
1.2A	Up to 40°C	> 90%	205,000



LUMEN MULTIPLIER

Ambient Temperature	Lumen Multiplier
0°C	1.02
10°C	1.01
25°C	1.00
40°C	0.99
50°C	0.97

NOMINAL POWER LUMENS (1A)

Number of Light Squares		1	2	3	4	5	6	7	8	9	10
Nominal Power (Watts)		59	113	166	225	279	333	391	445	501	558
Input Current @ 120V (A)		0.51	1.02	1.53	2.03	2.55	3.06	3.56	4.08	4.60	5.07
Input Current @ 208V (A)		0.29	0.56	0.82	1.11	1.37	1.64	1.93	2.19	2.46	2.75
Input Current @ 240V (A)		0.26	0.48	0.71	0.96	1.19	0.41	1.67	1.89	2.12	2.39
Input Current @ 277V (A)		0.23	0.42	0.61	0.83	1.03	1.23	1.45	1.65	1.84	2.09
Input Current @ 347V (A)		0.17	0.32	0.50	0.64	0.82	1.00	1.14	1.32	1.50	1.68
Input Current @ 480V (A)		0.14	0.24	0.37	0.48	0.61	0.75	0.91	0.99	1.12	1.28
Optics											
T2	4000K/5000K Lumens	6,256	12,225	18,242	24,104	29,865	35,739	42,265	47,888	53,420	59,144
	3000K Lumens	5,915	11,559	17,248	22,789	28,236	33,790	39,960	45,277	50,506	55,919
	BUG Rating	B1-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
T2R	4000K/5000K Lumens	6,642	12,979	19,366	25,589	31,705	37,941	44,870	50,840	56,711	62,789
	3000K Lumens	6,280	12,271	18,311	24,193	29,976	35,872	42,423	48,068	53,619	59,365
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5
T3	4000K/5000K Lumens	6,377	12,461	18,593	24,568	30,439	36,426	43,077	48,810	54,447	60,282
	3000K Lumens	-	-	-	-	-	-	-	-	-	-
	BUG Rating	B1-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
T3R	4000K/5000K Lumens	6,518	12,739	19,006	25,113	31,116	37,235	44,036	49,895	55,658	61,622
	3000K Lumens	6,029	11,781	17,579	23,229	28,779	34,440	40,729	46,148	51,478	56,995
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
T4FT	4000K/5000K Lumens	6,414	12,533	18,702	24,710	30,616	36,637	43,328	49,093	54,763	60,631
	3000K Lumens	6,064	11,849	17,681	23,363	28,946	34,638	40,966	46,417	51,776	57,325
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
T4W	4000K/5000K Lumens	6,331	12,372	18,459	24,391	30,221	36,163	42,769	48,459	54,056	59,849
	3000K Lumens	5,986	11,697	17,452	23,061	28,572	34,192	40,436	45,817	51,108	56,585
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
SL2	4000K/5000K Lumens	6,245	12,205	18,212	24,062	29,813	35,677	42,192	47,807	53,326	59,042
	3000K Lumens	5,904	11,539	17,218	22,750	28,187	33,732	39,891	45,199	50,418	55,822
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
SL3	4000K/5000K Lumens	6,376	12,460	18,591	24,564	30,436	36,421	43,072	48,803	54,439	60,273
	3000K Lumens	6,028	11,780	17,578	23,224	28,776	34,435	40,723	46,141	51,471	56,986
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
SL4	4000K/5000K Lumens	6,058	11,838	17,664	23,340	28,918	34,605	40,924	46,370	51,727	57,269
	3000K Lumens	5,727	11,193	16,701	22,067	27,341	32,718	38,692	43,841	48,906	54,146
	BUG Rating	B1-U0-G2	B1-U0-G3	B2-U0-G4	B2-U0-G4	B2-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
5NQ	4000K/5000K Lumens	6,577	12,851	19,176	25,336	31,392	37,566	44,426	50,337	56,151	62,170
	3000K Lumens	6,218	12,151	18,131	23,955	29,680	35,517	42,003	47,592	53,089	58,779
	BUG Rating	B2-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4
5MQ	4000K/5000K Lumens	6,697	13,088	19,528	25,803	31,970	38,258	45,243	51,264	57,185	63,313
	3000K Lumens	6,332	12,374	18,463	24,395	30,227	36,171	42,776	48,468	54,066	59,861
	BUG Rating	B3-U0-G1	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5
5WQ	4000K/5000K Lumens	6,715	13,122	19,580	25,871	32,055	38,360	45,365	51,401	57,337	63,482
	3000K Lumens	6,348	12,406	18,513	24,461	30,307	36,268	42,891	48,599	54,210	60,021
	BUG Rating	B3-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5
SLL/SLR	4000K/5000K Lumens	5,604	10,949	16,337	21,586	26,745	32,004	37,850	42,886	47,838	52,965
	3000K Lumens	5,298	10,351	15,446	20,409	25,287	30,258	35,786	40,547	45,229	50,077
	BUG Rating	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
RW	4000K/5000K Lumens	6,517	12,735	19,002	25,107	31,109	37,227	44,025	49,883	55,644	61,607
	3000K Lumens	6,162	12,040	17,965	23,738	29,413	35,197	41,623	47,163	52,609	58,247
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4
AFL	4000K/5000K Lumens	6,541	12,781	19,072	25,199	31,221	37,362	44,185	50,065	55,846	61,831
	3000K Lumens	6,184	12,084	18,032	23,825	29,519	35,325	41,775	47,334	52,801	58,459
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4

* Nominal data for 70 CRI.

CONTROL OPTIONS

0-10V (DIM)
This fixture is offered standard with 0-10V dimming driver(s). The DIM option provides 0-10V dimming wire leads for use with a lighting control panel or other control method.

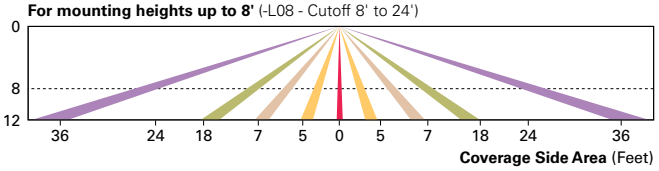
Photocontrol (P, R and PER7)
Optional button-type photocontrol (P) and photocontrol receptacles (R and PER7) provide a flexible solution to enable "dusk-to-dawn" lighting by sensing light levels. Advanced control systems compatible with NEMA 7-pin standards can be utilized with the PER7 receptacle.

After Hours Dim (AHD)
This feature allows photocontrol-enabled luminaires to achieve additional energy savings by dimming during scheduled portions of the night. The dimming profile will automatically take effect after a "dusk-to-dawn" period has been calculated from the photocontrol input. Specify the desired dimming profile for a simple, factory-shipped dimming solution requiring no external control wiring. Reference the After Hours Dim supplemental guide for additional information.

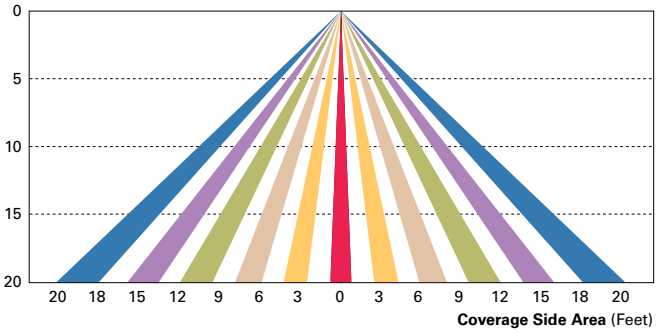
Dimming Occupancy Sensor (MS/DIM-LXX, MS/X-LXX and MS-LXX)
These sensors are factory installed in the luminaire housing. When the MS/DIM-LXX sensor option is selected, the occupancy sensor is connected to a dimming driver and the entire luminaire dims when there is no activity detected. When activity is detected, the luminaire returns to full light output. The MS/DIM sensor is factory preset to dim down to approximately 50 percent power with a time delay of five minutes. The MS-LXX sensor is factory preset to turn the luminaire off after five minutes of no activity. The MS/X-LXX is also preset for five minutes and only controls the specified number of light engines to maintain steady output from the remaining light engines.

These occupancy sensors includes an integral photocell that can be activated with the FSIR-100 accessory for "dusk-to-dawn" control or daylight harvesting - the factory preset is OFF. The FSIR-100 is a wireless tool utilized for changing the dimming level, time delay, sensitivity and other parameters. A variety of sensor lens are available to optimize the coverage. pattern for mounting heights from 8'-40'.

