

82ND AVENUE OF ROSES HIGH CRASH CORRIDOR SAFETY PLAN



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STUDY AREA

The 82nd Avenue of Roses High Crash Corridor Safety Project covers a seven-mile section of the 82nd Avenue of Roses, a roadway also designated as State Highway 213. A major north/south connector route, the study area runs from NE Killingsworth at the north, to Clatsop Street at the City limits to the south. In addition to its designation as a city street and state highway, the 82nd Avenue of Roses also serves Portland’s busiest transit line, and has a large pedestrian population utilizing the corridor. A sizeable portion of the corridor’s residents and businesses speak English as a second language.



WHY FOCUS ON THE 82ND AVENUE OF ROSES AS PORTLAND’S FIRST HIGH CRASH CORRIDOR?

- 1995 to 2004 crash data identified the 82nd Avenue of Roses as Portland’s most dangerous roadway. The data highlighted it as having the highest incidence of traffic crashes, injuries and fatalities, and the highest number of high crash intersection locations in the city of Portland.
- 1995 to 2004 traffic data shows 4% of Portland’s arterials—high-volume major streets like the 82nd Avenue of Roses—account for over 66% of Portland’s pedestrian fatalities and 58% of Portland’s pedestrian serious injuries.

WHAT ARE HIGH CRASH SAFETY CORRIDORS?

- High crash safety corridors are stretches of state highway identified as having a higher incidence of fatalities and serious-injury traffic crashes than the statewide average for similar roadways.
- High crash corridor action plans typically utilize the “Three E” multidisciplinary approach to improving traffic safety, involving tools and solutions under engineering, education and enforcement.

Examples of the “Three E” Multidisciplinary Approach	
Increased police traffic Enforcement	<ul style="list-style-type: none"> ▪ speeding ▪ red-light running ▪ tailgating
Low cost Engineering improvements	<ul style="list-style-type: none"> ▪ new enhanced pedestrian crossing facilities ▪ signal changes ▪ speed reduction changes ▪ median diverters to control unpredictable vehicle turn movements/access management
Increased Education efforts	<ul style="list-style-type: none"> ▪ media campaigns for speed, stopping distance ▪ targeted outreach efforts to corridor users and residents



ATTRIBUTES OF HIGH CRASH SAFETY CORRIDORS

- The distinct advantage of high crash corridor safety plans is their ability to react to an identified crash problem in a short period of time.
- High crash safety corridor implementation is relatively inexpensive and has been shown to have dramatic impacts on crash rates.
- Drivers are asked to pay extra attention and obey all traffic laws when driving along designated high crash corridor areas.
- Double fines typically apply along designated high crash safety corridors.
- In many cases, high crash safety corridors are an intermediate step while progress is made toward more permanent, long-term safety infrastructure improvements when greater funding becomes available.

HOW THE 82ND AVENUE OF ROSES HIGH CRASH CORRIDOR IS UNIQUE

- Historically in Oregon, High Crash Corridors have been designated along rural stretches of State highway.
- Due to the prohibitive nature of signage requirements at every intersection and driveway access point leading to the corridor, the 82nd Avenue of Roses will not have traditional “double-fine” elements typical of designated high crash corridors.

PROJECT PUBLIC INVOLVEMENT PROCESS

Public Involvement and Input Process
1) Three open houses were held in May 2007 for the northern, mid and southern sections of the corridor.
2) An in-depth safety survey comment form was widely distributed in paper form at meetings, open houses, major community events, and electronically online via the City’s website (see Appendix IV).
3) A transportation tour was held along the corridor for neighborhood association and district coalition members; agency staff from PDOT, ODOT, City Planning and others, stopping at key transportation locations (see Appendix XVI).
4) Prior to the formation of the 82 nd Avenue of Roses High Crash Corridor Safety Project, a separate CPTED (Crime Prevention Through Environmental Design) group formed to address specific crime and design issues relating to transportation at the NE 82 nd MAX station and neighboring vicinity (see Appendix XV). CPTED feedback has contributed significantly to the 82 nd Avenue of Roses High Crash Corridor Safety Project.
5) A CAC (Citizens Advisory Committee) formed to provide advisory input from corridor citizen stakeholders.
6) A TAC (Technical Advisory Committee) formed to provide technical feedback and to ensure good stakeholder support.



