



Economic Development Committee Meeting
Thursday, November 14, 2024
Meeting Room A – 3:00 pm

Agenda:

1. Main Street Resurfacing
 - A. Curbless Streets – Brick (Attachment 1.A)
 - B. Curb less Streets – Asphalt (Attachment 1.B)
 - C. E. Main between Hutton and Griswold (Attachment 1.C)
 - D. E. Main between Center and Hutton (Attachment 1.D)
 - E. Engineered Plan and Cross Section Concepts (Attachment 1.E)
 - F. RAP Grant – (Attachment 1.F)
2. Parklets (Attachment 2)
3. Next meeting – December 12, 2024



memorandum

Date: October 24, 2024

To: Mike Domine, Northville | Lori Ward, Northville

cc: Claire Martin, OHM | George Tsakoff, OHM

From: Alex Blehm, PE, OHM

Re: Main Street Streetscape Improvements – Preliminary Engineering Review

OHM has completed its preliminary engineering review of potential Main St streetscape improvements from Center St to Griswold St. There are two different improvements desired. For the west block, Center St to Hutton St, the intent of the project is to remove the barrier style curb and replace it with a flatter valley style curb creating a “curbless” street that is flexible in its use. This block of Main St is frequently closed to traffic (seasonally and for special events), and the curbless street would allow for the extension of the existing Northville Town Square Plaza space into the roadway. For the east block, Hutton St to Griswold St, the road improvement would consist of a conventional road reconstruction and enhancements within the existing sidewalk area to be consistent with the other downtown streetscape blocks. This memo summarizes the work completed by OHM and the critical findings.

The engineering review was conducted using principles and guidelines from the American Association of State Highway Transportation Officials (AASHTO), the Federal Highway Administration (FHWA), the Michigan Department of Transportation (MDOT), and the U.S. Access Board Public Right-of-Way Accessibility Guidelines (PROWAG).

OHM obtained a topographic survey for the full right-of-way (ROW) with cross sections every 25 ft and finished floor elevations at all building entrances. A structure inventory of all utility structures was performed within the area. Utility information was collected by contacting Miss Dig Utility Notification Center and reviewing the City’s GIS information and available record plans. Field verification beyond the initial inventory was not performed.

In addition to this memo, engineered plan view drawings, representative cross sections, and cost estimates for each block were prepared.

Main Street – Center Street to Hutton Street

Geometrics

For Center St to Hutton St, it is proposed to narrow the vehicle lanes to from 12 feet to 11 feet wide with a proposed 2-foot valley gutter and an 8-foot parking lane on each side. This provides 12 feet of pedestrian space on each side of the road. The preliminary plans show the road as narrowed to have 9.5-foot vehicle lanes as it reaches the center of the block and the plaza area. This is proposed to slow vehicle traffic and reinforce that this is a space that would prioritize a high number of pedestrians. Additionally, the loading and drop off zone in front of the Marquis Theatre and Great Harvest is proposed to be removed to provide more sidewalk space for pedestrians and restaurant seating.

There are no other major geometric changes proposed. No parking was removed, but a priority of uses or aesthetics could be evaluated to determine if more pedestrian space or landscaping would be better suited.

Limits and Transition

It is proposed that the sidewalk be sawcut 27 feet from the center of the ROW on both sides of the road. This will maintain a minimum of 6 feet of existing sidewalk that can be used to maintain pedestrian traffic to businesses during construction. Much of the sidewalk is in good condition and preserving a portion of the walk would reduce costs to the project. It is proposed that decorative, contrasting pavements butt up against the sawcut sidewalk to provide an aesthetic transition from new to old.

At Center St, it is proposed that work would begin just east of the existing catch basins on the east approach. This maintains the existing drainage scheme, crosswalks, and bollards, while avoiding the cost to extend work limits into the intersection. The road would ramp up at this point to meet the curbless elevation.

At Hutton St, it is proposed to reconstruct the entire intersection. The existing bollards would remain in place and be worked around. This can be accomplished by maintaining a patch of pavement around the bollards or by using a mini mill to remove the pavement. The road would ramp up between the curb ramps and the bollards. This allows the pedestrian crossing to remain at the curbless elevation. The north approach of Hutton St would be replaced to just south of the pair of catch basins, maintaining the existing drainage patterns. The limits of the south approach of Hutton St would be just north of the Hutton St perpendicular parking area.

Vertical Road Analysis

The road has a high point just east of Center St and all slopes are adequate for drainage. The road will ramp up at each intersection at approximately 5% (6 inches over 10 feet) to meet the curbless elevation. Beyond this, there are no proposed profile changes from existing.

Road Drainage

The existing road meets requirements for minimum slopes to convey drainage. The curbless block from Center St to Hutton St may require the need to modify road cross slopes to better match sidewalk elevations. In doing so, the longitudinal slope of the gutter will need to be evaluated to ensure minimum slopes are maintained. This will likely

be more of a concern in the half-block between Center St and the plaza where existing slopes are generally flatter than closer to Hutton St.

Between Center St and Hutton St, the existing catch basins are adequate for collecting drainage in the existing road condition. The City has indicated that there is some concern by business owners regarding the impact of stormwater conveyance just west of Hutton St if a curbless street is implemented. No issues in the existing condition with full height curbs have been documented. To address the concern with the curbless cross section, there are two methodologies that can be introduced. The first is that additional catch basins can be installed to more quickly collect the water into the sewer system. Spread calculations should be performed during future design efforts to identify the width of the water spread during higher intensity rain events. This will identify where and how many additional catch basins are needed. The second approach is to install rain gardens that collect stormwater runoff at various points, reducing the amount of runoff needed to traverse paved surfaces for extended distances. The area just west of Hutton St is well suited for this. Potential rain garden areas are shown on the preliminary plan attached to this report. Further discussions regarding the use of rain gardens would take place during future design phases. Maintenance and aesthetics may be a concern with implementing rain gardens in the streetscape area.

Americans with Disabilities Act (ADA) Compliance

A curbless road needs to serve its function as a festival street by allowing the free flow of pedestrians across the entire width of the right-of-way, but it also needs to safely move vehicles and pedestrians when its open to traffic. With the traditional full height curb gone, this requires special attention at the transition areas between the vehicle space and the pedestrian space.

PROWAG does not have firm requirements when it comes to how to handle curbless roads, but there are guiding principles that are common between PROWAG, FHWA, and AASHTO on how to best serve users with low vision. The two primary elements are to provide textural and a color contrast between the pedestrian space and the vehicle space. This can be done with surface-mounted tactile plates (commonly known as detectable warnings) running the length of the curbless road, or it can be done with textured pavers such as cobblestones. There are many products that meet this condition. In addition to the contrast in the paved surface, it is best practice to break up the transition space with vertical elements such as street trees, landscaping beds, bollards, streetlights, litter receptacles, or other utilities or amenities. These practices are not only to the benefit of those with low vision, but also provide intuitive boundaries for all users while still allowing the free movement of people when the street is closed to vehicles.

Pavement Section

The existing road pavement is approximately 9 inches of asphalt. It is recommended that the existing pavement is overlaid with 6 to 7 inches of asphalt to bring the elevations of the road up to sidewalk elevation. The parking lanes are proposed to be reconstructed to allow for the removal of the curb and installation of the valley gutter. Concrete is proposed to provide a material difference for aesthetics and better delineation of uses, but other materials can be selected depending on preference. Sidewalks are recommended to be constructed with a minimum of 6 inches of concrete with aggregate base because they will inevitably be exposed to heavier loads with the curbs removed, namely delivery vehicles, food trucks, or similar.

The brick pavement at the center of the block is a hallmark of Northville's downtown and was installed with the 2010 Northville Town Square project. With the change in elevation for the curbless cross section, the bricks would need to be removed and replaced. These bricks sit on a concrete base with an asphalt leveling course. Salvaging the bricks is an option, but not recommended. It is tedious, expensive work and many of the bricks would be wasted from the removal operations, either by chips and cracks or by the asphalt leveling course sticking to the bottom of the bricks preventing them from being reset. Many of the bricks would need to be replaced and without a stockpiled source, matching the existing color can be difficult. It is recommended that the bricks be entirely replaced with a new concrete base. This also provides an opportunity to modernize the aesthetics with an updated design. It is recommended that updating conceptual plans for aesthetic purposes be incorporated into the scope of work of future phases of design.

Engineer's Opinion of Probable Construction Cost

The cost to construct the evaluated curbless design is estimated to be \$1.9 million. This does not include the Hutton intersection. Assumptions were made that have the potential to change costs during a future design phase. These include estimated drainage needs, pavement material choices for aesthetics, landscaping plant material, and full replacement of streetscaping features such as tree grates, benches and bike racks.

A hydronic snow melt system was estimated at \$40 per square foot for a total of \$229,200 to install the piping underneath the brick areas that extend into the road and the north sidewalk. This assumes the current controller and mechanical systems can accommodate the increased area. During a future design phase, a certified manufacturer of these systems should be contacted for feasibility and an accurate quote of work.

A second construction cost estimate was prepared for an option to fully remove the asphalt pavement in the curbless section and replace with bricks. All other elements the same. This was estimated to be \$2.5 million.

Main Street – Hutton Street to Griswold Street

Geometrics

For Hutton St to Griswold St, it is proposed to maintain the existing cross section of 12-foot vehicle lanes, 8-foot parking aisles with 2-foot curb and gutter, and 5-foot sidewalks with a 6-foot of amenity zone for landscaping or street furniture. The only geometric change proposed is to remove the bump out in front of 355 E Main St at the request of the City.

Limits and Transition

The pavement including sidewalks, driveways, and curb within the public ROW is proposed to be removed and replaced. It is not intended to replace driveways or Church St beyond the ROW line. At Griswold St, the sidewalk ramps on the west side of the intersection are proposed to be replaced at the request of the City. It should be noted that the Griswold intersection is under the jurisdiction of Wayne County and all work within their ROW requires a permit through Wayne County's Department of Public Services (DPS). The road work is proposed to end at the west approach, enough to create a perpendicular end of work joint with the sidewalk ramp replacement. Sidewalk

and streetscape work in the northwest quadrant of Griswold is proposed to be extended north to the nearest driveway to provide a clean transition.