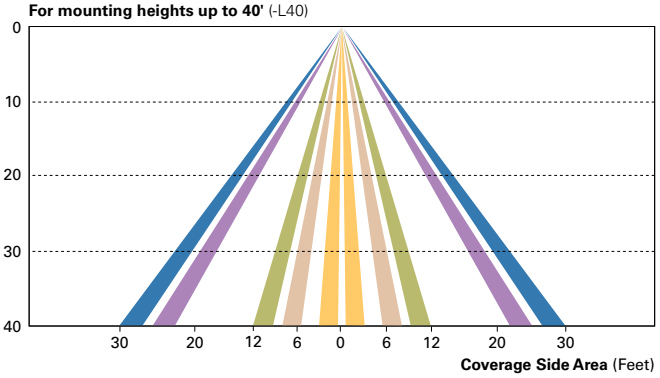
For mounting heights up to 8' (-L08 - Cutoff 8' to 24')



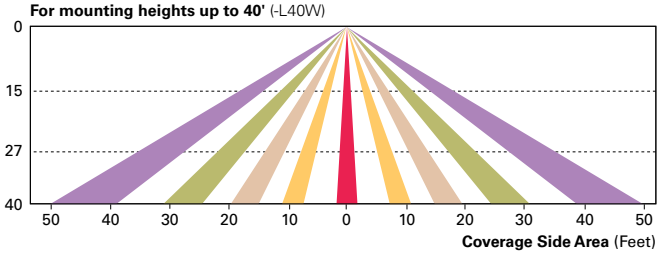
For mounting heights up to 20' (-L20)



For mounting heights up to 40' (-L40)

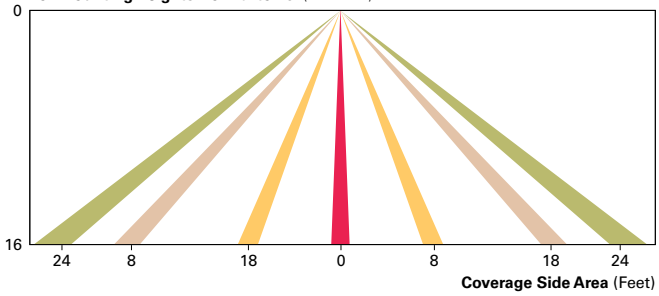


For mounting heights up to 40' (-L40W)

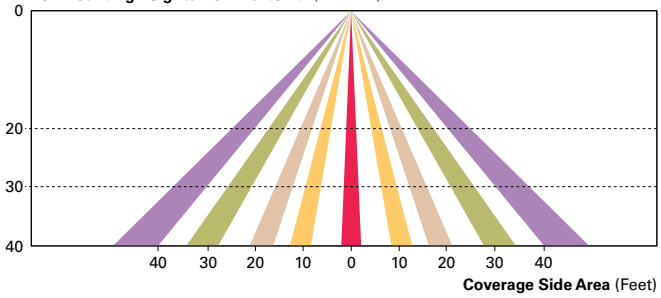


LumaWatt Pro Wireless Control and Monitoring System (LWR-LW and LWR-LN)
The Eaton's LumaWatt Pro powered by Enlighted is a connected lighting solution that combines a broad selection of energy-efficient LED luminaires with a powerful integrated wireless sensor system. The sensor controls the lighting system in compliance with the latest energy codes and collects valuable data about building performance and use. Software applications turn the granular data into information through energy dashboards and specialized apps that make it simple and help optimize the use of building resources, beyond lighting.

For mounting heights from 8' to 16' (LWR-LW)



For mounting heights from 16' to 40' (LWR-LN)



WaveLinx Wireless Outdoor Lighting Control Module (WOLC-7P-10A)
The 7-pin wireless outdoor lighting control module enables WaveLinx to control outdoor area, site and flood lighting. WaveLinx controls outdoor lighting using schedules to provide ON, OFF and dimming controls based on astronomic or time schedules based on a 7 day week.

LumenSafe Integrated Network Security Camera (LD)
Eaton brings ease of camera deployment to a whole new level. No additional wiring is needed beyond providing line power to the luminaire. A variety of networking options allows security integrators to design the optimal solution for active surveillance. As the ideal solution to meet the needs for active surveillance, the LumenSafe integrated network camera is a streamlined, outdoor-ready fixed dome that provides HDTV 1080p video. This IP camera is optimally designed for deployment in the video management system or security software platform of choice.

ORDERING INFORMATION

Sample Number: GLEON-AF-04-LED-E1-T3-GM-QM

Product Family [1, 2]	Light Engine	Number of Light Squares [3]	Lamp Type	Voltage	Distribution	Color	Mounting
GLEON=Galleon	**AF**=1A Drive Current	**01**=1 **02**=2 **03**=3 **04**=4 **05**=5 [4] **06**=6 **07**=7 [5] **08**=8 [5] **09**=9 [6] **10**=10 [6]	**LED**=Solid State Light Emitting Diodes	**E1**=120-277V **347**=347V [7] **480**=480V [7, 8]	**T2**=Type II **T2R**=Type II Roadway **T3**=Type III **T3R**=Type III Roadway **T4FT**=Type IV Forward Throw **T4W**=Type IV Wide **5NQ**=Type V Narrow **5MQ**=Type V Square Medium **5WQ**=Type V Square Wide **SL2**=Type II w/Spill Control ~~**SL3**=Type III w/Spill Control~~ **SL4**=Type IV w/Spill Control **SLL**=90° Spill Light Eliminator Left **SLR**=90° Spill Light Eliminator Right **RW**=Rectangular Wide Type I **AFL**=Automotive Frontline	**AP**=Grey **BZ**=Bronze **BK**=Black **DP**=Dark Platinum **GM**=Graphite Metallic **WH**=White	**[Blank]**=Arm for Round or Square Pole **EA**=Extended Arm [9] **MA**=Mast Arm Adapter [10] **WM**=Wall Mount **QM**=Quick Mount Arm (Standard Length) [11] **QMEA**=Quick Mount Arm (Extended Length) [12]

Options (Add as Suffix)

7027=70 CRI 2700K [13]
7030=70 CRI 3000K [13]
8030=80 CRI 3000K [14]
7050=70 CRI 5000K [13]
7060=70 CRI 6000K [13]
600=Drive Current Factory Set to Nominal 600mA [15]
800=Drive Current Factory Set to Nominal 800mA [15]
1200=Drive Current Factory Set to Nominal 1200mA [15, 16]
F=Single Fuse (120, 277 or 347V. Must Specify Voltage)
FF=Double Fuse (208, 240 or 480V. Must Specify Voltage)
2L=Two Circuits [17, 18]
DIM=External 0-10V Dimming Leads [19, 20]
P=Button Type Photocontrol (120, 208, 240 or 277V. Must Specify Volatage) [21]
PER7=NEMA 7-PIN Twistlock Photocontrol Receptacle [21]
R=NEMA Twistlock Photocontrol Receptacle [21]
AHD145=After Hours Dim, 5 Hours [22]
AHD245=After Hours Dim, 6 Hours [22]
AHD255=After Hours Dim, 7 Hours [22]
AHD355=After Hours Dim, 8 Hours [22]
HA=50°C High Ambient [23]
MS/DIM-L08=Motion Sensor for Dimming Operation, Maximum 8' Mounting Height [24, 25]
MS/DIM-L20=Motion Sensor for Dimming Operation, 9' - 20' Mounting Height [24, 26]
MS/DIM-L40=Motion Sensor for Dimming Operation, 21' - 40' Mounting Height [24, 27]
MS/DIM-L40W=Motion Sensor for Dimming Operation, 21' - 40' Mounting Height (Wide Range) [24, 28]
MS/X-L08=Bi-Level Motion Sensor, Maximum 8' Mounting Height [24, 25, 29]
MS/X-L20=Bi-Level Motion Sensor, 9' - 20' Mounting Height [24, 26, 29]
MS/X-L40=Bi-Level Motion Sensor, 21' - 40' Mounting Height [22, 27, 29]
MS/X-L40W=Bi-Level Motion Sensor, 21' - 40' Mounting Height (Wide Range) [24, 28, 29]
MS-L08=Motion Sensor for ON/OFF Operation, Maximum 8' Mounting Height [24, 25]
MS-L20=Motion Sensor for ON/OFF Operation, 9' - 20' Mounting Height [24, 26]
MS-L40=Motion Sensor for ON/OFF Operation, 21' - 40' Mounting Height [24, 27]
MS-L40W=Motion Sensor for ON/OFF Operation, 21' - 40' Mounting Height (Wide Range) [24, 28]
LWR-LW=LumaWatt Pro Wireless Sensor, Wide Lens for 8' - 16' Mounting Height [30]
LWR-LN=LumaWatt Pro Wireless Sensor, Narrow Lens for 16' - 40' Mounting Height [30]
L90=Optics Rotated 90° Left
R90=Optics Rotated 90° Right
MT=Factory Installed Mesh Top
TH=Tool-less Door Hardware
LCF=Light Square Trim Plate Painted to Match Housing [31]
HSS=Factory Installed House Side Shield [32]
CE=CE Marking [33]

Accessories (Order Separately)

OA/RA1016=NEMA Photocontrol Multi-Tap - 105-285V
OA/RA1027=NEMA Photocontrol - 480V
OA/RA1201=NEMA Photocontrol - 347V
OA/RA1013=Photocontrol Shorting Cap
OA/RA1014=120V Photocontrol
MA1252=10kV Surge Module Replacement
MA1036-XX=Single Tenon Adapter for 2-3/8" O.D. Tenon
MA1037-XX=2@180° Tenon Adapter for 2-3/8" O.D. Tenon
MA1197-XX=3@120° Tenon Adapter for 2-3/8" O.D. Tenon
MA1188-XX=4@90° Tenon Adapter for 2-3/8" O.D. Tenon
MA1189-XX=2@90° Tenon Adapter for 2-3/8" O.D. Tenon
MA1190-XX=3@90° Tenon Adapter for 2-3/8" O.D. Tenon
MA1191-XX=2@120° Tenon Adapter for 2-3/8" O.D. Tenon
MA1038-XX=Single Tenon Adapter for 3-1/2" O.D. Tenon
MA1039-XX=2@180° Tenon Adapter for 3-1/2" O.D. Tenon
MA1192-XX=3@120° Tenon Adapter for 3-1/2" O.D. Tenon
MA1193-XX=4@90° Tenon Adapter for 3-1/2" O.D. Tenon
MA1194-XX=2@90° Tenon Adapter for 3-1/2" O.D. Tenon
MA1195-XX=3@90° Tenon Adapter for 3-1/2" O.D. Tenon
FSIR-100=Wireless Configuration Tool for Occupancy Sensor [24]
GLEON-MT1=Field Installed Mesh Top for 1-4 Light Squares
GLEON-MT2=Field Installed Mesh Top for 5-6 Light Squares
GLEON-MT3=Field Installed Mesh Top for 7-8 Light Squares
GLEON-MT4=Field Installed Mesh Top for 9-10 Light Squares
GLEON-QM=Quick Mount Arm Kit [10]
GLEON-QMEA=Quick Mount Extended Arm Kit [11]
LS/HSS=Field Installed House Side Shield [32, 33]
WOLC-7P-10A=WaveLinx Outdoor Control Module (7-pin) [35]

