



City of Morgan Hill

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Title: AUTHORIZE CONTRACT WITH MICHAEL BAKER INTERNATIONAL FOR PREPARATION OF A RAILROAD CROSSING "QUIET ZONE" STUDY AND DEPOSITS FOR REIMBURSEMENT OF SERVICE TO UNION PACIFIC RAILROAD

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Attachments: 1. Quiet Zones Schedule, 2. Quiet Zones Scope of Work, 3. Quiet Zone Study scorecard #1, 4. Quiet Zone Study scorecard #2, 5. Michael Baker International City Services Agreement for Design Professionals 011017, 6. Quiet zone rate schedule, 7. Quiet Zone - Sepulveda Don CV, 8. 02 Supplement 1

Date	Ver.	Action By	Action	Result
1/25/2017	1	City Council	approved	Pass

CITY COUNCIL STAFF REPORT MEETING DATE: JANUARY 25, 2017

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APPROVED BY: Steve Rymer, City Manager

AUTHORIZE CONTRACT WITH MICHAEL BAKER INTERNATIONAL FOR PREPARATION OF A RAILROAD CROSSING "QUIET ZONE" STUDY AND DEPOSITS FOR REIMBURSEMENT OF SERVICE TO UNION PACIFIC RAILROAD

RECOMMENDATION(S)

1. Approve an amendment to the City's fiscal year 2016-2017 annual budget to appropriate \$88,330 for the "quiet zone" assessment and funding of deposits (\$44,165 Long Range Planning Fund 207 and \$44,165 Public Facilities (Non-AB 1600) Fund 346);
2. Approve professional services contract with Michael Baker International for development of a "quiet zone" assessment and implementation risk report for an amount not to exceed \$58,330; and
3. Authorize \$30,000 in funding of deposits for reimbursement of time and services to Union Pacific Railroad for the review of three proposed "quiet zone" intersections.

COUNCIL PRIORITIES, GOALS & STRATEGIES:

Ongoing Priorities

Enhancing public safety

Protecting the environment

2016 Focus Areas

Planning Our Community

Developing Our Community

Enhancing Our Services

REPORT NARRATIVE:

On May 20, 2015, the Morgan Hill City Council discussed railroad safety and the establishment of “quiet zones” in Morgan Hill's Downtown. The City Council had many questions about the “quiet zone” approval process, including the criteria and procedures required of creating a quiet zone as well as the steps necessary and costs associated with implementation.

In reviewing the process of creating a “quiet zone,” it appeared that zones may be most appropriate at Dunne Avenue, Main Avenue, and Tilton Avenue. Each of these crossings are located in noise sensitive areas where the reduction in train horn noise would be advantageous to the community, especially residentially sensitive neighborhoods. In 2005, the Federal Railroad Administration (FRA) established the Train Horn Rule that defines train horn use at crossings. This rule set the decibel requirement for the use of train horns, 96 decibel (minimum) and 110 decibel (maximum). In addition, the rule establishes that the horn shall be sounded within ¼ mile of the crossing, or in locations where the engineer cannot precisely estimate the arrival. The rules state that the horn shall be sounded no more than 25 seconds before arriving at the crossing.

The FRA governs the development of “quiet zones” in the United States. The California Public Utilities Commission (CPUC) is responsible for railroad and grade crossing safety in the state of California. “Quiet zone” development in Morgan Hill will include the cooperation of both agencies. In addition, the Union Pacific Railroad (UP) owns, operates, and maintains the main line tracks over these crossings. Therefore, UP will also be integral to the design, form and approval of one or multiple “quiet zones”.

The critical aspect of the rule is the “no train horn” or “quiet zone” that defines the establishment, maintenance, and operation of a highway-railroad crossing where train horns are not used. These “quiet zones” are created through the use of safety measures to enhance the overall crossing.

The FRA has established a process under which public agencies can establish “quiet zones.” This process is described in detail in Title 49 of the Code of Federal Regulations Part 222. In addition, the FRA has prepared informational brochures that provide guidance in the establishment of the “quiet zone.”

The development of the at-grade crossing to “quiet zone” status includes the addition of Supplemental Safety measures (SSM) and/or Alternative Safety Measures (ASM). SSMs include four-quadrant gate systems, pedestrian treatments, and traffic signal coordination, among others. ASMs are utilized where the SSMs cannot reduce the risk to below the national average. These can include; public outreach and education and engineering solutions.