Vertical Road Analysis

The road slopes downward to the east from Hutton St through Griswold St. The slope nears 5.5% at its steepest. AASHTO recommends keeping slopes below 6% where possible and below 3% at intersections. PROWAG goes further to require crosswalk slopes within an intersection to be at a 2.1% maximum grade. To meet PROWAG, slight modifications to the Hutton intersection would be required and significant changes to the Griswold intersection would be required. Griswold is under the jurisdiction of Wayne County and therefore it would be their responsibility to comply with PROWAG. Any modification by the City would need to be coordinated and permitted with the County. A feasibility review of this intersection to meet PROWAG is recommended to be detailed further during future phases of design.

Road Drainage

The road meets requirements for minimum slopes to convey drainage, but there are no existing catch basins to collect the drainage between Hutton St and Griswold St. AASHTO recommends providing drainage structures approximately every 300 feet. There are no major issues noted by the City on the existing road due to the lack of drainage structures. There is no recorded storm sewer system within this block of Main Street making the installation of new drainage structures costly. It is recommended that a new storm sewer system is installed to collect stormwater runoff consistent with AASHTO standards, but the City may also consider the cost impact during a future design stage.

Pavement Section

This section of Main Street is proposed to be reconstructed with 7 inches of asphalt and 9 inches of aggregate base. This was calculated using the AASHTO method of pavement design and could be refined further during a future design phase and input from a geotechnical engineer.

Engineer's Opinion of Probable Construction Cost

The cost to construct the proposed work from Hutton St to Griswold St is estimated to be \$1.2 million. This includes the Hutton intersection. Assumptions were made that have the potential to change costs during a future design phase. These include pavement material choices for aesthetics, landscaping plant material, and full replacement of streetscaping features such as tree grates, benches and bike racks.

The cost to construct the catch basins and storm sewer per AASHTO standards was not included in the base cost estimate. It is estimated to be another \$200,000 to install the sewer system necessary to meet these standards.

Potential Funding Sources

With the large expense of the project, it is expected that the City may need additional sources of funds to implement this project. Potential funding sources in addition to local funds for the project include The Michigan Economic Development Corporation (MEDC) Revitalization and Placemaking (RAP) Program, as well as the Transportation Alternatives Program (TAP).

MEDC RAP Program

The RAP program aims to provide funding for “place-based infrastructure development, real estate rehabilitation and development, and public space improvements”. It is anticipated that the Northville DDA would be an eligible applicant as they are an entity working to develop “permanent place-based infrastructure associated with traditional downtowns, social-zones, out door dining, and place-based public spaces”. The RAP Program utilized federal ARPA funds for its first round in 2022, and state funds for its second round in 2023. The third round is also anticipated to use state funds. RAP 3.0 applications are anticipated to be open from November 2024 to January 2025, with awards for public space place-based infrastructure projects from \$500,000 to \$1 million. It is anticipated that \$18.4 million will be available for Northville’s region, “Region 10”. A 50% local match would be required. Grants would be available for use in 2025, and funds are disbursed on a reimbursement basis.

It is likely that the curbless portion of the project would be considered more competitive for the funding, although the traditional streetscape portion could be eligible.

Transportation Alternatives Program (TAP)

The Transportation Alternatives Program (TAP) is run through the Michigan Department of Transportation (MDOT), as well as the state’s six metropolitan planning organizations (MPO). Northville’s MPO is the Southeastern Michigan Council of Governments (SEMCOG). TAP funds are federal funds granted from the Federal Highway Authority (FHWA). TAP applications are accepted on a rolling basis, with decisions made quarterly. Grant awards typically range from the low six figures to in excess of \$1 million. A local match of 20% of construction cost is required, but it is recommended this is increased if funds are sought through MDOT.

Award decisions are generally made within 6 months of application submittal, but may take longer if MDOT or SEMCOG require additional information after submittal. Awards are granted for future years (currently SEMCOG is accepting for FY2026 and later), and due to the federal funding requirements projects generally take over a year to implement.

Addressing pedestrian safety deficiencies in traditional/historic downtowns is considered a competitive TAP project, while traditional road reconstruction is not. It is likely that the curbless street section from Center St to Hutton St would be considered competitive, while the Hutton St to Griswold St streetscape improvements would not be considered competitive. However, MDOT and SEMCOG recommend discussions with grant coordinators before putting together an application.



OPINION OF PROBABLE CONSTRUCTION COST

ORCHARD, HILTZ & McCLIMENT, INC.

34000 Plymouth Road, Livonia, Michigan, 48150

Telephone: (734) 522-6711 FAX: (734) 466-4557

PROJECT: Main Street Reconstruction
 LOCATION: Main St - Center to Griswold
 WORK: Curbless between Center St and Hutton St
 with Brick Roadway

DATE: October 24, 2024
 PROJECT #: 0152-24-0080
 ESTIMATOR: KAH
 CHECKED BY: AMB
 CURRENT ENR: AMB

ITEM CODE	DESCRIPTION	UNIT	TOTAL	UNIT PRICE	COST
CATEGORY 2 - Center St to Hutton St with Brick Roadway					
1100001	Mobilization, Max	LSUM	0.6	\$237,200.00	\$ 142,320.00
2030011	Dr Structure, Rem	Ea	4	\$ 500.00	\$ 2,000.00
2040020	Curb and Gutter, Rem	Ft	1234	\$ 50.00	\$ 61,700.00
2040021	Curb, Rem	Ft	188	\$ 46.00	\$ 8,648.00
2040050	Pavt, Rem	Syd	454	\$ 15.00	\$ 6,810.00
2040055	Sidewalk, Rem	Syd	913	\$ 12.00	\$ 10,956.00
2050016	Excavation, Earth	Cyd	280	\$ 25.00	\$ 7,000.00
2080020	Erosion Control, Inlet Protection, Fabric Drop	Ea	22	\$ 110.00	\$ 2,420.00
2090001	Project Cleanup	LSUM	0.6	\$ 6,500.00	\$ 3,900.00
3020001	Aggregate Base	Ton	872	\$ 60.00	\$ 52,320.00
3020050	Aggregate Base, Conditioning	Syd	1328	\$ 10.00	\$ 13,280.00
4020033	Sewer, Cl A, 12 inch, Tr Det B	Ft	270	\$ 69.00	\$ 18,630.00
4030005	Dr Structure Cover, Adj, Case 1	Ea	12	\$ 750.00	\$ 9,000.00
4030050	Dr Structure Cover, Type K	Ea	10	\$ 800.00	\$ 8,000.00
4030200	Dr Structure, 24 inch dia	Ea	6	\$ 2,400.00	\$ 14,400.00
4030210	Dr Structure, 48 inch dia	Ea	4	\$ 5,000.00	\$ 20,000.00
4030280	Dr Structure, Adj, Add Depth	Ft	10	\$ 250.00	\$ 2,500.00
4030312	Dr Structure, Tap, 12 inch	Ea	8	\$ 650.00	\$ 5,200.00
4037050	Overflow Inlet	Ea	2	\$ 1,800.00	\$ 3,600.00
4040063	Underdrain, Subbase, 6 inch	Ft	1200	\$ 15.00	\$ 18,000.00
4040093	Underdrain Outlet, 6 inch	Ft	80	\$ 22.00	\$ 1,760.00
5010001	Pavt, Cleaning	LSUM	0.6	\$ 6,500.00	\$ 3,900.00
5010005	HMA Surface, Rem	Syd	1319	\$ 8.00	\$ 10,552.00
6020019	Conc Base Cse, Nonreinf, 8 inch	Syd	1760	\$ 60.00	\$ 105,600.00
6027011	Conc Base Cse, Nonreinf, 4 inch	Syd	881	\$ 30.00	\$ 26,430.00
8020038	Curb and Gutter, Conc, Det F4	Ft	79	\$ 40.00	\$ 3,160.00
8020060	Valley Gutter, Conc	Ft	994	\$ 40.00	\$ 39,760.00
8027001	Curb and Gutter, Conc, Det F2, Decorative	Ft	150	\$ 40.00	\$ 6,000.00
8030010	Detectable Warning Surface	Ft	52	\$ 65.00	\$ 3,380.00
8030030	Curb Ramp Opening, Conc	Ft	74	\$ 40.00	\$ 2,960.00
8030050	Sidewalk, Clay Brick Pavers	Sft	2410	\$ 30.00	\$ 72,300.00
8030051	Sidewalk, Clay Brick Pavers, Rem	Sft	2700	\$ 3.00	\$ 8,100.00
8032002	Curb Ramp, Conc, 6 inch	Sft	315	\$ 8.50	\$ 2,677.50
8037010	Decorative Concrete Sidewalk, 6 inch	Sft	2580	\$ 15.00	\$ 38,700.00
8037010	Hydronic Snow Melt System	Sft	5730	\$ 40.00	\$ 229,200.00
8037010	Roadway, Brick Pavers	Sft	15840	\$ 35.00	\$ 554,400.00
8037010	Sidewalk, Cobblestone	Sft	5515	\$ 30.00	\$ 165,450.00
8107051	Pavement Markings and Signing	LSUM	0.6	\$ 25,000.00	\$ 15,000.00
8127051	Maintenance of Traffic	LSUM	0.6	\$215,700.00	\$ 129,420.00
8150002	Watering and Cultivating, First Season, Min	LSUM	0.4	\$ 3,500.00	\$ 1,400.00
8150003	Watering and Cultivating, 2nd Season, Min	LSUM	0.4	\$ 4,000.00	\$ 1,600.00