NOTES:
1 Customer is responsible for engineering analysis to confirm pole and fixture compatibility for all applications. Refer to our white paper WP513001EN for additional support information. **2** DesignLights Consortium® Qualified. Refer to www.designlights.org Qualified Products List under Family Models for details. **3** Standard 4000K CCT and minimum 70 CRI. **4** Not compatible with MS/4-LXX or MS/1-LXX sensors. **5** Not compatible with extended quick mount arm (QMEA). **6** Not compatible with standard quick mount arm (QM) or extended quick mount arm (QMEA). **7** Requires the use of an internal step down transformer when combined with sensor options. Not available with sensor at 1200mA. Not available in combination with the HA high ambient and sensor options at 1A. **8** Only for use with 480V Wye systems. Per NEC, not for use with ungrounded systems, impedance grounded systems or corner grounded systems (commonly known as Three Phase Three Wire Delta, Three Phase High Leg Delta and Three Phase Corner Grounded Delta systems). **9** May be required when two or more luminaires are oriented on a 90° or 120° drilling pattern. Refer to arm mounting requirement table. **10** Factory installed. **11** Maximum 8 light squares. **12** Maximum 6 light squares.
13 Extended lead times apply. Use dedicated IES files for 2700K, 3000K, 5000K and 6000K when performing layouts. These files are published on the Galleon luminaire product page on the website. **14** Extended lead times
apply. Use dedicated IES files for 2700K, 3000K, 5000K and 6000K when performing layouts. These files are published on the Galleon luminaire product page on the website. **15** 1 Amp standard. Use dedicated IES files for 600mA, 800mA and 1200mA when performing layouts. These files are published on the Galleon luminaire product page on the website. **16** Not available with HA option. **17** 2L is not available with MS, MS/X or MS/DIM at 347V or 480V. 2L in AF-02 through AF-04 requires a larger housing, normally used for AF-05 or AF-06. Extended arm option may be required when mounting two or more fixtures per pole at 90° or 120°. Refer to arm mounting requirement table. **18** Not available with LumaWatt Pro wireless sensors. **19** Cannot be used with other control options. **20** Low voltage control lead brought out 18" outside fixture. **21** Not available if any "MS" sensor is selected. Motion sensor has an integral photocell. **22** Requires the use of P photocontrol or the PER7 or R photocontrol receptacle with photocontrol accessory. See After Hours Dim supplemental guide for additional information. **23** 50°C lumen maintenance data applies to 600mA, 800mA and 1A drive currents. **24** The FSIR-100 configuration tool is required to adjust parameters including high and low modes, sensitivity, time delay, cutoff and more. Consult your lighting representative at Eaton for more information. **25** Approximately 22' detection diameter at 8' mounting height. **26** Approximately 40' detection diameter at 20' mounting height. **27** Approximately 60' detection diameter at 40' mounting height. **28** Approximately 100' detection diameter at 40' mounting height. **29** Replace X with number of Light Squares operating in low output mode. **30** LumaWatt Pro wireless sensors are factory installed only requiring network components LWP-EM-1, LWP-GW-1 and LWP-PoE8 in appropriate quantities. See www.eaton.com/lighting for LumaWatt Pro application information. **31** Not available with house side shield (HSS). **32** Only for use with SL2, SL3, SL4 and AFL distributions. The Light Square trim plate is painted black when the HSS option is selected. **33** CE is not available with the LWR, MS, MS/X, MS/DIM, P, R or PER7 options. Available in 120-277V only. **34** One required for each Light Square. **35** Requires 7-pin NEMA twistlock photocontrol receptacle. The WOLC-7 cannot be used in conjunction with additional sensors or controls.

LumenSafe Integrated Network Security Camera Technology Options (Add as Suffix)

Product Family	Camera Type	Data Backhaul	
L=LumenSafe Technology* LumenSafe Technology CLICK HERE	**D**=Dome Camera	**C**=Cellular, Customer Installed SIM Card **A**=Cellular, Factory Installed AT&T SIM Card **V**=Cellular, Factory Installed Verizon SIM Card **S**=Cellular, Factory Installed Sprint SIM Card	**R**=Cellular, Factory Installed Rogers SIM Card **W**=Wi-Fi Networking w/ Omni-Directional Antenna **E**=Ethernet Networking

*Consult LumenSafe system pages for additional details and compatibility. Not available with 9-10 light square housing. Not available with 347V, 480V or high ambient options.

McGraw-Edison

DESCRIPTION

The Galleon™ LED luminaire delivers exceptional performance in a highly scalable, low-profile design. Patented, high-efficiency AccuLED Optics™ system provides uniform and energy conscious illumination to walkways, parking lots, roadways, building areas and security lighting applications. IP66 rated and UL/cUL Listed for wet locations.

Catalog #		Type
Project		L3
Comments		Date
Prepared by		

SPECIFICATION FEATURES

Construction
Extruded aluminum driver enclosure thermally isolated from Light Squares for optimal thermal performance. Heavy-wall, die-cast aluminum end caps enclose housing and die-cast aluminum heat sinks. A unique, patent pending interlocking housing and heat sink provides scalability with superior structural rigidity. 3G vibration tested and rated. Optional tool-less hardware available for ease of entry into electrical chamber. Housing is IP66 rated.

Optics
Patented, high-efficiency injection-molded AccuLED Optics technology. Optics are precisely designed to shape the distribution maximizing efficiency and application spacing. AccuLED Optics create consistent distributions with the scalability to meet customized application requirements. Offered standard in 4000K (+/- 275K) CCT 70 CRI. Optional 3000K, 5000K and 6000K CCT.

Electrical
LED drivers are mounted to removable tray assembly for ease of maintenance. 120-277V 50/60Hz, 347V 60Hz or 480V 60Hz operation. 480V is compatible for use with 480V Wye systems only. Standard with 0-10V dimming. Shipped standard with Eaton proprietary circuit module designed to withstand 10kV of transient line surge. The Galleon LED luminaire is suitable for operation in -40°C to 40°C ambient environments. For applications with ambient temperatures exceeding 40°C, specify the HA (High Ambient) option. Light Squares are IP66 rated. Greater than 90% lumen maintenance expected at 60,000 hours. Available in standard 1A drive current and optional 600mA, 800mA and 1200mA drive currents (nominal).

Mounting
STANDARD ARM MOUNT: Extruded aluminum arm includes internal bolt guides allowing for easy positioning of fixture during mounting. When mounting two or more luminaires at 90° and 120° apart, the EA extended arm may be required. Refer to the arm mounting requirement table. Round pole adapter included. For wall mounting, specify wall mount bracket option. QUICK MOUNT ARM: Adapter is bolted directly to the pole. Quick mount arm slide into place on the adapter and is secured via two screws, facilitating quick and easy installation. The versatile, patent pending, quick mount arm accommodates multiple drill patterns ranging from 1-1/2" to 4-7/8". Removal of the door on the quick mount arm enables wiring of the fixture without having to access the driver compartment. A knock-out enables round pole mounting.

Finish
Housing finished in super durable TGIC polyester powder coat paint, 2.5 mil nominal thickness for superior protection against fade and wear. Heat sink is powder coated black. Standard housing colors include black, bronze, grey, white, dark platinum and graphite metallic. RAL and custom color matches available.

Warranty
Five-year warranty.

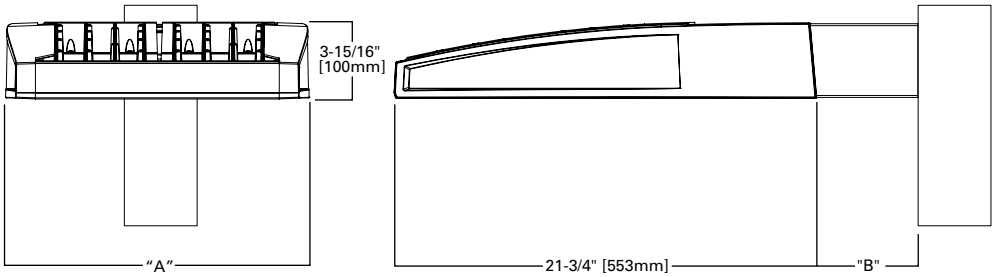
GLEON
GALLEON LED

1-10 Light Squares
Solid State LED

AREA/SITE LUMINAIRE

LumenSafe Technology
CLICK HERE

DIMENSIONS



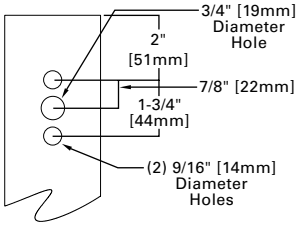
DIMENSION DATA

Number of Light Squares	"A" Width	"B" Standard Arm Length	"B" Optional Arm Length [1]	Weight with Arm (lbs.)	EPA with Arm [2] (Sq. Ft.)
1-4	15-1/2" (394mm)	7" (178mm)	10" (254mm)	33 (15.0 kgs.)	0.96
5-6	21-5/8" (549mm)	7" (178mm)	10" (254mm)	44 (20.0 kgs.)	1.00
7-8	27-5/8" (702mm)	7" (178mm)	13" (330mm)	54 (24.5 kgs.)	1.07
9-10	33-3/4" (857mm)	7" (178mm)	16" (406mm)	63 (28.6 kgs.)	1.12

NOTES: 1. Optional arm length to be used when mounting two fixtures at 90° on a single pole. **2.** EPA calculated with optional arm length.