SAFETY PLAN AND OBJECTIVES

Key Project Goals	
1)	Reduce the number of pedestrians, bicyclists and motorists killed or injured in crashes along the 82 nd Avenue of Roses corridor.
2)	Minimize the number of people that limit walking, biking or taking transit along the 82 nd Avenue of Roses due to traffic safety concerns.
3)	Develop a high crash corridor safety action plan model for the 82 nd Avenue of Roses corridor that can then be easily replicated for future high crash corridors in Portland.

Key Project Objectives	
1)	Identify operational changes to reduce collisions for all modes.
2)	Develop a strategic engineering strategy based on crash history and known problems.
3)	Develop a strategic enforcement strategy based on crash history and known problems.
4)	Develop a strategic education strategy based on crash history and known problems.
5)	Develop a process for evaluating and incorporating changes to the annual plan.
6)	Document commitments from agencies and community partners as needed.

RIGHT OF WAY JURISDICTIONS

Operational and Maintenance Responsibilities	
City of Portland Office of Transportation (PDOT)	<ul style="list-style-type: none"> ▪ Owns and maintains sidewalk right-of-way between NE Prescott to SE Flavel ▪ Operates signals ▪ Pays half of signal operating power share costs
Oregon Department of Transportation (ODOT)	<ul style="list-style-type: none"> ▪ Owns and maintains travel lane right of way curb to curb ▪ Owns signals ▪ Pays half of signal operating power share costs ▪ Owns and maintains sidewalk right of way at NE Prescott and all areas north, and at SE Flavel and all areas south



EXISTING CONDITIONS – OVERVIEW OF CORRIDOR CHARACTER

Originally developed as a rural beltway at Portland’s outer limits, the 82nd Avenue of Roses now also serves as State Highway 213 and has seen unprecedented urban growth during the past few decades as Portland’s population has steadily expanded. As Portland expanded, the corridor soon became a busy, congested major city arterial running through a network of developing neighborhoods and business districts.



Today, the 82nd Avenue of Roses is a congested and chaotic five-lane highway, comprising two travel lanes in each direction, and a continuous center turn lane. Sidewalks exist along most sections of the corridor, although most are substandard in terms of width, access, curb ramp compliance, and overall condition. The corridor’s land-use pattern is generally auto-centric with development being typically lower-density, single-story, sprawling and set back, with individual business driveway access points and parking lots. Development zoning along the 6-mile corridor comprises a mixture of General Industrial 2, Single Dwelling Residential, General Commercial and Storefront Commercial.

The 82nd Avenue of Roses corridor is currently perceived as an unfriendly and difficult to navigate environment for pedestrians and bicyclists. Pedestrians are more likely to die or be seriously injured from a collision on the corridor than anywhere else in Portland, with the corridor averaging over one pedestrian fatality a year. The sidewalk right-of-way is narrow and is heavily cluttered with impediments ranging from utility poles and roadway signage to encroaching shrubbery. The corridor has many curb ramp deficiencies, and several portions of sidewalk missing.



In addition to being a challenging pedestrian sidewalk environment along the corridor, the 82nd Avenue of Roses is also a difficult corridor for pedestrians to cross. Seniors and children often have the most difficulty. The infrequency of signalized crossings (often over 1,000 ft. apart) requires pedestrians to walk four or more blocks to access a signalized, protected pedestrian crossing. The lack of pedestrian median islands or other pedestrian enhancements often force pedestrians to cross the busy five-lane highway unprotected.



Many housing facilities serving seniors are located on or within two blocks of the 82nd Avenue of Roses. Seniors are very vulnerable pedestrians. When a senior is struck by a motor vehicle, the injury more frequently results in a fatality. Seniors frequently need more time to cross the street. Their vision is more limited and their peripheral vision is 30% less than younger, more able-bodied adults. Many seniors rely on walking as their primary means of transportation.

Children are another group of pedestrians that are very vulnerable in traffic. Several large schools front the 82nd Avenue of Roses corridor or have primary access along this state highway. These include Vestal Elementary School, Madison High School, Marshall High School, and Portland Community College. Parents, school staff, and community members consider these locations to have traffic safety concerns.

The 82nd Avenue of Roses has very high public transit use, including transfers to other lines. TriMet's bus line #72 that serves the corridor has the highest ridership rate of any bus line in the city, and is a key destination connection route, connecting to all east-west bus lines running downtown.