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ITEM CODE	DESCRIPTION	UNIT	TOTAL	UNIT PRICE	COST
8157001	Rain Garden Fencing	Ft	114	\$ 115.00	\$ 13,110.00
8157010	Landscape Plantings	Sft	1220	\$ 8.00	\$ 9,760.00
8157010	Rain Garden Plantings	Sft	200	\$ 6.00	\$ 1,200.00
8157021	Planting Soil Mix	Cyd	91	\$ 90.00	\$ 8,190.00
8157021	Rain Garden Soil Mix	Cyd	15	\$ 100.00	\$ 1,500.00
8157050	Benches	Ea	6	\$ 3,000.00	\$ 18,000.00
8157050	Bike Racks	Ea	4	\$ 1,200.00	\$ 4,800.00
8157050	Bollards	Ea	60	\$ 1,000.00	\$ 60,000.00
8157050	Litter Receptacles	Ea	10	\$ 2,000.00	\$ 20,000.00
8157050	Raised Planter	Ea	8	\$ 4,500.00	\$ 36,000.00
8157050	Tree Grate	Ea	2	\$ 3,500.00	\$ 7,000.00
8167010	Irrigation	Sft	2000	\$ 5.00	\$ 10,000.00
8167011	Turf Establishment	Syd	100	\$ 17.00	\$ 1,700.00
8167021	Shredded Hardwood Mulch	Cyd	14	\$ 160.00	\$ 2,240.00
8187051	Electrical Receptacles and Conduit	LSUM	1	\$ 25,000.00	\$ 25,000.00
8230095	Hydrant, Relocate, Case 1	Ea	2	\$ 850.00	\$ 1,700.00
8230421	Water Shutoff, Adj, Case 1	Ea	5	\$ 600.00	\$ 3,000.00
8230431	Gate Box, Adj, Case 1	Ea	15	\$ 600.00	\$ 9,000.00
SUBTOTAL FOR CATEGORY 2 - Center St to Hutton St with Brick Roadway					\$ 2,064,633.50
CONTINGENCY (20%)					\$ 412,926.70
TOTAL OPINION OF PROBABLE CONSTRUCTION COST =					\$ 2,477,560.20



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CATEGORY 1 - Center St to Hutton St					
1100001	Mobilization, Max	LSUM	0.6	\$237,200.00	\$ 142,320.00
2030011	Dr Structure, Rem	Ea	4	\$ 500.00	\$ 2,000.00
2040020	Curb and Gutter, Rem	Ft	1234	\$ 50.00	\$ 61,700.00
2040021	Curb, Rem	Ft	188	\$ 46.00	\$ 8,648.00
2040050	Pavt, Rem	Syd	454	\$ 15.00	\$ 6,810.00
2040055	Sidewalk, Rem	Syd	913	\$ 12.00	\$ 10,956.00
2050016	Excavation, Earth	Cyd	119	\$ 25.00	\$ 2,975.00
2080020	Erosion Control, Inlet Protection, Fabric Drop	Ea	22	\$ 110.00	\$ 2,420.00
2090001	Project Cleanup	LSUM	0.6	\$ 6,500.00	\$ 3,900.00
3020001	Aggregate Base	Ton	365	\$ 60.00	\$ 21,900.00
3020050	Aggregate Base, Conditioning	Syd	1671	\$ 10.00	\$ 16,710.00
4020033	Sewer, Cl A, 12 inch, Tr Det B	Ft	270	\$ 69.00	\$ 18,630.00
4030005	Dr Structure Cover, Adj, Case 1	Ea	12	\$ 750.00	\$ 9,000.00
4030050	Dr Structure Cover, Type K	Ea	10	\$ 800.00	\$ 8,000.00
4030200	Dr Structure, 24 inch dia	Ea	6	\$ 2,400.00	\$ 14,400.00
4030210	Dr Structure, 48 inch dia	Ea	4	\$ 5,000.00	\$ 20,000.00
4030280	Dr Structure, Adj, Add Depth	Ft	10	\$ 250.00	\$ 2,500.00
4030312	Dr Structure, Tap, 12 inch	Ea	8	\$ 650.00	\$ 5,200.00
4037050	Overflow Inlet	Ea	2	\$ 1,800.00	\$ 3,600.00
4040063	Underdrain, Subbase, 6 inch	Ft	1200	\$ 15.00	\$ 18,000.00
4040093	Underdrain Outlet, 6 inch	Ft	80	\$ 22.00	\$ 1,760.00
5010001	Pavt, Cleaning	LSUM	0.6	\$ 6,500.00	\$ 3,900.00
5010002	Cold Milling HMA Surface	Syd	910	\$ 5.00	\$ 4,550.00
5010005	HMA Surface, Rem	Syd	413	\$ 8.00	\$ 3,304.00
5012013	HMA, 3EML	Ton	177	\$ 130.00	\$ 23,010.00
5012025	HMA, 4EML	Ton	147	\$ 140.00	\$ 20,580.00
5012037	HMA, 5EML	Ton	89	\$ 150.00	\$ 13,350.00
6020019	Conc Base Cse, Nonreinf, 8 inch	Syd	369	\$ 60.00	\$ 22,140.00
6020106	Conc Pavt, Nonreinf, 9 inch	Syd	394	\$ 100.00	\$ 39,400.00
6027011	Conc Base Cse, Nonreinf, 4 inch	Syd	881	\$ 30.00	\$ 26,430.00
8020038	Curb and Gutter, Conc, Det F4	Ft	79	\$ 40.00	\$ 3,160.00
8020060	Valley Gutter, Conc	Ft	994	\$ 40.00	\$ 39,760.00
8027001	Curb and Gutter, Conc, Det F2, Decorative	Ft	150	\$ 40.00	\$ 6,000.00
8030010	Detectable Warning Surface	Ft	52	\$ 65.00	\$ 3,380.00
8030030	Curb Ramp Opening, Conc	Ft	74	\$ 40.00	\$ 2,960.00
8030050	Sidewalk, Clay Brick Pavers	Sft	2410	\$ 30.00	\$ 72,300.00
8030051	Sidewalk, Clay Brick Pavers, Rem	Sft	2700	\$ 3.00	\$ 8,100.00
8032002	Curb Ramp, Conc, 6 inch	Sft	315	\$ 8.50	\$ 2,677.50
8037010	Decorative Concrete Sidewalk, 6 inch	Sft	2580	\$ 15.00	\$ 38,700.00
8037010	Hydronic Snow Melt System	Sft	5730	\$ 40.00	\$ 229,200.00
8037010	Roadway, Brick Pavers	Sft	3320	\$ 35.00	\$ 116,200.00



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8037010	Sidewalk, Cobblestone	Sft	5515	\$ 30.00	\$ 165,450.00
8107051	Pavement Markings and Signing	LSUM	0.6	\$ 25,000.00	\$ 15,000.00
8127051	Maintenance of Traffic	LSUM	0.6	\$215,700.00	\$ 129,420.00
8150002	Watering and Cultivating, First Season, Min	LSUM	0.4	\$ 3,500.00	\$ 1,400.00
8150003	Watering and Cultivating, 2nd Season, Min	LSUM	0.4	\$ 4,000.00	\$ 1,600.00
8157001	Rain Garden Fencing	Ft	114	\$ 115.00	\$ 13,110.00
8157010	Landscape Plantings	Sft	1220	\$ 8.00	\$ 9,760.00
8157010	Rain Garden Plantings	Sft	200	\$ 6.00	\$ 1,200.00
8157021	Planting Soil Mix	Cyd	91	\$ 90.00	\$ 8,190.00
8157021	Rain Garden Soil Mix	Cyd	15	\$ 100.00	\$ 1,500.00
8157050	Benches	Ea	6	\$ 3,000.00	\$ 18,000.00
8157050	Bike Racks	Ea	4	\$ 1,200.00	\$ 4,800.00
8157050	Bollards	Ea	60	\$ 1,000.00	\$ 60,000.00
8157050	Litter Receptacles	Ea	10	\$ 2,000.00	\$ 20,000.00
8157050	Raised Planter	Ea	8	\$ 4,500.00	\$ 36,000.00
8157050	Tree Grate	Ea	2	\$ 3,500.00	\$ 7,000.00
8167010	Irrigation	Sft	2000	\$ 5.00	\$ 10,000.00
8167011	Turf Establishment	Syd	100	\$ 17.00	\$ 1,700.00
8167021	Shredded Hardwood Mulch	Cyd	14	\$ 160.00	\$ 2,240.00
8187051	Electrical Receptacles and Conduit	LSUM	1	\$ 25,000.00	\$ 25,000.00
8230095	Hydrant, Relocate, Case 1	Ea	2	\$ 850.00	\$ 1,700.00
8230421	Water Shutoff, Adj, Case 1	Ea	5	\$ 600.00	\$ 3,000.00
8230431	Gate Box, Adj, Case 1	Ea	15	\$ 600.00	\$ 9,000.00
SUBTOTAL FOR CATEGORY 1 - Center St to Hutton St					\$ 1,605,600.50
CONTINGENCY (20%)					\$ 321,120.10
TOTAL OPINION OF PROBABLE CONSTRUCTION COST =					\$ 1,926,720.60



OPINION OF PROBABLE CONSTRUCTION COST

ORCHARD, HILTZ & McCLIMENT, INC.

34000 Plymouth Road, Livonia, Michigan, 48150

Telephone: (734) 522-6711 FAX: (734) 466-4557

PROJECT: Main Street Reconstruction
 LOCATION: Main St - Center to Griswold
 WORK: Reconstruction between Hutton St and Griswold St
 Includes the Hutton St Intersection