DRILLING PATTERN

TYPE "N"



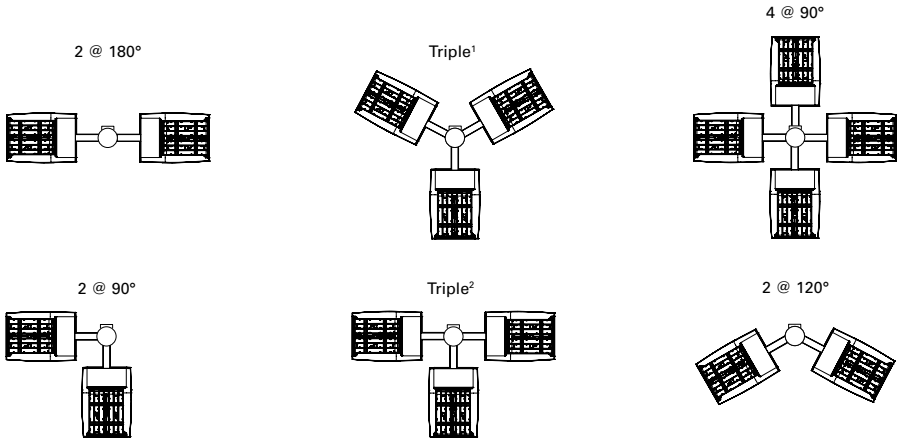
CERTIFICATION DATA
UL/cUL Wet Location Listed
ISO 9001
LM79 / LM80 Compliant
3G Vibration Rated
IP66 Rated
DesignLights Consortium® Qualified*

ENERGY DATA
Electronic LED Driver
>0.9 Power Factor
<20% Total Harmonic Distortion
120V-277V 50/60Hz
347V & 480V 60Hz
-40°C Min. Temperature
40°C Max. Temperature
50°C Max. Temperature (HA Option)

*www.designlights.org

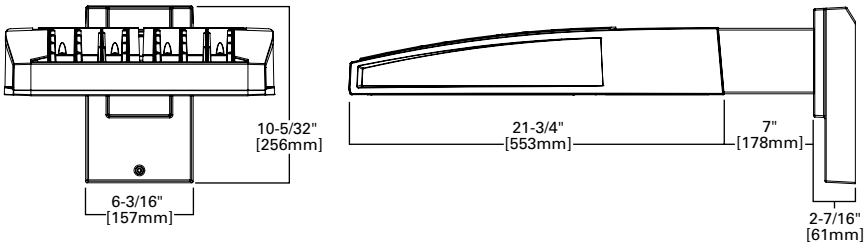
ARM MOUNTING REQUIREMENTS

Configuration	90° Apart	120° Apart
GLEON-AF-01	7" Arm (Standard)	7" Arm (Standard)
GLEON-AF-02	7" Arm (Standard)	7" Arm (Standard)
GLEON-AF-03	7" Arm (Standard)	7" Arm (Standard)
GLEON-AF-04	7" Arm (Standard)	7" Arm (Standard)
GLEON-AF-05	10" Extended Arm (Required)	7" Arm (Standard)
GLEON-AF-06	10" Extended Arm (Required)	7" Arm (Standard)
GLEON-AF-07	13" Extended Arm (Required)	13" Extended Arm (Required)
GLEON-AF-08	13" Extended Arm (Required)	13" Extended Arm (Required)
GLEON-AF-09	16" Extended Arm (Required)	16" Extended Arm (Required)
GLEON-AF-10	16" Extended Arm (Required)	16" Extended Arm (Required)

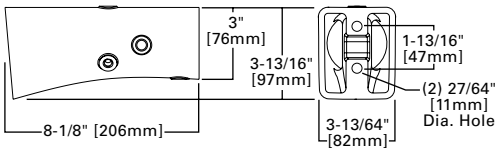


NOTES: 1 Round poles are 3 @ 120°. Square poles are 3 @ 90°. **2** Round poles are 3 @ 90°.

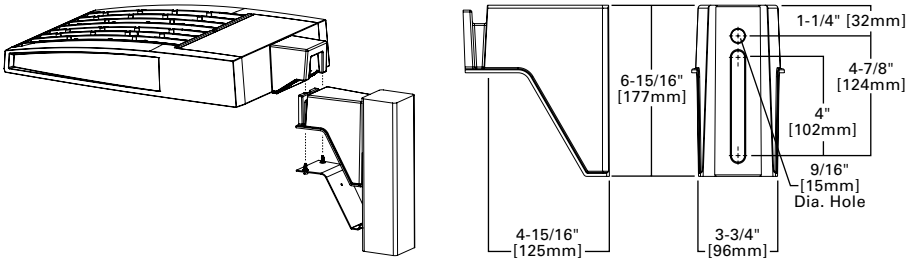
STANDARD WALL MOUNT

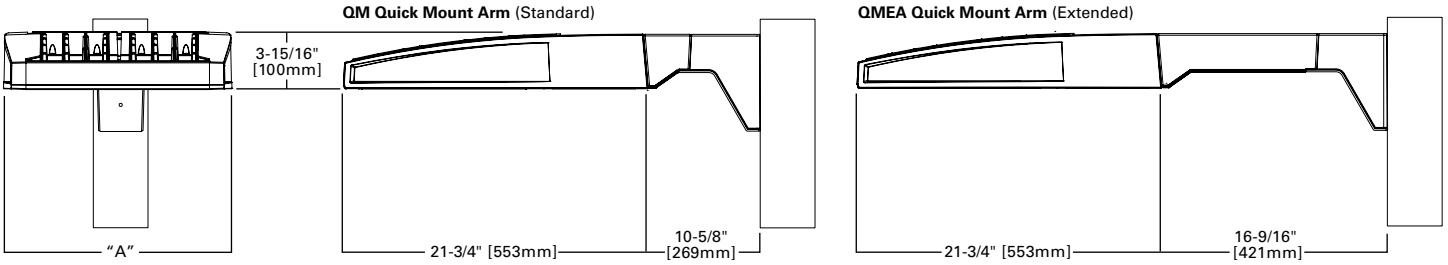


MAST ARM MOUNT



QUICK MOUNT ARM (INCLUDES FIXTURE ADAPTER)



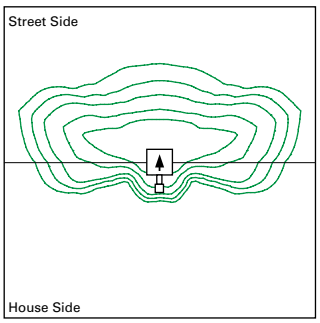


QUICK MOUNT ARM DATA

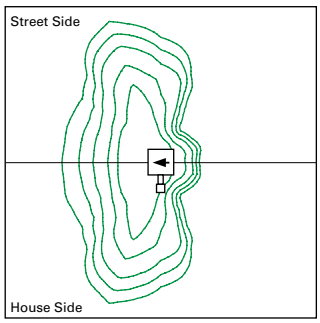
Number of Light Squares [1, 2]	"A" Width	Weight with QM Arm (lbs.)	Weight with QMEA Arm (lbs.)	EPA (Sq. Ft.)
1-4	15-1/2" (394mm)	35 (15.91 kgs.)	38 (17.27 kgs.)	1.11
5-6 [3]	21-5/8" (549mm)	46 (20.91 kgs.)	49 (22.27 kgs.)	
7-8	27-5/8" (702mm)	56 (25.45 kgs.)	59 (26.82 kgs.)	

NOTES: 1 QM option available with 1-8 light square configurations. **2** QMEA option available with 1-6 light square configurations. **3** QMEA arm to be used when mounting two fixtures at 90° on a single pole.

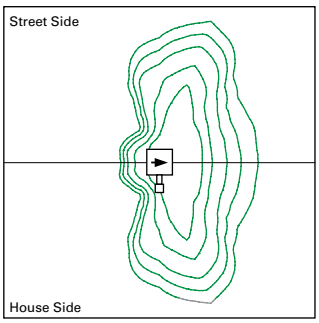
OPTIC ORIENTATION



Standard

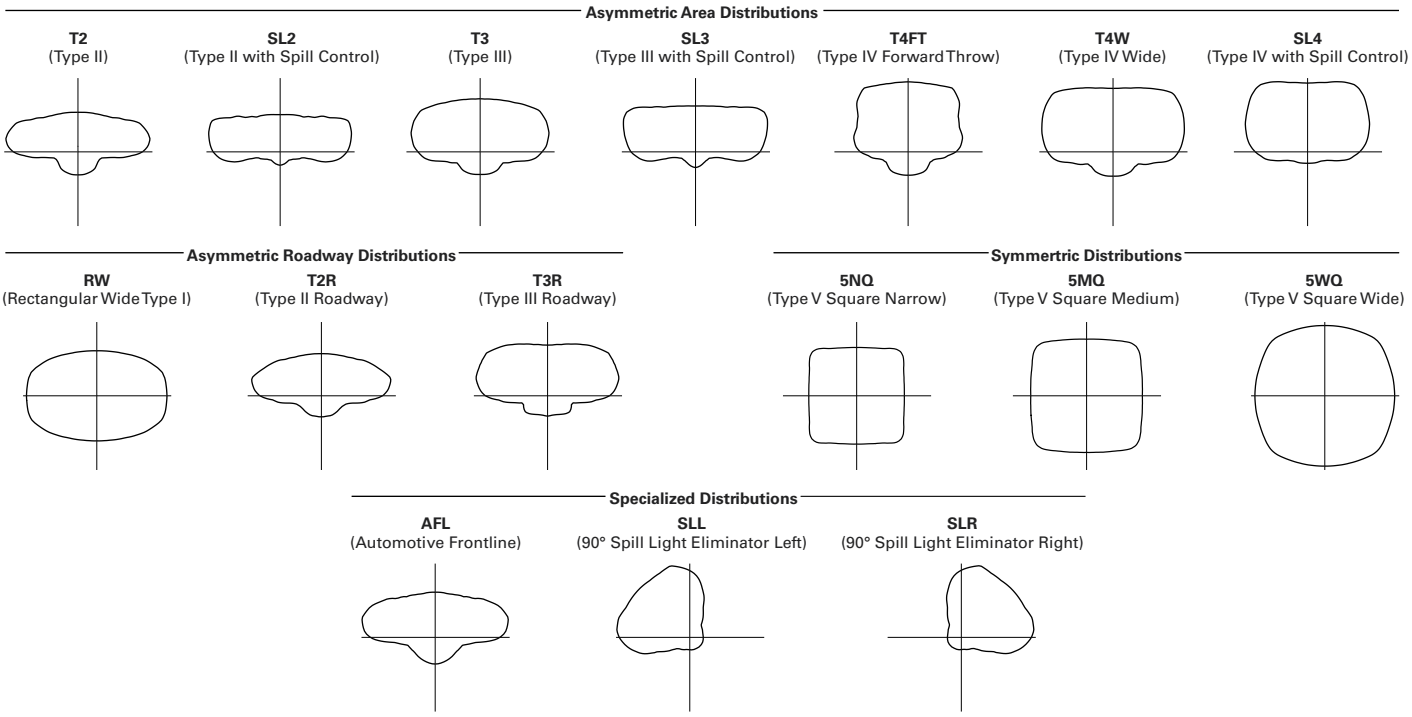


Optics Rotated Left @ 90° [L90]



