



MARSHALL
CULTIVATING THE BEST IN US

FEASIBILITY REPORT

PROJECT ST-012-2025

**S. HILL ST., S. MINNESOTA ST. (COLLEGE TO CHARLES)
AND CHARLES AVE. (WHITNEY TO MINNESOTA)
RECONSTRUCTION PROJECTS**

DECEMBER 10, 2024



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I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision, and that I am a duly Registered Professional Engineer under the laws of the State of Minnesota.



By: _____

Eric R. Hanson, P.E.
Registration No. 53316

FEASIBILITY REPORT

S. HILL ST., S. MINNESOTA ST. (COLLEGE TO CHARLES) AND CHARLES AVE. (WHITNEY TO MINNESOTA) RECONSTRUCTION PROJECTS CITY OF MARSHALL, MINNESOTA

1.0 SCOPE

This Feasibility Report as authorized by the City Council, covers the following proposed improvements: Reconstruction of the sidewalk, roadways and utility replacement on South Hill Street and South Minnesota Street from College Drive to Charles Avenue, and Charles Avenue from South Whitney Street to South Minnesota Street. All public utilities will be replaced, including watermain, sanitary sewer, and storm sewer on South Hill Street, South Minnesota Street and Charles Avenue. Other items of work included in this project are pavement removal, aggregate base, concrete surfacing, sidewalks, curb and gutter, streetscaping, and other minor work.

2.0 BACKGROUND / EXISTING CONDITIONS

Street

City records show this area was platted between 1938 and 1939 with 80' rights-of-way. The earliest city records show the streets with 1.5" of paving in 1957 and has had overlays over the years. The original pavement section does not meet the City's current standards for thickness and load rating. The existing pavement surface is beginning to show its age with considerable cracking. There are numerous patches due to pavement degradation.

The existing street widths in this project area are 80' back of curb to back of curb. This area of Marshall has a unique layout for the streets that include a 20.' (back of curb to back of curb) surface, a 20' grass island with trees and another 20.5' (back of curb to back of curb) surface. Currently the existing 20' surfaces include a 12' travel lane and an eight-foot parallel parking lane.

The existing rights-of-way in the allies vary from 19' to 26' with the bituminous paving varying from 16' to 19'.

The sidewalk within the limits of the project is five feet wide and at the back of the curb. The sidewalk has exhibited signs of issues with cracking and buckling observed. This sidewalk does not meet the current requirements of ADA accessibility due to several areas of cracking and faulting. Several of the existing pedestrian ramps are not ADA compliant.

Utilities

The water distribution for the two blocks of houses north of Charels Avenue, East of Whitney Street and West of Minnesota Avenue is a two-inch copper line that is in both alleys, the services connect to the back of the houses. Charles Avenue has an existing four-inch Cast Iron Pipe (CI) and Ductile Iron Pipe (DIP) watermain except for the six-inch PVC watermain at Hill Street. All the DIP in this project area is in poor condition, undersized, and does not provide sufficient fire hydrant pressures for today's standards.

The existing sanitary sewer in Hill Street and Minnesota Street flow from south to north in an eight-inch vitrified clay pipe (VCP) pipe between Charles Avenue and East College Drive. Our records show that the sewers were constructed in 1939 by the WPA, this puts their age at approximately 84 years old. During review of the project the sewer system was televised and evaluated. The age and condition of the sewer in these segments make this sewer a good candidate for replacement with this project.

There is a limited existing drainage system with the project area. There are insufficient catch basins to provide adequate surface drainage and downstream storm sewer main within the project area and further are not large enough to provide sufficient capacity for the drainage areas.

3.0 PROPOSED IMPROVEMENTS

Street

A bituminous pavement section will be proposed and discussed in this feasibility report. Staff is proposing a street section comprised of four-inch of bituminous surfacing and 12-inch of Class 5 aggregate base. A geotextile fabric will be placed on the subgrade prior to the placement of the aggregate base. A four-inch perforated drain tile shall be installed at the back of the curb below the aggregate base to provide subsurface drainage for the street section in area where it is needed.

The proposed roadway starting 80 feet south of College Drive will be two 21-foot (as measured back of curb to back of curb) lanes separated with a 17-foot island. Each of the proposed lanes has a 12-foot travel lane and an 8-foot parking lane. The 17-foot island will continue to have trees in it. The project layout that is included with this report reflects these possible changes.