DATE: October 24, 2024
 PROJECT #: 0152-24-0080
 ESTIMATOR: KAH
 CHECKED BY: AMB
 CURRENT ENR: AMB

ITEM CODE	DESCRIPTION	UNIT	TOTAL	UNIT PRICE	COST
CATEGORY 3 - Hutton St to Griswold St (Includes Hutton)					
1100001	Mobilization, Max	LSUM	0.4	\$237,200.00	\$ 94,880.00
2020004	Tree, Rem, 6 inch to 18 inch	Ea	11	\$ 550.00	\$ 6,050.00
2040020	Curb and Gutter, Rem	Ft	1127	\$ 50.00	\$ 56,350.00
2040021	Curb, Rem	Ft	151	\$ 46.00	\$ 6,946.00
2040050	Pavt, Rem	Syd	640	\$ 15.00	\$ 9,600.00
2040055	Sidewalk, Rem	Syd	755	\$ 12.00	\$ 9,060.00
2050016	Excavation, Earth	Cyd	1264	\$ 25.00	\$ 31,600.00
2080020	Erosion Control, Inlet Protection, Fabric Drop	Ea	4	\$ 110.00	\$ 440.00
2090001	Project Cleanup	LSUM	0.4	\$ 6,500.00	\$ 2,600.00
3020001	Aggregate Base	Ton	2581	\$ 60.00	\$ 154,860.00
4030005	Dr Structure Cover, Adj, Case 1	Ea	4	\$ 750.00	\$ 3,000.00
4030280	Dr Structure, Adj, Add Depth	Ft	2	\$ 250.00	\$ 500.00
4040063	Underdrain, Subbase, 6 inch	Ft	1200	\$ 15.00	\$ 18,000.00
4040093	Underdrain Outlet, 6 inch	Ft	80	\$ 22.00	\$ 1,760.00
5010001	Pavt, Cleaning	LSUM	0.4	\$ 6,500.00	\$ 2,600.00
5010005	HMA Surface, Rem	Syd	3086	\$ 8.00	\$ 24,688.00
5010025	Hand Patching	Ton	7	\$ 180.00	\$ 1,260.00
5010061	HMA Approach	Ton	288	\$ 210.00	\$ 60,480.00
5012013	HMA, 3EML	Ton	409	\$ 130.00	\$ 53,170.00
5012025	HMA, 4EML	Ton	341	\$ 140.00	\$ 47,740.00
5012037	HMA, 5EML	Ton	205	\$ 150.00	\$ 30,750.00
8010007	Driveway, Nonreinf Conc, 8 inch	Syd	138	\$ 85.00	\$ 11,730.00
8020038	Curb and Gutter, Conc, Det F4	Ft	985	\$ 40.00	\$ 39,400.00
8020050	Driveway Opening, Conc, Det M	Ft	254	\$ 40.00	\$ 10,160.00
8030010	Detectable Warning Surface	Ft	49	\$ 65.00	\$ 3,185.00
8030030	Curb Ramp Opening, Conc	Ft	97	\$ 40.00	\$ 3,880.00
8030044	Sidewalk, Conc, 4 inch	Sft	6800	\$ 7.00	\$ 47,600.00
8030046	Sidewalk, Conc, 6 inch	Sft	992	\$ 8.00	\$ 7,936.00
8030050	Sidewalk, Clay Brick Pavers	Sft	245	\$ 30.00	\$ 7,350.00
8032002	Curb Ramp, Conc, 6 inch	Sft	392	\$ 8.50	\$ 3,332.00
8037010	Decorative Concrete Sidewalk, 6 inch	Sft	3020	\$ 15.00	\$ 45,300.00
8107051	Pavement Markings and Signing	LSUM	0.4	\$ 25,000.00	\$ 10,000.00
8127051	Maintenance of Traffic	LSUM	0.4	\$215,700.00	\$ 86,280.00
8150002	Watering and Cultivating, First Season, Min	LSUM	0.6	\$ 3,500.00	\$ 2,100.00
8150003	Watering and Cultivating, 2nd Season, Min	LSUM	0.6	\$ 4,000.00	\$ 2,400.00
8157010	Landscape Plantings	Sft	520	\$ 8.00	\$ 4,160.00
8157021	Planting Soil Mix	Cyd	39	\$ 90.00	\$ 3,510.00
8157050	Benches	Ea	4	\$ 3,000.00	\$ 12,000.00
8157050	Bike Racks	Ea	4	\$ 1,200.00	\$ 4,800.00
8157050	Deciduous Street Tree	Ea	10	\$ 800.00	\$ 8,000.00
8157050	Litter Receptacles	Ea	6	\$ 2,000.00	\$ 12,000.00



OPINION OF PROBABLE CONSTRUCTION COST

ORCHARD, HILTZ & McCLIMENT, INC.

34000 Plymouth Road, Livonia, Michigan, 48150

Telephone: (734) 522-6711 FAX: (734) 466-4557

PROJECT: Main Street Reconstruction
LOCATION: Main St - Center to Griswold
WORK: Reconstruction between Hutton St and Griswold St
Includes the Hutton St Intersection

DATE: October 24, 2024
PROJECT #: 0152-24-0080
ESTIMATOR: KAH
CHECKED BY: AMB
CURRENT ENR: AMB

ITEM CODE	DESCRIPTION	UNIT	TOTAL	UNIT PRICE	COST
8157050	Raised Planter	Ea	2	\$ 4,500.00	\$ 9,000.00
8157050	Tree Grate	Ea	8	\$ 3,500.00	\$ 28,000.00
8167011	Turf Establishment	Syd	100	\$ 17.00	\$ 1,700.00
8167021	Shredded Hardwood Mulch	Cyd	5	\$ 160.00	\$ 800.00
8190279	Light Std Fdn	Ea	1	\$ 2,000.00	\$ 2,000.00
8190280	Light Std Fdn, Rem	Ea	1	\$ 500.00	\$ 500.00
8190301	Light Std Shaft, Install Salv	Ea	1	\$ 1,500.00	\$ 1,500.00
8190306	Light Std Shaft, Rem and Salv	Ea	1	\$ 500.00	\$ 500.00
8230095	Hydrant, Relocate, Case 1	Ea	2	\$ 850.00	\$ 1,700.00
8230421	Water Shutoff, Adj, Case 1	Ea	5	\$ 600.00	\$ 3,000.00
8230431	Gate Box, Adj, Case 1	Ea	15	\$ 600.00	\$ 9,000.00
8252145	Sanitary Structure Cover, Adj, Case 1	Ea	2	\$ 600.00	\$ 1,200.00
SUBTOTAL FOR CATEGORY 3 - Hutton St to Griswold St (Includes Hutton)					\$ 1,000,357.00
CONTINGENCY (20%)					\$ 200,071.40
TOTAL OPINION OF PROBABLE CONSTRUCTION COST =					\$ 1,200,428.40



OPINION OF PROBABLE CONSTRUCTION COST

ORCHARD, HILTZ & McCLIMENT, INC.

34000 Plymouth Road, Livonia, Michigan, 48150

Telephone: (734) 522-6711 FAX: (734) 466-4557

PROJECT: Main Street Engineering Study
 LOCATION: Main St - Center to Griswold
 WORK: Rehabilitation of Center to Hutton
 Brick replacement, asphalt overlay, curb and sidewalk repairs

DATE: November 8, 2024
 PROJECT #: 0152-24-0080
 ESTIMATOR: KAH
 CHECKED BY: AMB
 CURRENT ENR: AMB

ITEM CODE	DESCRIPTION	UNIT	TOTAL	UNIT PRICE	COST
CATEGORY 4 - Center to Hutton - Rehab only					
1077051	Mobilization for Rehab	LSUM	1	\$ 50,000.00	\$ 50,000.00
2030011	Dr Structure, Rem	Ea	4	\$ 500.00	\$ 2,000.00
2040020	Curb and Gutter, Rem	Ft	462	\$ 50.00	\$ 23,100.00
2040021	Curb, Rem	Ft	180	\$ 46.00	\$ 8,280.00
2040050	Pavt, Rem	Syd	819	\$ 15.00	\$ 12,285.00
2040055	Sidewalk, Rem	Syd	92	\$ 12.00	\$ 1,104.00
2080020	Erosion Control, Inlet Protection, Fabric Drop	Ea	12	\$ 110.00	\$ 1,320.00
2097051	Project Cleanup for Rehab	LSUM	1	\$ 1,300.00	\$ 1,300.00
3020001	Aggregate Base	Ton	20	\$ 60.00	\$ 1,200.00
3020050	Aggregate Base, Conditioning	Syd	821	\$ 10.00	\$ 8,210.00
4020033	Sewer, CI A, 12 inch, Tr Det B	Ft	32	\$ 69.00	\$ 2,208.00
4030005	Dr Structure Cover, Adj, Case 1	Ea	12	\$ 750.00	\$ 9,000.00
4030050	Dr Structure Cover, Type K	Ea	4	\$ 800.00	\$ 3,200.00
4030210	Dr Structure, 48 inch dia	Ea	4	\$ 5,000.00	\$ 20,000.00
5010002	Cold Milling HMA Surface	Syd	910	\$ 5.00	\$ 4,550.00
5010025	Hand Patching	Ton	3	\$ 180.00	\$ 540.00
5012037	HMA, 5EML	Ton	111	\$ 150.00	\$ 16,650.00
5017051	Pavt, Cleaning for Rehab	LSUM	1	\$ 1,300.00	\$ 1,300.00
6020019	Conc Base Cse, Nonreinf, 8 inch	Syd	428	\$ 60.00	\$ 25,680.00
8020038	Curb and Gutter, Conc, Det F4	Ft	338	\$ 40.00	\$ 13,520.00
8020060	Valley Gutter, Conc	Ft	84	\$ 40.00	\$ 3,360.00
8027001	Curb and Gutter, Conc, Det F2, Decorative	Ft	180	\$ 40.00	\$ 7,200.00
8030030	Curb Ramp Opening, Conc	Ft	40	\$ 40.00	\$ 1,600.00
8037010	Decorative Concrete Sidewalk, 6 inch	Sft	821	\$ 15.00	\$ 12,315.00
8037010	Roadway, Brick Pavers	Sft	3850	\$ 35.00	\$ 134,750.00
8037010	Sidewalk, Clay Brick Pavers, Remove and Reset	Sft	1160	\$ 25.00	\$ 29,000.00
8107051	Pavement Markings and Signing for Rehab	LSUM	1	\$ 15,000.00	\$ 15,000.00
8127051	Traffic Control for Rehab	LSUM	1	\$ 50,000.00	\$ 50,000.00
SUBTOTAL FOR CATEGORY 4 - Center to Hutton - Rehab only					\$ 458,672.00
CONTINGENCY (20%)					\$ 91,734.40
TOTAL OPINION OF PROBABLE CONSTRUCTION COST =					\$ 550,406.40