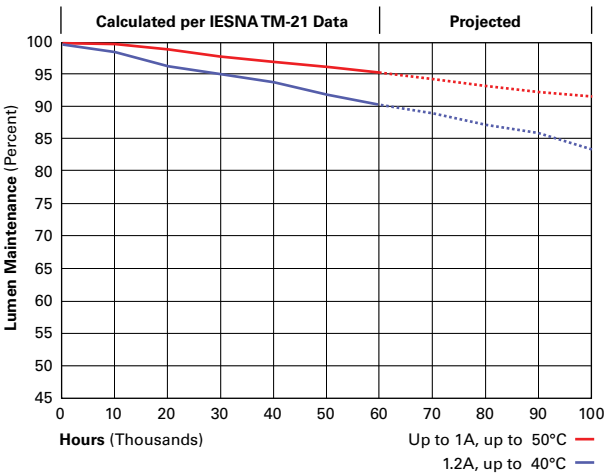
Optics Rotated Right @ 90° [R90]

OPTICAL DISTRIBUTIONS



LUMEN MAINTENANCE

Drive Current	Ambient Temperature	TM-21 Lumen Maintenance (60,000 Hours)	Projected L70 (Hours)
Up to 1A	Up to 50°C	> 95%	416,000
1.2A	Up to 40°C	> 90%	205,000



LUMEN MULTIPLIER

Ambient Temperature	Lumen Multiplier
0°C	1.02
10°C	1.01
25°C	1.00
40°C	0.99
50°C	0.97

NOMINAL POWER LUMENS (1A)

Number of Light Squares		1	2	3	4	5	6	7	8	9	10
Nominal Power (Watts)		59	113	166	225	279	333	391	445	501	558
Input Current @ 120V (A)		0.51	1.02	1.53	2.03	2.55	3.06	3.56	4.08	4.60	5.07
Input Current @ 208V (A)		0.29	0.56	0.82	1.11	1.37	1.64	1.93	2.19	2.46	2.75
Input Current @ 240V (A)		0.26	0.48	0.71	0.96	1.19	0.41	1.67	1.89	2.12	2.39
Input Current @ 277V (A)		0.23	0.42	0.61	0.83	1.03	1.23	1.45	1.65	1.84	2.09
Input Current @ 347V (A)		0.17	0.32	0.50	0.64	0.82	1.00	1.14	1.32	1.50	1.68
Input Current @ 480V (A)		0.14	0.24	0.37	0.48	0.61	0.75	0.91	0.99	1.12	1.28
Optics											
T2	4000K/5000K Lumens	6,256	12,225	18,242	24,104	29,865	35,739	42,265	47,888	53,420	59,144
	3000K Lumens	5,915	11,559	17,248	22,789	28,236	33,790	39,960	45,277	50,506	55,919
	BUG Rating	B1-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
T2R	4000K/5000K Lumens	6,642	12,979	19,366	25,589	31,705	37,941	44,870	50,840	56,711	62,789
	3000K Lumens	6,280	12,271	18,311	24,193	29,976	35,872	42,423	48,068	53,619	59,365
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5
T3	4000K/5000K Lumens	6,377	12,461	18,593	24,568	30,439	36,426	43,077	48,810	54,447	60,282
	3000K Lumens	-	-	-	-	-	-	-	-	-	-
	BUG Rating	B1-U0-G2	B2-U0-G2	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
T3R	4000K/5000K Lumens	6,518	12,739	19,006	25,113	31,116	37,235	44,036	49,895	55,658	61,622
	3000K Lumens	6,029	11,781	17,579	23,229	28,779	34,440	40,729	46,148	51,478	56,995
	BUG Rating	B1-U0-G2	B2-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
T4FT	4000K/5000K Lumens	6,414	12,533	18,702	24,710	30,616	36,637	43,328	49,093	54,763	60,631
	3000K Lumens	6,064	11,849	17,681	23,363	28,946	34,638	40,966	46,417	51,776	57,325
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
T4W	4000K/5000K Lumens	6,331	12,372	18,459	24,391	30,221	36,163	42,769	48,459	54,056	59,849
	3000K Lumens	5,986	11,697	17,452	23,061	28,572	34,192	40,436	45,817	51,108	56,585
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
SL2	4000K/5000K Lumens	6,245	12,205	18,212	24,062	29,813	35,677	42,192	47,807	53,326	59,042
	3000K Lumens	5,904	11,539	17,218	22,750	28,187	33,732	39,891	45,199	50,418	55,822
	BUG Rating	B1-U0-G2	B2-U0-G3	B3-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5	B4-U0-G5
SL3	4000K/5000K Lumens	6,376	12,460	18,591	24,564	30,436	36,421	43,072	48,803	54,439	60,273
	3000K Lumens	6,028	11,780	17,578	23,224	28,776	34,435	40,723	46,141	51,471	56,986
	BUG Rating	B1-U0-G2	B2-U0-G3	B2-U0-G3	B3-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B4-U0-G5	B4-U0-G5
SL4	4000K/5000K Lumens	6,058	11,838	17,664	23,340	28,918	34,605	40,924	46,370	51,727	57,269
	3000K Lumens	5,727	11,193	16,701	22,067	27,341	32,718	38,692	43,841	48,906	54,146
	BUG Rating	B1-U0-G2	B1-U0-G3	B2-U0-G4	B2-U0-G4	B2-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
5NQ	4000K/5000K Lumens	6,577	12,851	19,176	25,336	31,392	37,566	44,426	50,337	56,151	62,170
	3000K Lumens	6,218	12,151	18,131	23,955	29,680	35,517	42,003	47,592	53,089	58,779
	BUG Rating	B2-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4
5MQ	4000K/5000K Lumens	6,697	13,088	19,528	25,803	31,970	38,258	45,243	51,264	57,185	63,313
	3000K Lumens	6,332	12,374	18,463	24,395	30,227	36,171	42,776	48,468	54,066	59,861
	BUG Rating	B3-U0-G1	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5
5WQ	4000K/5000K Lumens	6,715	13,122	19,580	25,871	32,055	38,360	45,365	51,401	57,337	63,482
	3000K Lumens	6,348	12,406	18,513	24,461	30,307	36,268	42,891	48,599	54,210	60,021
	BUG Rating	B3-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G5	B5-U0-G5	B5-U0-G5	B5-U0-G5
SLL/SLR	4000K/5000K Lumens	5,604	10,949	16,337	21,586	26,745	32,004	37,850	42,886	47,838	52,965
	3000K Lumens	5,298	10,351	15,446	20,409	25,287	30,258	35,786	40,547	45,229	50,077
	BUG Rating	B1-U0-G2	B1-U0-G3	B2-U0-G3	B2-U0-G4	B3-U0-G4	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5	B3-U0-G5
RW	4000K/5000K Lumens	6,517	12,735	19,002	25,107	31,109	37,227	44,025	49,883	55,644	61,607
	3000K Lumens	6,162	12,040	17,965	23,738	29,413	35,197	41,623	47,163	52,609	58,247
	BUG Rating	B3-U0-G1	B3-U0-G2	B4-U0-G2	B4-U0-G2	B5-U0-G3	B5-U0-G3	B5-U0-G3	B5-U0-G4	B5-U0-G4	B5-U0-G4
AFL	4000K/5000K Lumens	6,541	12,781	19,072	25,199	31,221	37,362	44,185	50,065	55,846	61,831
	3000K Lumens	6,184	12,084	18,032	23,825	29,519	35,325	41,775	47,334	52,801	58,459
	BUG Rating	B1-U0-G1	B2-U0-G2	B2-U0-G2	B3-U0-G2	B3-U0-G3	B3-U0-G3	B3-U0-G3	B3-U0-G3	B4-U0-G4	B4-U0-G4

* Nominal data for 70 CRI.

CONTROL OPTIONS

0-10V (DIM)
This fixture is offered standard with 0-10V dimming driver(s). The DIM option provides 0-10V dimming wire leads for use with a lighting control panel or other control method.

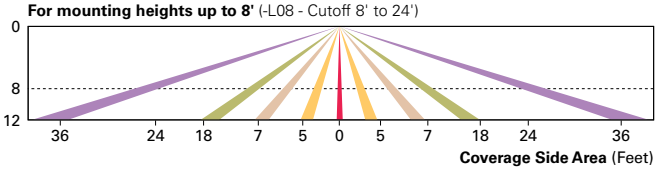
Photocontrol (P, R and PER7)
Optional button-type photocontrol (P) and photocontrol receptacles (R and PER7) provide a flexible solution to enable "dusk-to-dawn" lighting by sensing light levels. Advanced control systems compatible with NEMA 7-pin standards can be utilized with the PER7 receptacle.

After Hours Dim (AHD)
This feature allows photocontrol-enabled luminaires to achieve additional energy savings by dimming during scheduled portions of the night. The dimming profile will automatically take effect after a "dusk-to-dawn" period has been calculated from the photocontrol input. Specify the desired dimming profile for a simple, factory-shipped dimming solution requiring no external control wiring. Reference the After Hours Dim supplemental guide for additional information.