The proposed alley widths vary from 16-19' and are planned to be wither bituminous or concrete surfacing.

The project is proposing to install a 6-foot sidewalk adjacent to the back of curb on the outside of each 20' lanes. The median will not have any parallel sidewalk installed. The pedestrian ramps will be reconstructed to bring them into compliance with ADA standards.

Utilities

The proposed utility improvements include replacing existing VCP sanitary sewer, existing DIP watermain, and existing storm sewer.

The watermain improvements will consist of replacing all DIP watermain with Polyvinyl Chloride (PVC) watermain pipe. Watermain improvements are planned in close coordination with MMU staff input. The existing 4" CIP and DIP in the project will be replaced with 8" PVC pipe. All water lines in the alleys would be replaced with new 6" PVC, the service lines and curb stops will be replaced to the right-of-way line.

The sanitary sewer system improvements will include replacing all manholes, sewer main, and sewer services along the project. Generally, the VCP main will be replaced with an 8-inch PVC main on S Hill Street and S Minnesota Street between East College Drive and Charels Avenue. All sewer services will be replaced to the right-of-way (ROW) with a minimum 4" pipe size.

The storm sewer system improvements will include replacing all manholes, intakes, and piping. Additional catch basins would be installed in the intersection of S Hill Street and Charles Avenue. The work in this area will also include replacing all catch basin leads and existing manholes.

4.0 STATEMENT OF PROBABLE COST

The estimated costs to complete the proposed improvements are shown below. The estimated construction costs include a 10% allowance for contingencies and a 16% allowance for administrative and engineering costs. The unit prices for each item of work used in determining the estimated cost of construction is based on previous projects similar in nature and is subject to change.

| | |
|--|-------------------------------------|
| <i>Street and Curb and Gutter</i> | <i>\$757,000.00</i> |
| <i>Watermain Replacement</i> | <i>\$245,000.00</i> |
| <i>Sanitary Sewer Replacement</i> | <i>\$104,000.00</i> |
| <i>Storm Sewer Replacement</i> | <i>\$99,000.00</i> |
| <i>Subtotal Estimated Construction Cost</i> | <i>\$1,205,000.00</i> |
| <i>Contingencies (10%)</i> | <u><i>\$121,000.00</i></u> |
| <i>Total Estimated Construction Cost</i> | <i>\$1,326,000.00</i> |
| <i>Estimated Engineering, & Administration (16%)</i> | <u><i>\$213,000.00</i></u> |
| <i>Total Estimated Project Cost</i> | <u><i>\$1,539,000.00</i></u> |

5.0 PROPOSED ASSESSMENTS

The adjacent properties will not be assessed for the watermain improvements. All costs for watermain and related work will be paid by MMU.

The adjacent properties will not be assessed for sanitary sewer main improvements. All costs for sanitary sewer main will be paid by the City of Marshall Wastewater Department. Sanitary sewer service lines and connection points to the main will be assessed to the adjacent property owners according to current sanitary sewer assessment procedures.

Costs for the street replacements will be partially assessed to the adjacent property owners in accordance with the most recent Special Assessment Policy and partially funded by the Wastewater Department, MMU, and Surface Water Management Utility fund.

Streetscaping improvements will be partially assessed to the adjacent property owners as directed through Council action describing the split amounts.

A preliminary assessment roll showing the estimated assessments for each benefiting parcel, City Participation, and utility participation will be prepared at a later date for consideration by the City Council in accordance with the most recent Special Assessment Policy.

6.0 FEASIBILITY/CONDITIONS/QUALIFICATIONS

The proposed improvements as described in this report are necessary, cost-effective, and feasible from an engineering standpoint. The feasibility of this project is contingent upon the findings of the City Council pertaining to project financing and public input.