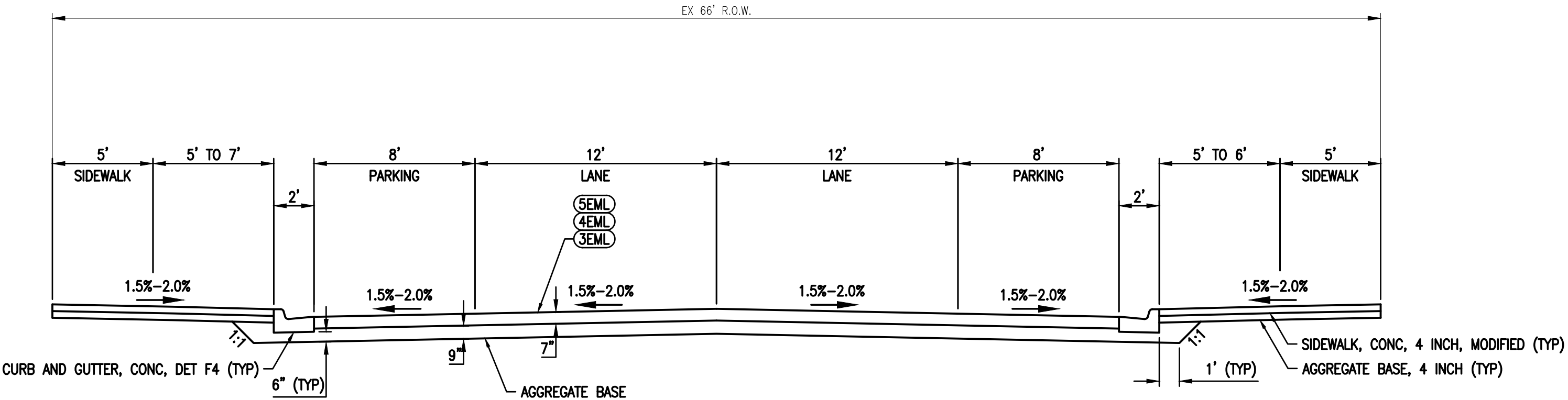
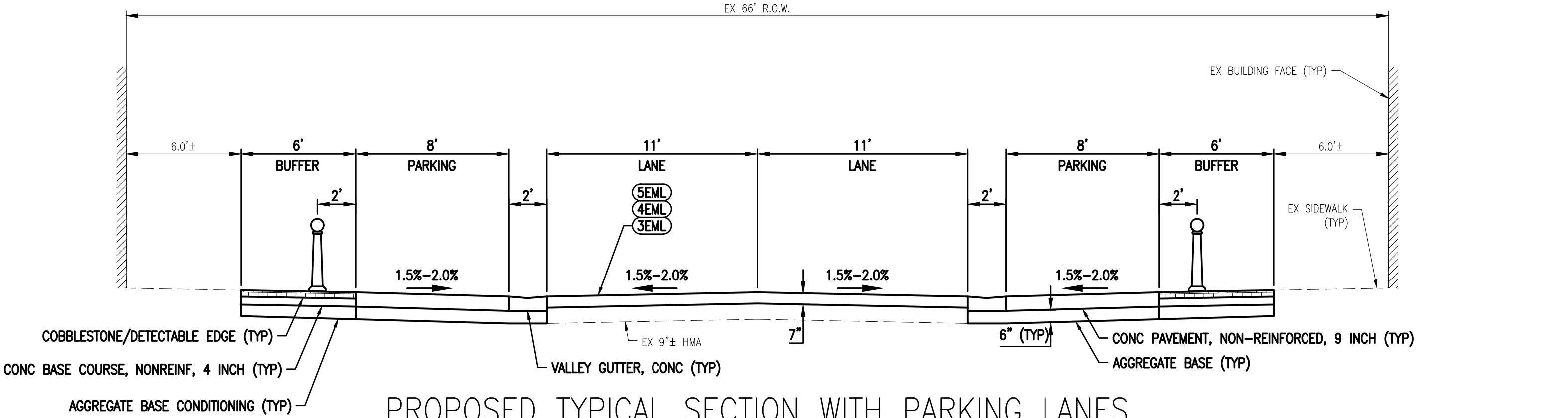


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ISSUED FOR:	ISSUE DESCRIPTION	DATE
REVISION	DESCRIPTION	
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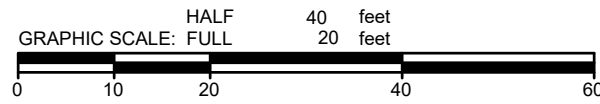
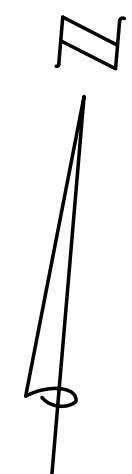
PROJECT NUMBER	PM	XX
0182-24-0080		
CITY OF NORTHVILLE		
MAIN STREET PRELIMINARY STUDY		
LOCATION		
TYPICAL CROSS SECTIONS		

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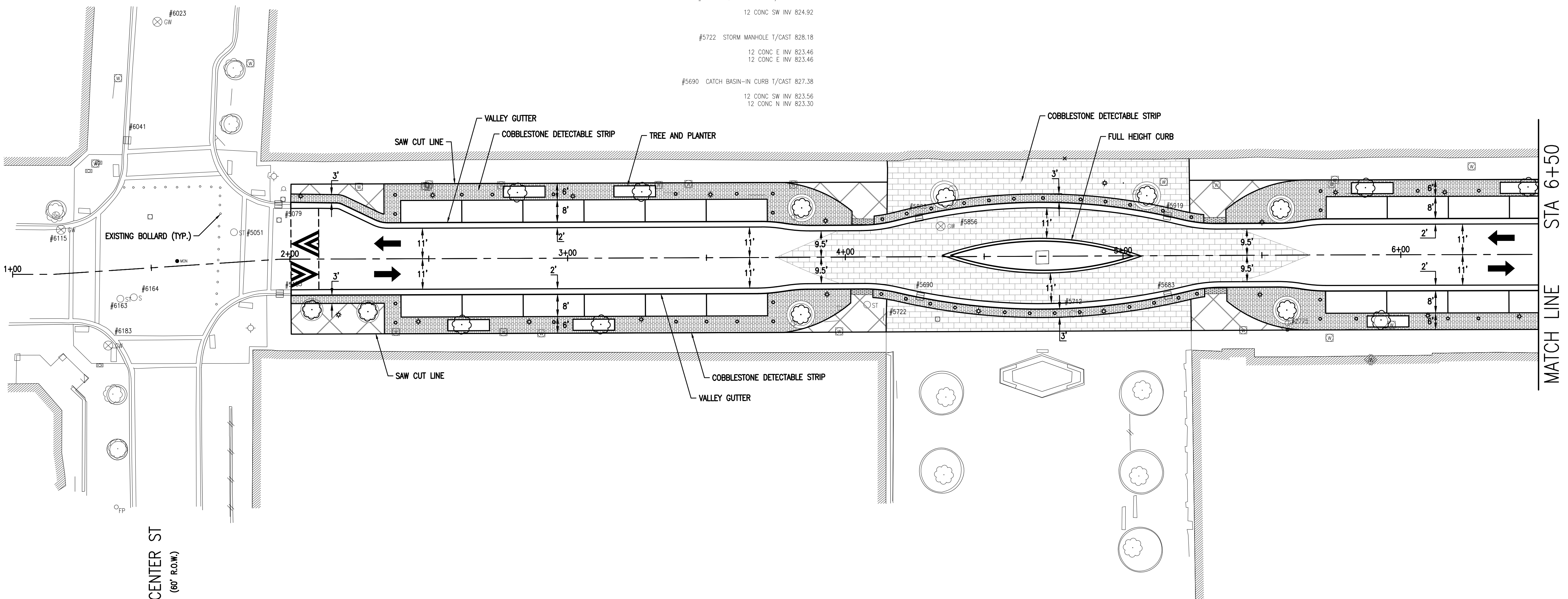


JOB BENCHMARK #200 ARROW ON HYDRANT IN NORTHEAST QUAD CENTER AND MAIN. ELEV 831.92	JOB BENCHMARK #212 SOUTHEAST FLANGE BOLT HYDRANT "SPICE TEA" #134 MAIN ST ELEV 830.26
JOB BENCHMARK #211 "X" LIGHT POLE BASE IN FRONT OF "GARDEN VIEW" #117 MAIN ST ELEV 829.50	JOB BENCHMARK #213 "X" LIGHT POLE BASE FRONT OF " BEES KNEES " #149 MAIN ST ELEV 825.40
TRAVERSE POINT #100 N 340571.67 E 13361866.37 ELEV 829.22	TRAVERSE POINT #112 N 340575.31 E 13362159.14 ELEV 826.84
TRAVERSE POINT #111 N 340573.35 E 13362002.96 ELEV 829.08	TRAVERSE POINT #113 N 340590.74 E 13362267.96 ELEV 824.58

EAST MAIN STREET
(66' R.O.W.)