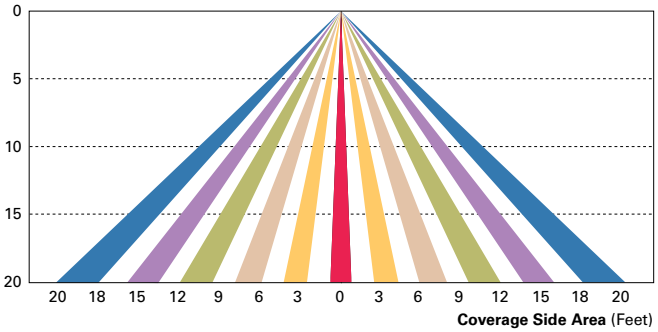
Dimming Occupancy Sensor (MS/DIM-LXX, MS/X-LXX and MS-LXX)
These sensors are factory installed in the luminaire housing. When the MS/DIM-LXX sensor option is selected, the occupancy sensor is connected to a dimming driver and the entire luminaire dims when there is no activity detected. When activity is detected, the luminaire returns to full light output. The MS/DIM sensor is factory preset to dim down to approximately 50 percent power with a time delay of five minutes. The MS-LXX sensor is factory preset to turn the luminaire off after five minutes of no activity. The MS/X-LXX is also preset for five minutes and only controls the specified number of light engines to maintain steady output from the remaining light engines.

These occupancy sensors includes an integral photocell that can be activated with the FSIR-100 accessory for "dusk-to-dawn" control or daylight harvesting - the factory preset is OFF. The FSIR-100 is a wireless tool utilized for changing the dimming level, time delay, sensitivity and other parameters. A variety of sensor lens are available to optimize the coverage. pattern for mounting heights from 8'-40'.

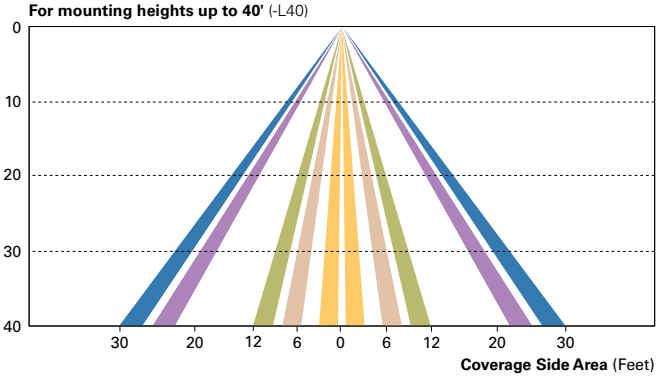
For mounting heights up to 8' (-L08 - Cutoff 8' to 24')



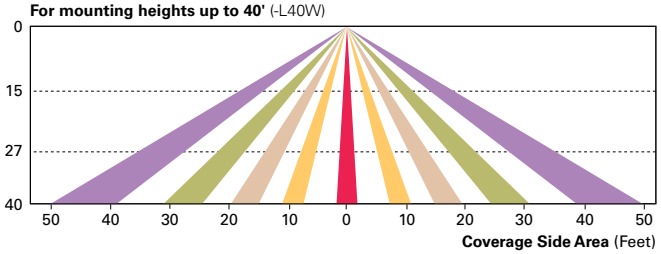
For mounting heights up to 20' (-L20)



For mounting heights up to 40' (-L40)

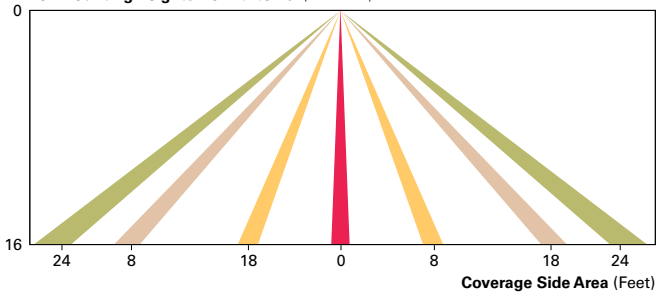


For mounting heights up to 40' (-L40W)

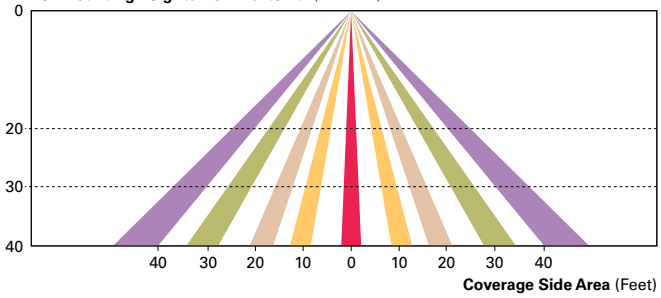


LumaWatt Pro Wireless Control and Monitoring System (LWR-LW and LWR-LN)
The Eaton's LumaWatt Pro powered by Enlighted is a connected lighting solution that combines a broad selection of energy-efficient LED luminaires with a powerful integrated wireless sensor system. The sensor controls the lighting system in compliance with the latest energy codes and collects valuable data about building performance and use. Software applications turn the granular data into information through energy dashboards and specialized apps that make it simple and help optimize the use of building resources, beyond lighting.

For mounting heights from 8' to 16' (LWR-LW)



For mounting heights from 16' to 40' (LWR-LN)



WaveLinx Wireless Outdoor Lighting Control Module (WOLC-7P-10A)
The 7-pin wireless outdoor lighting control module enables WaveLinx to control outdoor area, site and flood lighting. WaveLinx controls outdoor lighting using schedules to provide ON, OFF and dimming controls based on astronomic or time schedules based on a 7 day week.

LumenSafe Integrated Network Security Camera (LD)
Eaton brings ease of camera deployment to a whole new level. No additional wiring is needed beyond providing line power to the luminaire. A variety of networking options allows security integrators to design the optimal solution for active surveillance. As the ideal solution to meet the needs for active surveillance, the LumenSafe integrated network camera is a streamlined, outdoor-ready fixed dome that provides HDTV 1080p video. This IP camera is optimally designed for deployment in the video management system or security software platform of choice.

ORDERING INFORMATION

Sample Number: GLEON-AF-04-LED-E1-T3-GM-QM

Product Family [1, 2]	Light Engine	Number of Light Squares [3]	Lamp Type	Voltage	Distribution	Color	Mounting
GLEON=Galleon	**AF**=1A Drive Current	**01**=1 **02**=2 **03**=3 **04**=4 **05**=5 [4] **06**=6 **07**=7 [5] **08**=8 [5] **09**=9 [6] **10**=10 [6]	**LED**=Solid State Light Emitting Diodes	**E1**=120-277V **347**=347V [7] **480**=480V [7, 8]	**T2**=Type II **T2R**=Type II Roadway **T3**=Type III **T3R**=Type III Roadway **T4FT**=Type IV Forward Throw **T4W**=Type IV Wide **5NQ**=Type V Narrow **5MQ**=Type V Square Medium **5WQ**=Type V Square Wide **SL2**=Type II w/Spill Control **SL3**=Type III w/Spill Control **SL4**=Type IV w/Spill Control HOUSESIDE SHIELD - HSS **SLL**=90° Spill Light Eliminator Left **SLR**=90° Spill Light Eliminator Right **RW**=Rectangular Wide Type I **AFL**=Automotive Frontline	**AP**=Grey **BZ**=Bronze **BK**=Black **DP**=Dark Platinum **GM**=Graphite Metallic **WH**=White	**[Blank]**=Arm for Round or Square Pole **EA**=Extended Arm [9] **MA**=Mast Arm Adapter [10] **WM**=Wall Mount **QM**=Quick Mount Arm (Standard Length) [11] **QMEA**=Quick Mount Arm (Extended Length) [12]

Options (Add as Suffix)

7027=70 CRI 2700K [13]
7030=70 CRI 3000K [13]
8030=80 CRI 3000K [14]
7050=70 CRI 5000K [13]
7060=70 CRI 6000K [13]
600=Drive Current Factory Set to Nominal 600mA [15]
800=Drive Current Factory Set to Nominal 800mA [15]
1200=Drive Current Factory Set to Nominal 1200mA [15, 16]
F=Single Fuse (120, 277 or 347V. Must Specify Voltage)
FF=Double Fuse (208, 240 or 480V. Must Specify Voltage)
2L=Two Circuits [17, 18]
DIM=External 0-10V Dimming Leads [19, 20]
P=Button Type Photocontrol (120, 208, 240 or 277V. Must Specify Volatage) [21]
PER7=NEMA 7-PIN Twistlock Photocontrol Receptacle [21]
R=NEMA Twistlock Photocontrol Receptacle [21]
AHD145=After Hours Dim, 5 Hours [22]
AHD245=After Hours Dim, 6 Hours [22]
AHD255=After Hours Dim, 7 Hours [22]
AHD355=After Hours Dim, 8 Hours [22]
HA=50°C High Ambient [23]
MS/DIM-L08=Motion Sensor for Dimming Operation, Maximum 8' Mounting Height [24, 25]
MS/DIM-L20=Motion Sensor for Dimming Operation, 9' - 20' Mounting Height [24, 26]
MS/DIM-L40=Motion Sensor for Dimming Operation, 21' - 40' Mounting Height [24, 27]
MS/DIM-L40W=Motion Sensor for Dimming Operation, 21' - 40' Mounting Height (Wide Range) [24, 28]
MS/X-L08=Bi-Level Motion Sensor, Maximum 8' Mounting Height [24, 25, 29]
MS/X-L20=Bi-Level Motion Sensor, 9' - 20' Mounting Height [24, 26, 29]
MS/X-L40=Bi-Level Motion Sensor, 21' - 40' Mounting Height [22, 27, 29]
MS/X-L40W=Bi-Level Motion Sensor, 21' - 40' Mounting Height (Wide Range) [24, 28, 29]
MS-L08=Motion Sensor for ON/OFF Operation, Maximum 8' Mounting Height [24, 25]
MS-L20=Motion Sensor for ON/OFF Operation, 9' - 20' Mounting Height [24, 26]
MS-L40=Motion Sensor for ON/OFF Operation, 21' - 40' Mounting Height [24, 27]
MS-L40W=Motion Sensor for ON/OFF Operation, 21' - 40' Mounting Height (Wide Range) [24, 28]
LWR-LW=LumaWatt Pro Wireless Sensor, Wide Lens for 8' - 16' Mounting Height [30]
LWR-LN=LumaWatt Pro Wireless Sensor, Narrow Lens for 16' - 40' Mounting Height [30]
L90=Optics Rotated 90° Left
R90=Optics Rotated 90° Right
MT=Factory Installed Mesh Top
TH=Tool-less Door Hardware
LCF=Light Square Trim Plate Painted to Match Housing [31]
HSS=Factory Installed House Side Shield [32]
CE=CE Marking [33]

