

CITY OF COOS BAY CITY COUNCIL
Agenda Staff Report

MEETING DATE January 2, 2013	AGENDA ITEM NUMBER
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TO: Mayor Shoji and City Council

FROM: Jim Hossley, Public Works and Development Director
Through: Rodger Craddock, City Manager *RCR*



ISSUE: Rockwall & Railing along North 12th Street

BACKGROUND:

Last month, Councilor Muenchrath said he had heard from a citizen concerned with the condition of the railing at the top of the retaining rock wall along and between upper and lower 12th Street. The wall is along the portion of 12th Street north of Central Avenue. City staff investigated the rock wall and decorative rock columns along with the metal tube rail between columns. No plans exist to tell us how or when the retaining wall was constructed. Our best guess is the wall was constructed around 80 to 100 years ago. Without performing a subsurface geotechnical investigation on the rock wall, it appears the wall is in sound condition. However the rail and columns on top of the wall show signs of deterioration.

The American Association of State Highway and Transportation Officials (AASHTO) standards for guardrail are the generally accepted national standard for these barriers. The Oregon Department of Transportation (ODOT) has adopted these design standards into its Highway Design Manual. Even if it were rebuilt to like new condition, the decorative rock column and metal tube rail design would not meet AASHTO design standards. While repair of the existing system would improve its appearance, doing so may give drivers and nearby residents a false sense of improved safety. The role of a guardrail barrier system is to keep an errant vehicle in the travel lane while minimizing injury to vehicle occupants and damage to the vehicle. The present system does not provide this. It should be noted that per ODOT's 2012 Highway Design Manual, "On projects where any portion of an existing run of guardrail is being reconstructed to current safety standards, the entire run of guard rail shall be brought up to current safety standards." Thus repairing the existing system does not appear to be an option.

There are other types of decorative guardrail systems that meet the AASHTO/ODOT standards. These decorative systems are relatively expensive. The most commonly used barrier on highways and roads is the functional, but not decorative, "W-beam" guardrail system. Its name comes from the shape of the metal beam used as the rail element of the guardrail, which is supported by wood or steel posts.

ADVANTAGES:

While there have been few accidents related to the existing rock column and metal rail system, replacement with a guardrail system meeting present safety design standards would provide an improved measure of safety along the retaining wall.

DISADVANTAGES:

The cost of replacing the guardrail/barricade system at the top of the retaining wall will be very expensive. The most inexpensive fix, the "W-beam", would likely reduce the travel lane width on upper 12th Street. This may necessitate converting upper and lower 12th Streets into a one-way couplet. There is sanitary sewer and storm drain pipe systems where supporting posts for the W-beam would be driven into the ground. This will increase the complexity and the cost of the project.

BUDGET:

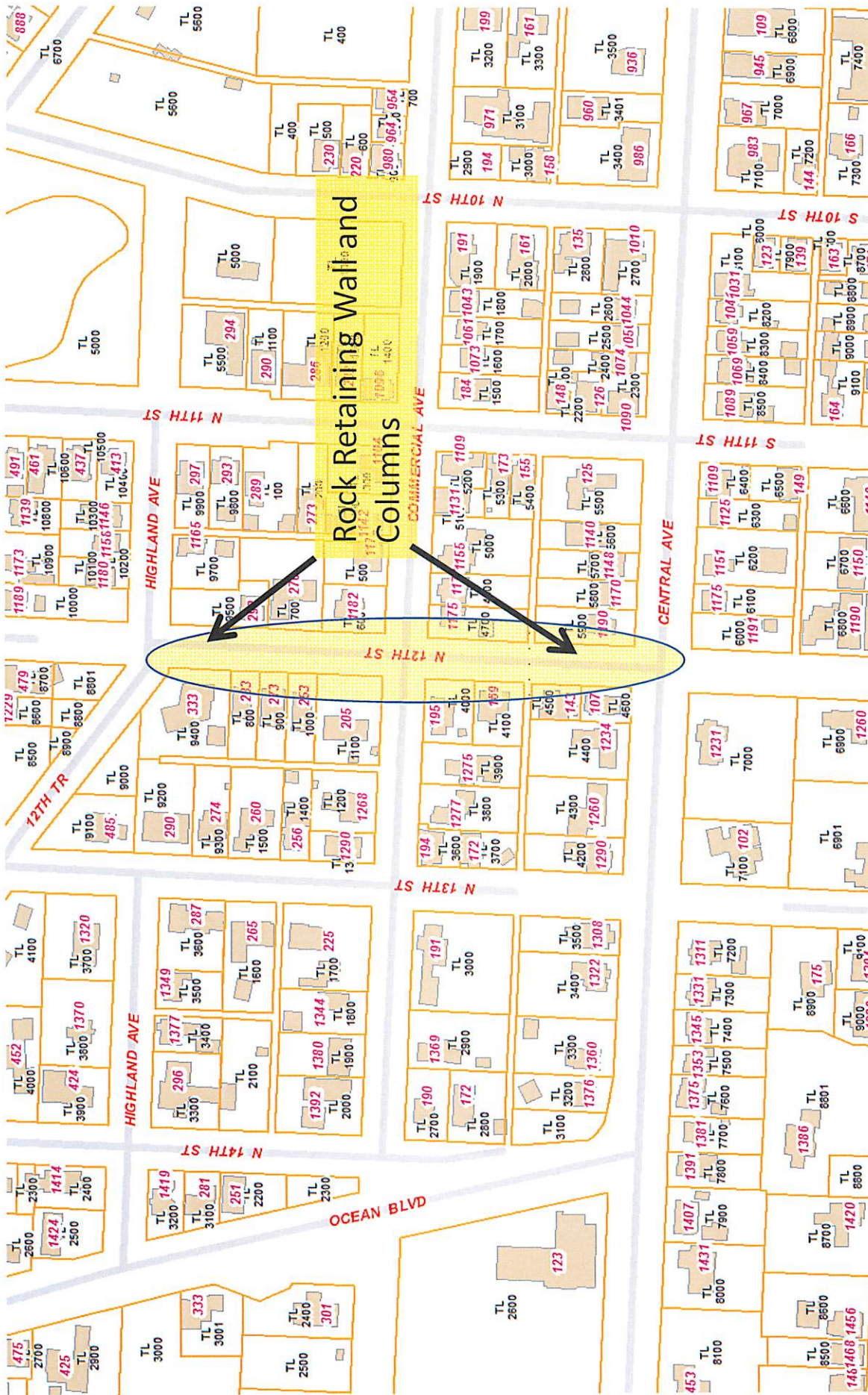
The cost estimate to install the "W-beam" guardrail system is approximately \$112,000 including relocating sewer and drainage pipe. The cost for a decorative concrete barricade system is approximately twice the cost of the "W-beam". This project is not in the current (FYE 2013) budget. The gas tax fund is the typical source for this type of work. We would have to use funds designated for concrete, asphalt and gravel to do the installation and thus forego asphalt patching for the rest of the fiscal year.

RECOMMENDATION:

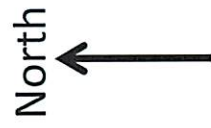
While the existing rock column and metal rail system does not meet modern guardrail design standards, there have not been a significant number of accidents involving it. Ideally, the existing rock column and metal rail system should be replaced with a guardrail meeting modern design standards. Limited funds this fiscal year means other, perhaps higher priority, maintenance projects would have to be postponed to complete this replacement project. Staff recommends that this project be considered through the upcoming FYE 2014 budget planning/approval process. During this process this project can be prioritized against other projects for the limited available funds.