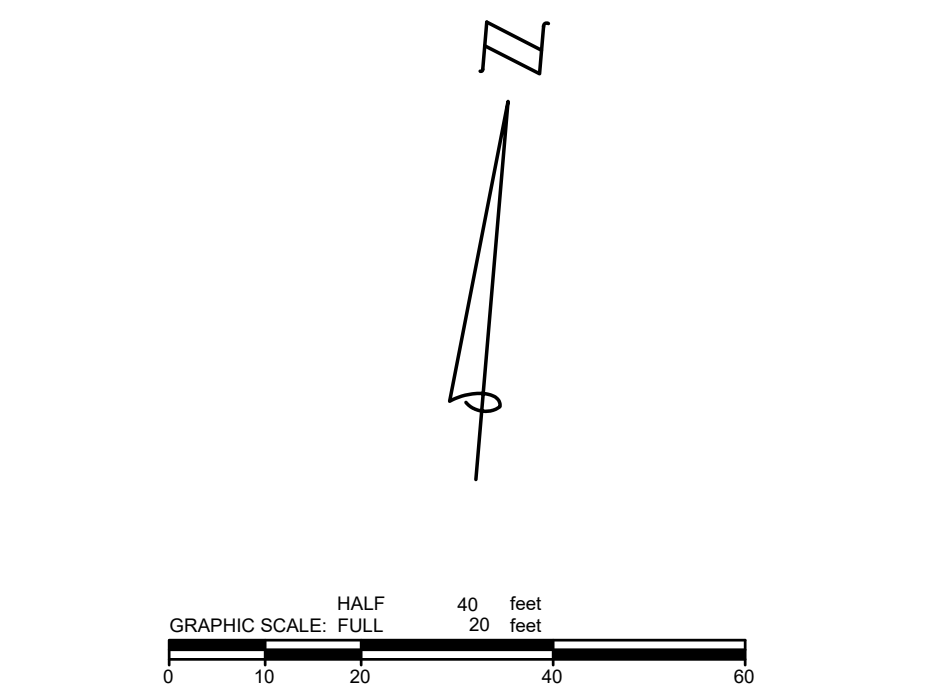
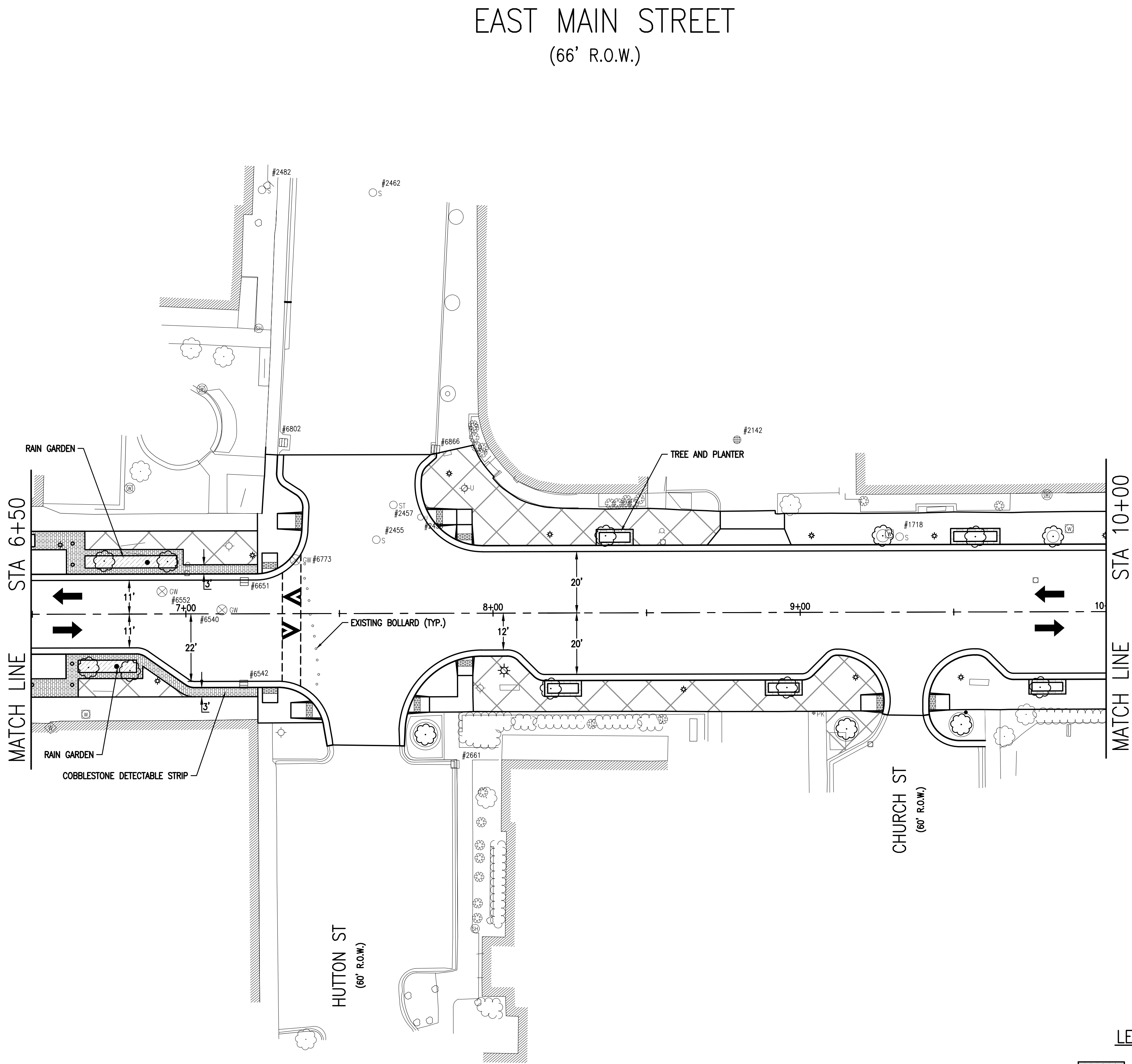


#6163 STORM MANHOLE T/CAST 828.26 12 CONC N INV 823.02 12 CONC NE INV 822.86 18 CONC W INV 819.48 18 CLAY S INV 819.00	#5863 CATCH BASIN-IN CURB T/CAST 827.32 12 CONC S INV 822.56	#6164 SANITARY MANHOLE T/CAST 828.33 12 CLAY W INV 816.93 12 CLAY S INV 816.18	#6115 GATE WELL T/CAST 828.97 12 IRON E/W T/PIPE 823.61
#6041 SQ CATCH BASIN T/CAST 829.36 12 CONC SW INV 824.80 12 CONC E INV 825.48	#5712 STORM MANHOLE T/CAST 826.81 12 CONC E INV 821.87 12 CONC SW INV 820.73 12 CONC NW INV 820.87 12 CONC NE INV 821.69		#6023 GATE WELL T/CAST 830.24 8 IRON N/S/W/E T/PIPE 825.58
#5051 STORM MANHOLE T/CAST 829.20 12 CONC NE INV 823.96 12 CONC SE INV 824.32 12 CONC SW INV 824.28 8 CONC N INV 824.38	#5919 CATCH BASIN-IN CURB T/CAST 825.74 12 CONC S INV 822.66		#5856 GATE WELL T/CAST 827.30 12 IRON N/S/E/W T/PIPE 822.66
#5079 SQ CATCH BASIN T/CAST 828.88 12 CONC SW INV 824.92	#5683 CATCH BASIN-IN CURB T/CAST 825.93 12 CONC SW INV 821.07 12 CONC N INV 821.03		
#5722 STORM MANHOLE T/CAST 828.18 12 CONC E INV 823.46 12 CONC E INV 823.46			
#5690 CATCH BASIN-IN CURB T/CAST 827.38 12 CONC SW INV 823.56 12 CONC N INV 823.30			



DRAWING PATH: P:\0125 01650162240060 Main Street Preliminary Study\Drawings\Civil\Plans Const\240060 CON.dwg Oct 24, 2024 - 11:12am

JOB BENCHMARK #201 ARROW ON HYDRANT IN NORTHWEST QUAD MAIN AND HUTTON ELEV 824.46	
JOB BENCHMARK #214 "X" LIGHT POLE BASE BY ENTRANCE CHURCH SANCTUARY (EAST SIDE HUTTON ST) ELEV 821.90	
JOB BENCHMARK #215 "X" LIGHT POLE BASE WEST SIDE HUTTON ST +/- 60' NORTH MAIN ST ELEV 822.20	
JOB BENCHMARK #216 "X" LIGHT POLE BASE AT SOUTHWEST CORNER MAIN CHURCH ST (ENTRANCE STARBUCKS) ELEV 818.08	
TRAVERSE POINT #101 N 340604.66 E 13362415.54 ELEV 821.84	
TRAVERSE POINT #114 N 340501.89 E 13362474.38 ELEV 821.42	
TRAVERSE POINT #115 N 340689.14 E 13362418.58 ELEV 821.23	
TRAVERSE POINT #116 N 340612.19 E 13362643.12 ELEV 817.07	




#2482 SANITARY MANHOLE T/CAST 822.73 FLOW EAST, 11.14 CL INV. 10 CONC E INV 811.59 10 CONC W INV 811.59	#6552 GATE WELL T/CAST 821.93 12 IRON E/W T/PIPE 816.53
#2455 SANITARY MANHOLE T/CAST 821.23 10 CLAY N INV 810.63 10 CLAY E INV 810.59	#6540 GATE WELL T/CAST 821.88 6 IRON N/S T/PIPE 816.18
#2462 SANITARY MANHOLE T/CAST 822.10 FLOW SOUTH 10 CLAY N INV 811.36 10 CLAY S INV 811.20 10 CLAY W INV 811.48	#6773 GATE WELL T/CAST 821.27 8 IRON N/S T/PIPE 815.59
#1718 SANITARY MANHOLE T/CAST 817.64 FLOW SOUTH 6 CLAY NW INV 811.70 10 CLAY W INV 807.62 10 CLAY S INV 807.54	
#6651 SQ CATCH BASIN T/CAST 821.51 12 CONC S INV 817.33 12 CONC NE INV 817.21	
#6542 CATCH BASIN-IN CURB T/CAST 821.39 6 CMP SE INV 819.03 12 CONC N INV 817.97	
#6802 SQ CATCH BASIN T/CAST 820.89 12 CONC S INV 816.79 12 PVC E INV 816.55 12 PVC NW INV 816.75	
#2457 STORM MANHOLE T/CAST 821.12 10 CONC W INV 817.74 12 CONC NE INV 817.98	
#6866 CATCH BASIN-IN CURB T/CAST 820.94 12 CONC SW INV 818.65	
#2661 CATCH BASIN-IN CURB T/CAST 820.56 12 CONC SW INV 816.70	
#2142 RD CATCH BASIN T/CAST 818.22 12 CONC N INV 813.70 6 PVC SE INV 814.71	

LEGEND	
	BRICK
	COBBLESTONE/DETECTABLE EDGE
	RAIN GARDEN



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ARCHITECTS ENGINEERS PLANNERS
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PRELIMINARY - NOT FOR CONSTRUCTION