Accessories (Order Separately)

OA/RA1016=NEMA Photocontrol Multi-Tap - 105-285V
OA/RA1027=NEMA Photocontrol - 480V
OA/RA1201=NEMA Photocontrol - 347V
OA/RA1013=Photocontrol Shorting Cap
OA/RA1014=120V Photocontrol
MA1252=10kV Surge Module Replacement
MA1036-XX=Single Tenon Adapter for 2-3/8" O.D. Tenon
MA1037-XX=2@180° Tenon Adapter for 2-3/8" O.D. Tenon
MA1197-XX=3@120° Tenon Adapter for 2-3/8" O.D. Tenon
MA1188-XX=4@90° Tenon Adapter for 2-3/8" O.D. Tenon
MA1189-XX=2@90° Tenon Adapter for 2-3/8" O.D. Tenon
MA1190-XX=3@90° Tenon Adapter for 2-3/8" O.D. Tenon
MA1191-XX=2@120° Tenon Adapter for 2-3/8" O.D. Tenon
MA1038-XX=Single Tenon Adapter for 3-1/2" O.D. Tenon
MA1039-XX=2@180° Tenon Adapter for 3-1/2" O.D. Tenon
MA1192-XX=3@120° Tenon Adapter for 3-1/2" O.D. Tenon
MA1193-XX=4@90° Tenon Adapter for 3-1/2" O.D. Tenon
MA1194-XX=2@90° Tenon Adapter for 3-1/2" O.D. Tenon
MA1195-XX=3@90° Tenon Adapter for 3-1/2" O.D. Tenon
FSIR-100=Wireless Configuration Tool for Occupancy Sensor [24]
GLEON-MT1=Field Installed Mesh Top for 1-4 Light Squares
GLEON-MT2=Field Installed Mesh Top for 5-6 Light Squares
GLEON-MT3=Field Installed Mesh Top for 7-8 Light Squares
GLEON-MT4=Field Installed Mesh Top for 9-10 Light Squares
GLEON-QM=Quick Mount Arm Kit [10]
GLEON-QMEA=Quick Mount Extended Arm Kit [11]
LS/HSS=Field Installed House Side Shield [32, 33]
WOLC-7P-10A=WaveLinx Outdoor Control Module (7-pin) [35]

NOTES:
1 Customer is responsible for engineering analysis to confirm pole and fixture compatibility for all applications. Refer to our white paper WP513001EN for additional support information. **2** DesignLights Consortium® Qualified. Refer to www.designlights.org Qualified Products List under Family Models for details. **3** Standard 4000K CCT and minimum 70 CRI. **4** Not compatible with MS/4-LXX or MS/1-LXX sensors. **5** Not compatible with extended quick mount arm (QMEA). **6** Not compatible with standard quick mount arm (QM) or extended quick mount arm (QMEA). **7** Requires the use of an internal step down transformer when combined with sensor options. Not available with sensor at 1200mA. Not available in combination with the HA high ambient and sensor options at 1A. **8** Only for use with 480V Wye systems. Per NEC, not for use with ungrounded systems, impedance grounded systems or corner grounded systems (commonly known as Three Phase Three Wire Delta, Three Phase High Leg Delta and Three Phase Corner Grounded Delta systems). **9** May be required when two or more luminaires are oriented on a 90° or 120° drilling pattern. Refer to arm mounting requirement table. **10** Factory installed. **11** Maximum 8 light squares. **12** Maximum 6 light squares.
13 Extended lead times apply. Use dedicated IES files for 2700K, 3000K, 5000K and 6000K when performing layouts. These files are published on the Galleon luminaire product page on the website. **14** Extended lead times
apply. Use dedicated IES files for 2700K, 3000K, 5000K and 6000K when performing layouts. These files are published on the Galleon luminaire product page on the website. **15** 1 Amp standard. Use dedicated IES files for 600mA, 800mA and 1200mA when performing layouts. These files are published on the Galleon luminaire product page on the website. **16** Not available with HA option. **17** 2L is not available with MS, MS/X or MS/DIM at 347V or 480V. 2L in AF-02 through AF-04 requires a larger housing, normally used for AF-05 or AF-06. Extended arm option may be required when mounting two or more fixtures per pole at 90° or 120°. Refer to arm mounting requirement table. **18** Not available with LumaWatt Pro wireless sensors. **19** Cannot be used with other control options. **20** Low voltage control lead brought out 18" outside fixture. **21** Not available if any "MS" sensor is selected. Motion sensor has an integral photocell. **22** Requires the use of P photocontrol or the PER7 or R photocontrol receptacle with photocontrol accessory. See After Hours Dim supplemental guide for additional information. **23** 50°C lumen maintenance data applies to 600mA, 800mA and 1A drive currents. **24** The FSIR-100 configuration tool is required to adjust parameters including high and low modes, sensitivity, time delay, cutoff and more. Consult your lighting representative at Eaton for more information. **25** Approximately 22' detection diameter at 8' mounting height. **26** Approximately 40' detection diameter at 20' mounting height. **27** Approximately 60' detection diameter at 40' mounting height. **28** Approximately 100' detection diameter at 40' mounting height. **29** Replace X with number of Light Squares operating in low output mode. **30** LumaWatt Pro wireless sensors are factory installed only requiring network components LWP-EM-1, LWP-GW-1 and LWP-PoE8 in appropriate quantities. See www.eaton.com/lighting for LumaWatt Pro application information. **31** Not available with house side shield (HSS). **32** Only for use with SL2, SL3, SL4 and AFL distributions. The Light Square trim plate is painted black when the HSS option is selected. **33** CE is not available with the LWR, MS, MS/X, MS/DIM, P, R or PER7 options. Available in 120-277V only. **34** One required for each Light Square. **35** Requires 7-pin NEMA twistlock photocontrol receptacle. The WOLC-7 cannot be used in conjunction with additional sensors or controls.

LumenSafe Integrated Network Security Camera Technology Options (Add as Suffix)

Product Family	Camera Type	Data Backhaul	
L=LumenSafe Technology* LumenSafe Technology CLICK HERE	**D**=Dome Camera	**C**=Cellular, Customer Installed SIM Card **A**=Cellular, Factory Installed AT&T SIM Card **V**=Cellular, Factory Installed Verizon SIM Card **S**=Cellular, Factory Installed Sprint SIM Card	**R**=Cellular, Factory Installed Rogers SIM Card **W**=Wi-Fi Networking w/ Omni-Directional Antenna **E**=Ethernet Networking

*Consult LumenSafe system pages for additional details and compatibility. Not available with 9-10 light square housing. Not available with 347V, 480V or high ambient options.

Lumark

DESCRIPTION

The patented Lumark Crosstour™ LED Wall Pack Series of luminaries provides an architectural style with super bright, energy efficient LEDs. The low-profile, rugged die-cast aluminum construction, universal back box, stainless steel hardware along with a sealed and gasketed optical compartment make the Crosstour impervious to contaminants. The Crosstour wall luminaire is ideal for wall/surface, inverted mount for façade/canopy illumination, post/bollard, site lighting, floodlight and low level pathway illumination including stairs. Typical applications include building entrances, multi-use facilities, apartment buildings, institutions, schools, stairways and loading docks test.

		Type
Catalog #		L6
Project		
Comments		Date
Prepared by		

SPECIFICATION FEATURES

Construction
Slim, low-profile LED design with rugged one-piece, die-cast aluminum hinged removable door and back box. Matching housing styles incorporate both a small and medium design. The small housing is available in 12W, 18W and 26W. The medium housing is available in the 38W model. Patented secure lock hinge feature allows for safe and easy tool-less electrical connections with the supplied push-in connectors. Back box includes three half-inch, NPT threaded conduit entry points. The universal back box supports both the small and medium forms and mounts to standard 3-1/2" to 4" round and octagonal, 4" square, single gang and masonry junction boxes. Key hole gasket allows for adaptation to junction box or wall. External fin design extracts heat from the fixture surface. One-piece silicone gasket seals door and back box. Minimum 5" wide pole for site lighting application. Not recommended for car wash applications.

Optical
Silicone sealed optical LED chamber incorporates a custom engineered mirrored anodized reflector providing high-efficiency illumination. Optical assembly includes impact-resistant tempered glass and meets IESNA requirements for full cutoff compliance. Available in seven lumen packages; 5000K, 4000K and 3000K CCT.

Electrical
LED driver is mounted to the die-cast housing for optimal heat sinking. LED thermal management system incorporates both conduction and natural convection to transfer heat rapidly away from the LED source. 12W, 18W, 26W and 38W series operate in -40°C to 40°C [-40°F to 104°F]. High ambient 50°C models available. Crosstour luminaires maintain greater than 89% of initial light output after 72,000 hours of operation. Three half-inch NPT threaded conduit entry points allow for thru-branch wiring. Back box is an authorized electrical wiring compartment. Integral LED electronic driver incorporates surge protection. 120-277V 50/60Hz or 347V 60Hz models.