The city team is recommending that a feasibility study be conducted of developing “quiet zones at Dunne Avenue, Main Avenue, and Tilton Avenue. To do this, experts in rail development, connectivity, partnerships, design, and permitting were identified to assist with the very detailed, technical, and unusual jurisdiction presented by the multiple authorities governing rail use. Michael Baker International is recommended to assist with this specific work program. The scope of work recommended includes the following:

- **Pre-Study of Existing Conditions:** An analysis of the existing at-grade crossings (design, current improvements, safety equipment and age, related public facilities and accident and safety records).
- **Quiet Zone Risk Index (QZRI):** Developing the risk index of the crossings using the FRA QZRI calculator. The result is then compared to the national average.
- **Preliminary Crossing Configuration:** Using the information from the QZRI calculator, Supplemental Safety Measure (SSMs) will be examined for inclusion in the crossing to reduce the QZRI to below the national average.
- **Field Diagnostic Meetings:** Field meetings with the FRA, CPUC, and Union Pacific Railroad to confirm crossing configurations and discuss the next steps.
- **Feasibility Study Report:** A Technical Memo analyzing the three at-grade crossings for “quiet zone” status.

The final product from this initial work will be Feasibility Study Technical Memo which will include estimated costs, conceptual configurations, analysis, and overall process. Additionally, Michael Baker will help identify potential grant opportunities available for study and construction of quiet zones.

The Feasibility Study will provide the framework for the final design and permitting of the enhancements to the grade crossings. The costs for the establishment of the “quiet zone” at the three crossings cannot be determined at this time due to limited analysis. However, the following table provides some idea of the potential costs per crossing based upon existing conditions.

Potential Quiet Zone Costs

	Total (Low)	Total (High)
Construction Costs	\$1,500,000.00	\$3,000,000.00
Engineering	\$225,000.00	\$450,000.00
Permitting	\$50,000.00	\$50,000.00
Other Soft Costs	\$250,000.00	\$500,000.00
UPRR Costs	\$300,000.00	\$600,000.00
Subtotal	\$2,325,000.00	\$4,600,000.00
Escalation (2 year @ 3%)	\$2,466,592.50	\$4,880,140.00
Contingency (30%)	\$739,977.75	\$1,464,042.00
Total	\$3,206,570.25	\$6,344,182.00

At the midpoint of this proposed contract, the City of Morgan Hill and Michael Baker International will need to engage UPRR in discussions. UPRR requires that the City reimburse it for all activities initiated in this process, from inception to completion. Initially the City must provide a deposit to pay for all staff services, prior to engaging in any form of conversation, discussion or review of data, concepts or proposals. The initial deposit is \$10,000 per intersection to be discussed; for a total initial

deposit of \$30,000. This report also requests authorization to fund deposits with UPRR at the appropriate time of engagement.

COMMUNITY ENGAGEMENT: Involve

As more and more housing is being developed near rail facilities, residents and businesses have become more aware and increasingly interrupted by train horn noise. Development of housing adjacent to urban rail and community transportation hubs is a goal of SB 35, the States Greenhouse Gas Emission legislation and related regional and local policies encouraging transportation opportunity mode split, General Plan policy such as Priority Development Area (PDA) development, housing element goals focusing development of dense housing near train and bus services. The integration of transportation behaviors befitting State, regional, and local policy is at the core of quiet zone implementation. A modest budget for community input, assuming one large or two smaller, targeted meetings at this first investigative phase of the quiet zones has been established as part of the contract.

ALTERNATIVE ACTIONS:

1. Determine that quiet intersections are not of interest at this time and defer contract action.
2. Decide to study a different number of quiet zones than the three recommended.

PRIOR CITY COUNCIL AND COMMISSION ACTIONS:

On May 20, 2015, the Morgan Hill City Council discussed railroad safety and the establishment of “quiet zones” in Morgan Hill’s Downtown.

FISCAL AND RESOURCE IMPACT:

The total cost of the Michael Baker International contract will not exceed \$58,330 and is expected to be complete in 6 months. The initial deposit to UPRR totals \$30,000. The cost of the proposed contract and deposit would be shared by Long Range Planning Fund 207 and the Public Facilities (Non-AB 1600) Fund 346. Budget scorecards have been prepared to reflect the unexpected budget expense.

CEQA (California Environmental Quality Act):

Not a Project

LINKS/ATTACHMENTS:

1. Timeline
2. Proposal
3. Budget Scorecard - Fund 207
4. Budget Scorecard - Fund 346
5. Contract
6. Schedule of Hourly Rates
7. Resume of Team Lead - Don Sepulveda