ISSUED FOR:	ISSUE DESCRIPTION	REVISION	DESCRIPTION	DATE

PROJECT NUMBER: 0162-24-0060

PM: XX

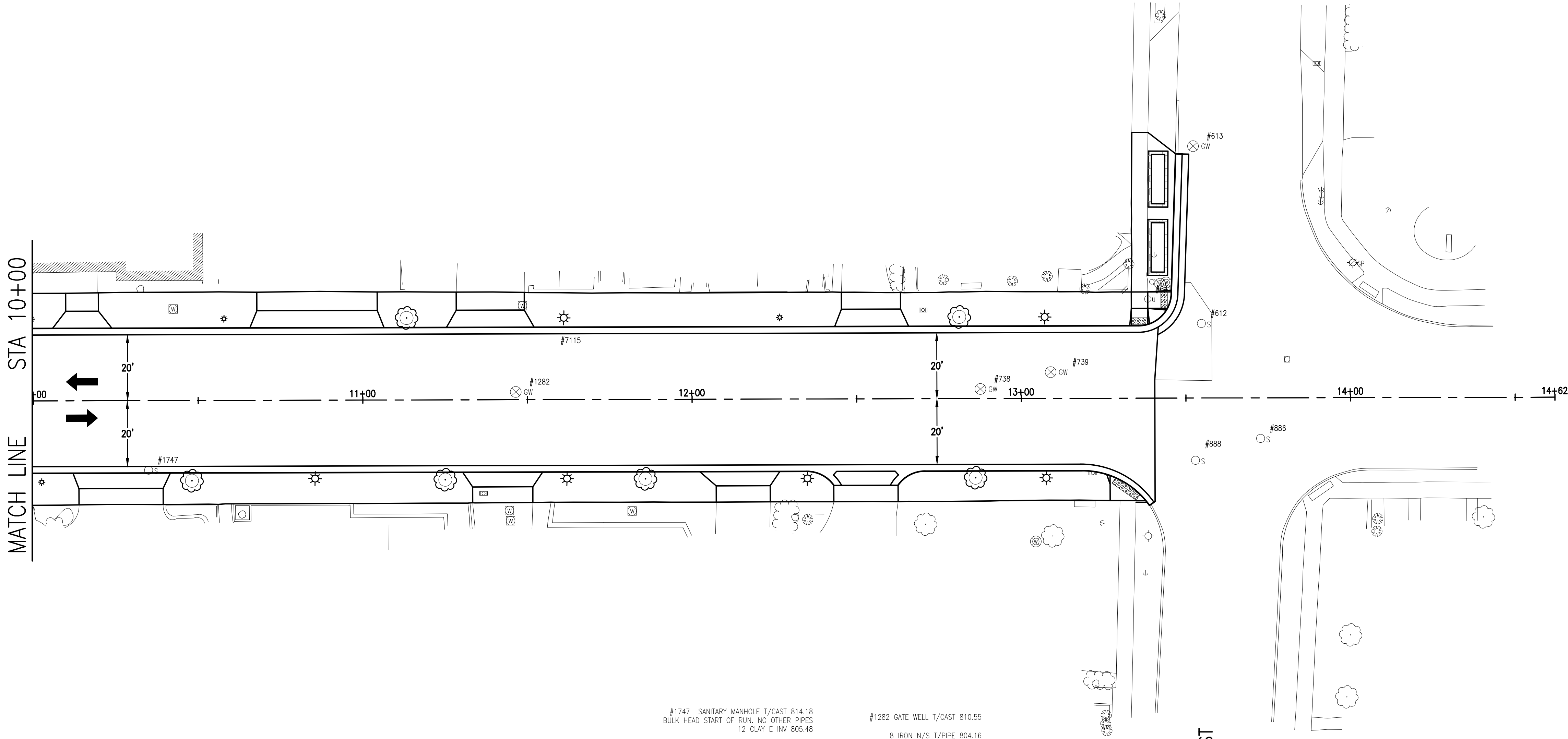
CITY OF NORTHVILLE
MAIN STREET PRELIMINARY STUDY
STA 6+50 TO STA 10+00
EAST MAIN STREET CONSTRUCTION SHEET

3

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JOB BENCHMARK #217 "X" LIGHT POLE NORTH SIDE MAIN ST IN FRONT OF #341	
	ELEV 810.34
JOB BENCHMARK #218 CS IN UTIL POLE AT SOUTHWEST CORNER MAIN ST AND GRISWOLD	
	ELEV 801.09
TRAVERSE POINT #117 N 340671.92 E 13362804.08	
	ELEV 812.15
TRAVERSE POINT #118 N 340629.99 E 13363094.62	
	ELEV 798.40
TRAVERSE POINT #119 N 340800.62 E 13363076.41	
	ELEV 795.82

EAST MAIN STREET
(66' R.O.W.)



#1747 SANITARY MANHOLE T/CAST 814.18
BULK HEAD START OF RUN. NO OTHER PIPES
12 CLAY E INV 805.48

#1282 GATE WELL T/CAST 810.55
8 IRON N/S T/PIPE 804.16

#612 SANITARY MANHOLE T/CAST 798.94
FLOW SOUTH
10 CLAY NW INV 791.86
12 CLAY NW INV 785.42
15 CLAY N INV 785.29
15 CLAY S INV 784.89

#738 GATE WELL T/CAST 803.19
8 IRON S/S T/PIPE 796.82

#886 SANITARY MANHOLE T/CAST 798.45
RUSH FLOW EAST
48 CONC N INV 776.56
48 CONC E INV 776.56
48 CONC S INV 776.56

#739 GATE WELL T/CAST 801.69
IRON E/W T/PIPE 796.01

#888 SANITARY MANHOLE T/CAST 798.33
FLOW EAST
15 CLAY N INV 784.83
12 PVC E INV 784.77

#613 GATE WELL T/CAST 797.25
RIM SAYS SANITARY. IT IS NOT
IRON N/S T/PIPE 791.54

- LEGEND
- BRICK
 - COBBLESTONE/DETECTABLE EDGE
 - RAIN GARDEN



PRELIMINARY - NOT
FOR CONSTRUCTION

ISSUED FOR:	ISSUE DESCRIPTION	DATE
REVISION	DESCRIPTION	
1		
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PROJECT NUMBER	PM	XX
0182-24-0380		
CITY OF NORTHVILLE		
MAIN STREET PRELIMINARY STUDY		
STA 10+00 TO P.O.E.		
EAST MAIN STREET CONSTRUCTION SHEET		

REVITALIZATION AND PLACEMAKING (RAP FUND) PROGRAM

GUIDELINES

Program Overview

The Revitalization and Placemaking (“RAP”) Program is an incentive program that will proactively deploy state funding to address community revitalization needs in Michigan communities by investing in projects that enable population and tax revenue growth through rehabilitation of underutilized buildings and historic structures, and development of permanent place-based infrastructure associated with social zones and traditional downtowns, outdoor dining, and place-based public spaces. Administered by the Michigan Economic Development Corporation (“MEDC”), this tool provides access to development gap financing for 1) real estate rehabilitation and development projects; 2) public place-based infrastructure projects; or 3) façade improvement program implementation projects. Grants will be awarded for individual projects; however, grants for place-based infrastructure and/or façade program implementation may be awarded to subgrant programs. Awards may be made based on individual application or based on funding rounds as determined by the MEDC.

Program Goals

Through the RAP Program, the MEDC partners with local communities to proactively address revitalization needs by investing in projects that promote population and tax revenue growth. These investments help create the environment necessary to attract and retain talent, add new housing options, enable business creation and attraction, and provide resources for Michigan citizens and communities.

Eligible Applicants:

- Real Estate Rehabilitation and Development: Individuals or entities working to rehabilitate vacant, underutilized, blighted, and historic structures. These applicants may include but are not limited to: non-profits and local economic development organizations or private real estate developers.
- Public Place-Based Infrastructure (individual projects): Individuals or entities working on the development of permanent place-based infrastructure¹ associated with traditional downtowns, social-zones, outdoor dining and placed-based public spaces. These applicants may include but are not limited to: Municipal or economic development organizations such as Downtown Development Authorities, local units of government, local Land Bank Fast Track Authorities² or other entities approved by the MEDC.
- Façade or Public Place-Based Infrastructure Subgrant (as part of a funding round): Economic development organizations and other public entities working to improve the streetscape in traditional downtowns and neighborhood commercial nodes by investing in place-based infrastructure on publicly owned and maintained properties or investing in private building facades through an existing and active local façade improvement program.

¹ Amenity that is not intended to be temporary, including but not limited to a site improvement or building, and that positively contributes to a traditional downtown or a mixed-use area with abundant accommodations for non-motorized transportation.

² Local authority created under Act 258 of 2003.

Eligible Properties:

- Real Estate Rehabilitation and Development:
 1. Must qualify as Previously Developed Property³ and may have previously contained or currently contains a structure.
 2. Must be located in or contributing to a traditional downtown, central business district, neighborhood commercial node or adjacent walkable neighborhood; and
- Public Place-Based Infrastructure:
 1. Must be located in or contributing to a traditional downtown, central business district, neighborhood commercial node or adjacent walkable neighborhood; and
 2. Must be a property and be owned and maintained by a municipality or community-focused non-profit; and
 3. Must be a physical location that is generally open and accessible to the public, without cost, and is owned and maintained for the public good. Public space can be used for recreation, public use, or as places for people to gather.
- Façade Program Implementation:
 1. Must be located in or contributing to a traditional downtown, central business district, neighborhood commercial node or adjacent walkable neighborhood; and
 2. Must fit the requirements of the local and currently active façade improvement program.

Eligible Costs

"Eligible Costs" are at least one, or any combination, of the following expenditures:

- a. Acquisition or costs for real property;
- b. Fees or costs for alteration, new construction, improvement, demolition, or rehabilitation of buildings of an approved project, including utility tap fees, and fees and costs paid to a governmental entity for permits, zoning, and inspections;
- c. Costs associated with site improvements such as access (including ADA improvements) and streetscaping elements such as lighting, fencing, street furniture, etc.;
- d. Fees or costs for site improvements, including a surface parking lot, parking garage, parking ramp, utilities and public infrastructure, such as roads, curbs, gutters, sidewalks, landscaping, lighting, grading and land balancing;
- e. Fees or costs for the addition of machinery, equipment or fixtures for an approved project;
- f. Professional fees or costs for an approved project for the following services: architectural, engineering, environmental, and surveying;
- g. Real estate developer fees not to exceed 4% of total project costs;
- h. Other costs associated with real estate or place-based infrastructure development or administration of subgrant programs may be considered on a case-by-case basis or as defined within a funding round.

Award Structures and Funding

Funding availability is based on income tax revenue deposited into the Revitalization and Placemaking Fund and appropriated for this program as described in Section 696 of the Income Tax Act of 1967.

³ Previously developed property means property that was part of an existing developed residential, commercial, or industrial zone and contained a structure serviced by utilities, or former dumps, landfills, and other areas filled with nonnative material.

Grants for place-based infrastructure and/or façade program implementation may be awarded to subgrant programs and will have unique funding limits as determined in the funding round.