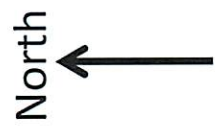
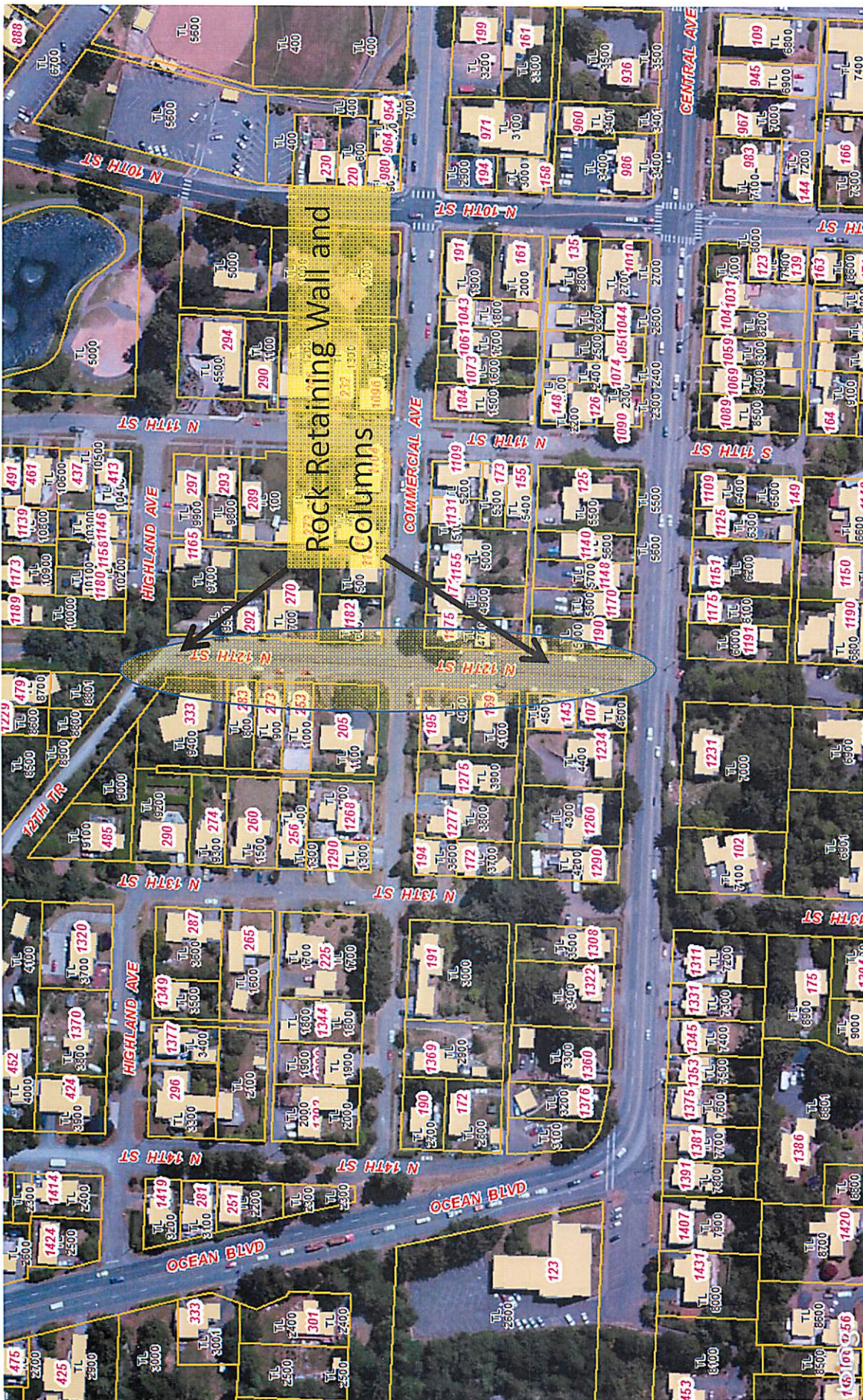
ATTACHMENTS:

Aerial Photo/ Map
Pictures of Guardrail Examples



Rock Retaining Wall and Columns







“W-Beam Guardrail



Examples of Decorative Concrete Guardrail