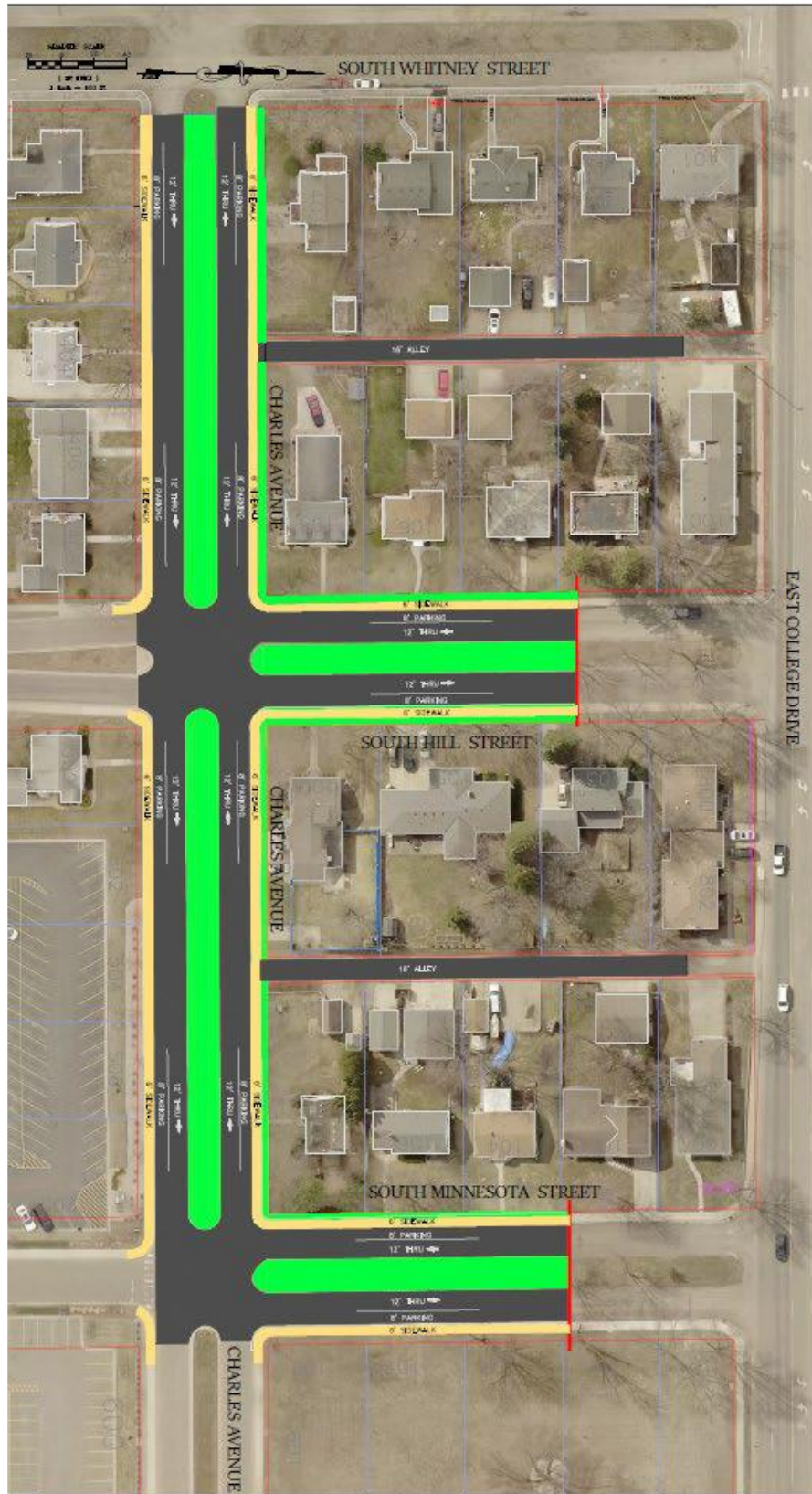
7.0 PROPOSED PROJECT SCHEDULE

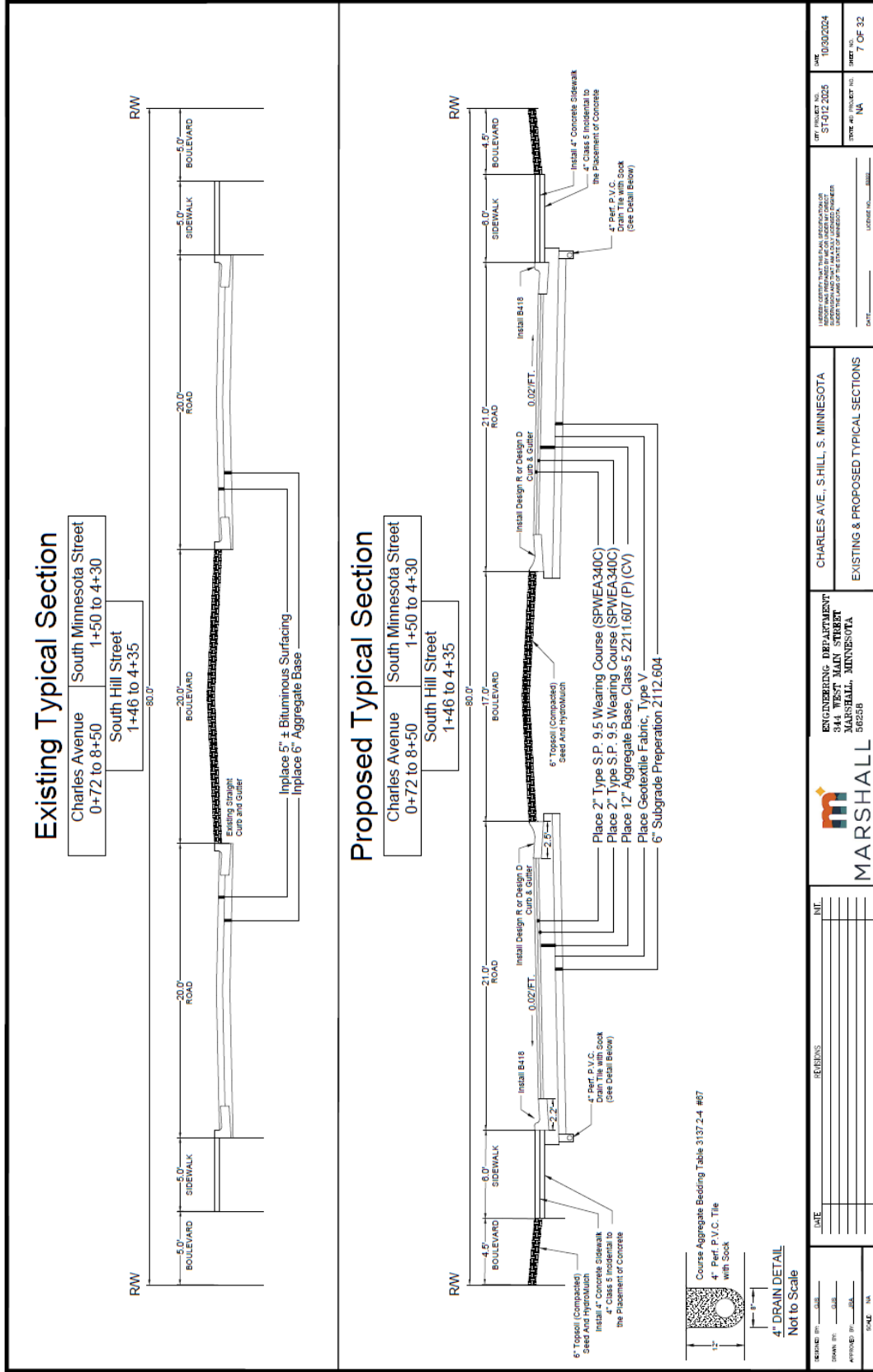
The following is the anticipated schedule for the project, assuming the City Council elects to proceed with the proposed improvements.

- November 12, 2024 Ordering Preparation of Report on Improvements
- December 10, 2024 Receiving Report & Calling for Hearing on Improvement
- January 14, 2025..... Public Hearing on Improvement/Order Plans & Specs
- January 14, 2025..... Approve Plans & Specs/Authorize Call for Bids
- January 17-February 12, 2025 Advertise for Bids
- February 12, 2025..... Bid Opening Date
- February 25, 2025..... Award Contract
- March 2025..... Notice to Proceed
- April 2025 Begin Construction
- October 2025..... End Construction
- February 2026..... Public Hearing on Assessment/Adopt Assessment

APPENDIX

PROJECT LAYOUT





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|---|--|----------------|---|---|---|
| SHEET NO. 103002024 DATE 10/30/2024 SHEET NO. 7 OF 32 | LICENSE NO. NA LICENSE EXPIRES: NA DATE: | LICENSEE NAME: | PROJECT NO. 51-012 2025 PROJECT NAME: CHARLES AVE., S HILL, S, MINNESOTA EXISTING & PROPOSED TYPICAL SECTIONS | ENGINEERING FIRM: MARSHALL, MINNESOTA 844 WEST MAIN STREET MARSHALL, MINNESOTA 56258 56258 | INT. REVISIONS DATE DRAWN BY: JLB APPROVED BY: JLB SCALE: NA |
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