All awards will be structured as performance-based reimbursement grants with milestones and reporting requirements:

- Real Estate Rehabilitation and Development:
 1. Grant awards on a single project associated with the rehabilitation of vacant and blighted buildings or costs associated with the repurposing of space left vacant shall not exceed the lesser of \$1.5 million or 50% of Eligible Costs, except all allowed under 2. below.
 2. Grant awards for a single project with an extraordinary economic development impact or public benefit that has maximized all other state loans and financing tools as determined by the MEDC, will be eligible for an award amount up to the lesser of \$5 million or 50% of the Eligible Costs. Any project for consideration must pursue and maximize all additional programs and/or funding sources available to support the project (e.g., Loan capacity, Housing TIF, Federal Historic Tax Credit, etc.). Also, any instances of Extraordinary Economic Development Impact/Public Benefit shall satisfy the MEDC Place Incentives Guidance, and embody one or more of the additional qualities described below:
 - Project will eliminate long lasting instances of blight and/or environmental contamination (10+ years), through the redevelopment of the property.
 - Project has a geographic correlation, and addresses community needs associated with a significant, strategic MEDC investment.
 - Project is proposed in an area of historic disinvestment and has not seen new or rehabilitated mixed-use development in 5+ years.
- ** All projects funded under these criteria are subject to RAP regional targets and will significantly impact the availability of additional funding for other projects in the region.**
- Public Place-Based Infrastructure:
 1. For a single project associated with the development of permanent place-based infrastructure in support of a traditional downtown or central business district and associated with social-zones⁴, outdoor dining, etc.: must have a minimum request of \$500,000 and a maximum of the lesser of \$1 million or 50% of Eligible Costs.
 2. Grant applications will be accepted as part of an application round as announced by the MEDC.
- Public Place-Based Infrastructure and/or Façade Program (Subgrant Funding Rounds):
 1. There is no minimum or maximum request amount for subgrant applications, but applicants are encouraged to only include the most competitive projects and to recognize that all projects in the grant application must meet readiness requirements and have all funding sources secured.
 2. There is no minimum grant amount for each subrecipient grant within the subgrant application, but the maximum grant amount for each subrecipient grant request within the subgrant application is limited to the lesser of \$500,000 or 50% of Eligible Costs.
 3. Grant applications may be submitted as part of an application round as announced by the MEDC.

Award Disbursement

Awards will be disbursed in two parts. The first disbursement will be for up to fifty percent (50%) of the eligible costs submitted, not to exceed fifty percent (50%) of the grant; and, upon Project completion, up to fifty percent (50%) of eligible costs submitted, not to exceed the remaining balance of the grant.

⁴ Area or district established by a local governmental unit (city, village, township, county) under MCL 436.1551

There will be no more than two disbursements per project.

Project Considerations

The most competitive applications will clearly address community revitalization needs by responding to the criteria below:

1. Local support and match: All submissions must include a letter of support from the local or regional economic development organization and the highest municipal local official, such as the City Manager, Mayor, or Township Supervisor. The letter must also state that support is specific to the RAP project and not just general project support. If the project is for place-based infrastructure, the letter must provide a detailed explanation of who will maintain the space and how ongoing maintenance costs will be funded.
2. Location: Preference will be given to projects located in traditional downtowns, neighborhood commercial nodes, and Geographically Disadvantaged Areas⁵.
3. Capacity: The applicant, consultant or individual member of the development team must have experience implementing a project of a similar scope.
4. Long-term impacts: Competitive applicants will be able to articulate how the proposal will have a long-term impact in the community including addressing how the project will enable growth in population and tax revenue.
5. Financial Viability:
 - Demonstrate long-term financial viability of the project
 - Demonstrate financial need for the incentive award
 - Demonstrating that all other financing sources have been exhausted.
6. Local and Regional Impact Considerations:
 - Project should demonstrate how it supports the vision and goals stated in the local master plan, downtown plan, capital improvements plan and/or economic development strategy.
 - Project should demonstrate the readiness of infrastructure – utilities, housing, transportation, public transit, and other community services. Is the project filling available capacity or creating need for new community or state investments in infrastructure/resources?
 - The most competitive proposals will include a financial contribution from the local unit of government.
7. Additional programing, partnership and design considerations may be incorporated into funding round applications.

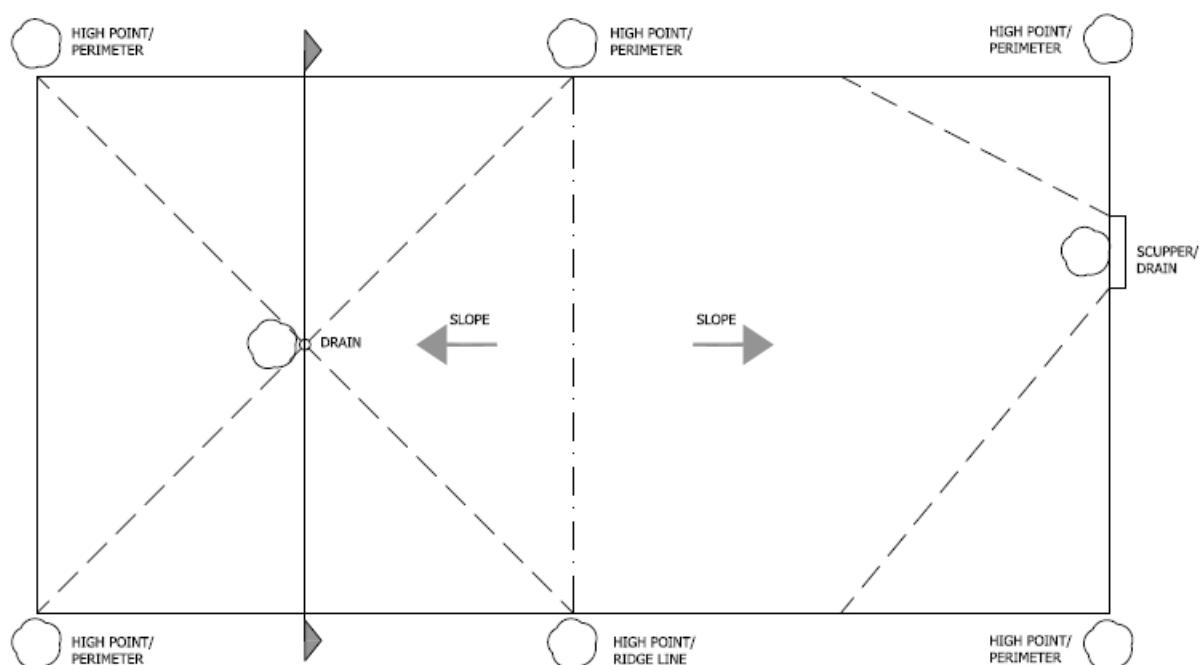
All RAP Program awards shall be memorialized by final written agreement with terms and conditions in accordance with these RAP Guidelines, MEDC approval, and any other applicable laws. These terms and conditions shall otherwise be satisfactory to the MEDC, and shall include, without limitation, performance-based milestones governing disbursements, repayment provisions, and periodic reporting to facilitate the MEDC's report to the Michigan Legislature. The RAP Program agreements shall also include a provision for repayment due to breach of the written agreement or failure to meet measurable milestones.

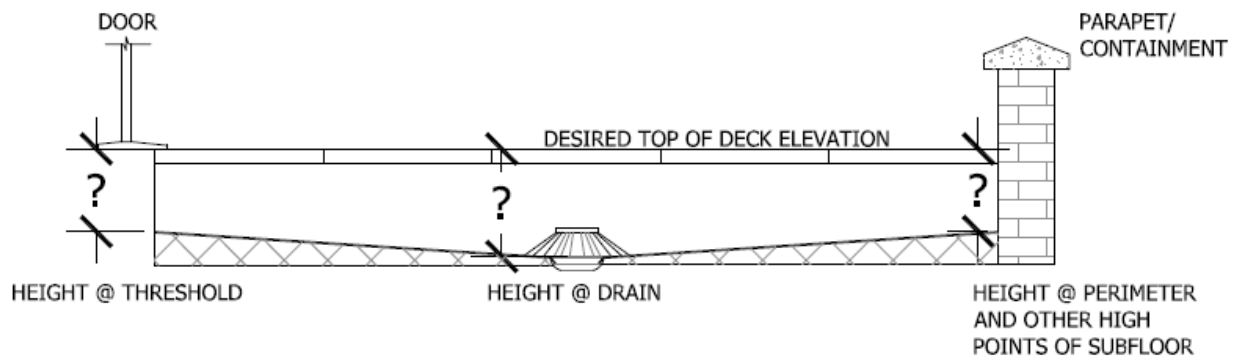
⁵ Geographically Disadvantaged Areas are defined as economically distressed and historically underinvested census tracts and counties, especially in urban and rural areas, that tend to experience relatively high unemployment and low household incomes. MEDC and the State of Michigan operationalize geographically disadvantaged areas to constitute Treasury-designated Opportunity Zones and Small Business Administration-defined HUBZones (Historically Underutilized Business Zones).

BISON CAD LAYOUT REQUIREMENTS

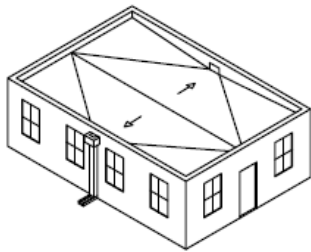
For the detailed CAD layout, we would need the following:

- A plan drawing illustrating the deck perimeter and paver layout,
- decking material to be installed with dimensions (LWH),
 - Bison IPE wood tiles are 23.875"x23.875" x 1.69"
 - Bison 2cm paver with metal support tray is 1.14"H
 - Other
- a drainage plan illustrating drain locations, valleys, and ridges, and
- 1 of 3 options:
 1. a section through the deck area illustrating slope and changing cavity height,
 2. slope called out on the drainage plan and a VIF starting height measured from top of slab/TPO to top of desired deck (taken at a door threshold, drain, or high point), OR
 3. VIF (verified in field) heights taken at each corner, high point, and drain

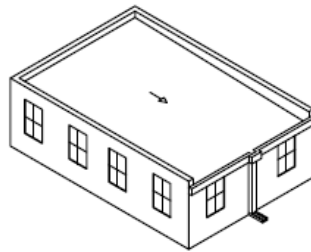




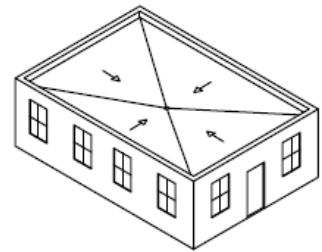
FLAT ROOF DRAINAGE SYSTEMS



SCUPPER DRAINS



GUTTER & DOWNSPOUT



INTERNAL DRAINAGE SYSTEM