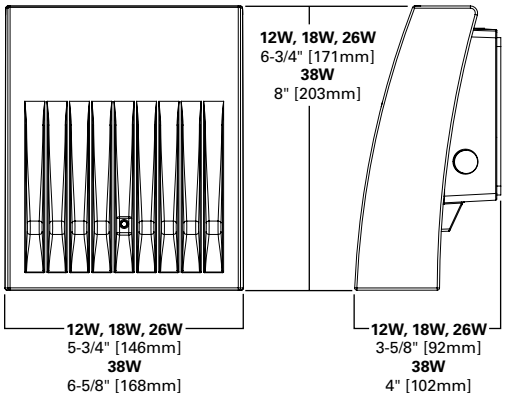
Finish
Crosstour is protected with a Super durable TGIC carbon bronze or summit white polyester powder coat paint. Super durable TGIC powder coat paint finishes withstand extreme climate conditions while providing optimal color and gloss retention of the installed life.

Warranty
Five-year warranty.

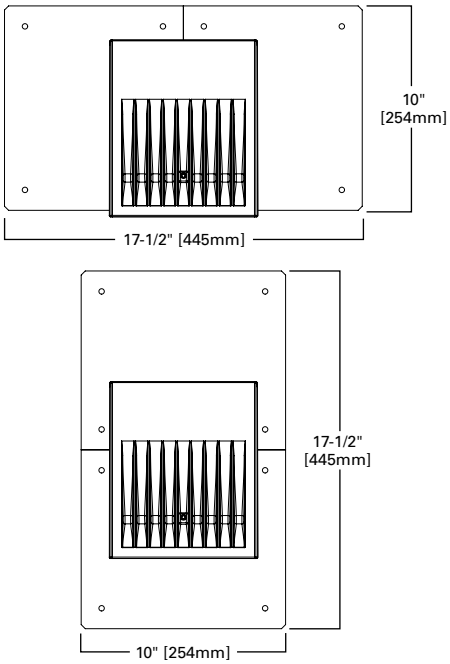
XTOR
CROSSTOUR LED

APPLICATIONS:
WALL / SURFACE
POST / BOLLARD
LOW LEVEL
FLOODLIGHT
INVERTED
SITE LIGHTING

DIMENSIONS



ESCUTCHEON PLATES



CERTIFICATION DATA
UL/cUL Wet Location Listed
LM79 / LM80 Compliant
ROHS Compliant
ADA Compliant
NOM Compliant Models
IP66 Ingressed Protection Rated
Title 24 Compliant
DesignLights Consortium® Qualified*

TECHNICAL DATA
40°C Maximum Ambient Temperature
External Supply Wiring 90°C Minimum

EPA
Effective Projected Area (Sq. Ft.):
XTOR1B, XT0R2B, XT0R3B=0.34
XTOR4B=0.45

SHIPPING DATA:
Approximate Net Weight:
3.7 – 5.25 lbs. [1.7 – 2.4 kgs.]

Powering Business Worldwide

*www.designlights.org

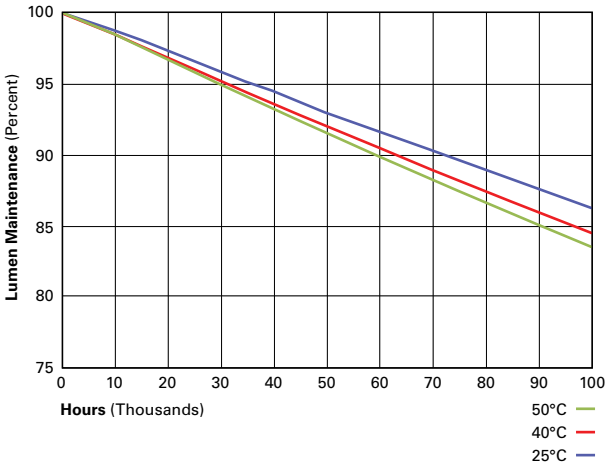
POWER AND LUMENS BY FIXTURE MODEL

LED Information	XTOR1B	XTOR1B-W	XTOR1B-Y	XTOR2B	XTOR2B-W	XTOR2B-Y	XTOR3B	XTOR3B-W	XTOR3B-Y	XTOR4B	XTOR4B-W	XTOR4B-Y
Delivered Lumens (Wall Mount)	1,418	1,396	1,327	2,135	2,103	1,997	2,751	2,710	2,575	4,269	4,205	3,995
Delivered Lumens (With Flood Accessory Kit) [1]	1,005	990	940	1,495	1,472	1,399	2,099	2,068	1,965	3,168	3,121	2,965
B.U.G. Rating [2]	B1-U0-G0	B1-U0-G0	B1-U0-G0	B1-U0-G0	B1-U0-G0	B1-U0-G0	B1-U0-G0	B1-U0-G0	B1-U0-G0	B2-U0-G0	B2-U0-G0	B2-U0-G0
CCT (Kelvin)	5,000	4,000	3,000	5,000	4,000	3,000	5,000	4,000	3,000	5,000	4,000	3,000
CRI (Color Rendering Index)	70	70	70	70	70	70	70	70	70	70	70	70
Power Consumption (Watts)	12W	12W	12W	18W	18W	18W	26W	26W	26W	38W	38W	38W

NOTES: 1 Includes shield and visor. **2** B.U.G. Rating does not apply to floodlighting.

LUMEN MAINTENANCE

Ambient Temperature	TM-21 Lumen Maintenance (72,000 Hours)	Theoretical L70 (Hours)
XTOR1B Model		
25°C	> 90%	255,000
40°C	> 89%	234,000
50°C	> 88%	215,000
XTOR2B Model		
25°C	> 89%	240,000
40°C	> 88%	212,000
50°C	> 87%	196,000
XTOR3B Model		
25°C	> 89%	240,000
40°C	> 88%	212,000
50°C	> 87%	196,000
XTOR4B Model		
25°C	> 89%	222,000
40°C	> 87%	198,000
50°C	> 87%	184,000



CURRENT DRAW

Voltage	Model Series			
	XTOR1B	XTOR2B	XTOR3B	XTOR4B
120V	0.103A	0.15A	0.22A	0.34A
208V	0.060A	0.09A	0.13A	0.17A
240V	0.053A	0.08A	0.11A	0.17A
277V	0.048A	0.07A	0.10A	0.15A
347V	0.039A	0.06A	0.082A	0.12A

ORDERING INFORMATION

Sample Number: XTOR2B-W-WT-PC1

Series [1]	**LED Kelvin Color**	**Housing Color**	**Options** (Add as Suffix)	**Accessories** (Order Separately)
XTOR1B=Small Door, 12W **XTOR2B**=Small Door, 18W **XTOR3B**=Small Door, 26W **XTOR4B**=Medium Door, 38W	**[Blank]**=Bright White (Standard), 5000K **W**=Neutral White, 4000K **Y**=Warm White, 3000K	**[Blank]**=Carbon Bronze (Standard) **WT**=Summit White **BK**=Black **BZ**=Bronze **AP**=Grey **GM**=Graphite Metallic **DP**=Dark Platinum	**PC1**=Photocontrol 120V [2] **PC2**=Photocontrol 208-277V [2,3] **347V**=347V [4] **HA**=50°C High Ambient [4]	**WG/XTOR**=Wire Guard [5] **XTORFLD-KNC**=Knuckle Floodlight Kit [6] **XTORFLD-TRN**=Trunnion Floodlight Kit [6] **XTORFLD-KNC-WT**=Knuckle Floodlight Kit, Summit White [6] **XTORFLD-TRN-WT**=Trunnion Floodlight Kit, Summit White [6] **EWP/XTOR**=Escutcheon Wall Plate, Carbon Bronze **EWP/XTOR-WT**=Escutcheon Wall Plate, Summit White

NOTES:
1. DesignLights Consortium® Qualified and classified for both DLC Standard and DLC Premium, refer to www.designlights.org for details.
2. Photocontrols are factory installed.
3. Order PC2 for 347V models.
4. Thru-branch wiring not available with HA option or with 347V. XTOR3B not available with HA and 347V or 120V combination.
5. Wire guard for wall/surface mount. Not for use with floodlight kit accessory.
6. Floodlight kit accessory supplied with knuckle (KNC) or trunnion (TRN) base, small and large top visors and small and large impact shields.

STOCK ORDERING INFORMATION

12W Series	**18W Series**	**26W Series**	**38W Series**
XTOR1B=12W, 5000K, Carbon Bronze	**XTOR2B**=18W, 5000K, Carbon Bronze	**XTOR3B**=26W, 5000K, Carbon Bronze	**XTOR4B**=38W, 5000K, Carbon Bronze
XTOR1B-WT=12W, 5000K, Summit White	**XTOR2B-W**=18W, 4000K, Carbon Bronze	**XTOR3B-W**=26W, 4000K, Carbon Bronze	**XTOR4B-W**=38W, 4000K, Carbon Bronze
XTOR1B-PC1=12W, 5000K, 120V PC, Carbon Bronze	**XTOR2B-WT**=18W, 5000K, Summit White	**XTOR3B-WT**=26W, 5000K, Summit White	**XTOR4B-WT**=38W, 5000K, Summit White
XTOR1B-W=12W, 4000K, Carbon Bronze	**XTOR2B-PC1**=18W, 5000K, 120V PC, Carbon Bronze	**XTOR3B-PC1**=26W, 5000K, 120V PC, Carbon Bronze	**XTOR4B-PC1**=38W, 5000K, 120V PC, Carbon Bronze
	XTOR2B-W-PC1=18W, 4000K, 120V PC, Carbon Bronze	**XTOR3B-W-PC1**=26W, 4000K, 120V PC, Carbon Bronze	**XTOR4B-W-PC1**=38W, 4000K, 120V PC, Carbon Bronze
	XTOR2B-347V=18W, 5000K, Carbon Bronze, 347V	**XTOR3B-347V**=26W, 5000K, Carbon Bronze, 347V	**XTOR4B-347V**=38W, 5000K, Carbon Bronze, 347V
	XTOR2B-WT-PC1=18W, 5000K, 120V PC, Summit White	**XTOR3B-PC2**=26W, 5000K, 208-277V PC, Carbon Bronze	