The numerous driveways and access points along the 82nd Avenue of Roses are a major cause of traffic crashes. Consolidating the number of access points would help reduce crashes. On the 82nd Avenue of Roses the zoning for commercial use has resulted in many businesses being set-back with personal driveways leading off the highway to individual parking lots. These numerous long concealed driveway entrances (typically two-three per block) pose significant safety threats for both pedestrians and motorists. These private access driveways produce unpredictable lane changes and turn movements from motorists, resulting in a large number of collisions both with other vehicles, and pedestrians on the sidewalk.





EXISTING CONDITIONS – SUMMARY OF CORRIDOR CRASH DATA

Corridor Data Overview	
Average daily traffic volume	29,500 vehicles (2005)
Percentage of freight trucks	0.75% (2005)
Roadway section curb to curb	Two northbound travel lanes Two southbound travel lanes One center turn lane
Total roadway width	60 feet width curb to curb (approximately)
Posted speed	35 mph

2001-2004 High Crash Intersection Locations Along the 82 nd Avenue of Roses		
82 nd Avenue of Roses at SE Powell	Ranked # 1	107 Crashes* (excluding property damage only)
82 nd Avenue of Roses at SE Division	Ranked #4	92 Crashes (excluding property damage only)
82 nd Avenue of Roses at SE Foster	Ranked #13	73 Crashes (excluding property damage only)
82 nd Avenue of Roses at SE Holgate	Ranked #23	46 Crashes (excluding property damage only)
82 nd Avenue of Roses at SE Duke	Ranked #24	46 Crashes (excluding property damage only)

Notes:

- * SE Powell at the 82nd Avenue of Roses recently underwent a complete signal rebuild and will not be a focus of this project until new post-rebuild crash data becomes available.

Crash Summary Data for the 82 nd Avenue of Roses Entire Corridor	
Injuries and Fatalities	Crashes by Top 3 Location Types
11 Fatalities	1906 Intersection crashes (50%)
81 Injuries of type A severity (incapacitating)	1216 Roadway straight section crashes (32%)
430 Injuries of type B severity (non-incapacitating)	547 Alley related crashes (access management) (14%)
1178 Injuries of type C severity (pain)	
2047 Property damage only crashes	
3747 Total Reported Crashes from 1997 - 2006	
119 Total crashes involving pedestrians	



Crash Summary Data Northern Section North of I-84 to Airport Way (MP 0.0 – MP 2.30)		
Corridor Section Length	2.3 Miles	
Total Crashes	647 Crashes	
Crash Breakdown by Location	Intersection crashes	369 Crashes (57%)
	Straight roadway crashes	195 Crashes (30%)
	Alley crashes	67 Crashes (10%)
Crash Breakdown by Type	Rear end	244 Crashes (38%)
	Turning movement	209 Crashes (32%)
	Angle	67 Crashes (10%)
	Pedestrian	23 Crashes (4%)
Injury Types	Fatal	2 FataIs
	Type A Severity (incapacitating)	15 Crashes (2%)
	Type B Severity (non-incapacitating)	92 Crashes (14%)
	Type C Severity (pain)	176 Crashes (27%)
	Property damage only	362 Crashes (56%)
Top Intersection Crash Locations	82 nd Avenue of Roses and NE Fremont	60 Crashes (12.4%)
	82 nd Avenue of Roses and NE Prescott	50 Crashes (7.7%)
	82 nd Avenue of Roses and NE Halsey	46 Crashes (7.1%)
	82 nd Avenue of Roses and NE Tillamook	38 Crashes (5.9%)



Crash Summary Data Mid Section I-84 to SE Powell (MP 2.3 – MP 4.78)		
Corridor Section Length	2.48 Miles	
Total Crashes	1680 Crashes	
Crash Breakdown by Location	Intersection crashes	800 Crashes (48%)
	Straight roadway crashes	553 Crashes (33%)
	Alley crashes	286 Crashes (17%)
Crash Breakdown by Type	Rear end	783 Crashes (47%)
	Turning movement	522 Crashes (31%)
	Angle	142 Crashes (8%)
	Pedestrian	41 Crashes (2%)
Injury Types	Fatal	7 FataIs
	Type A Severity (incapacitating)	34 Crashes (2%)
	Type B Severity (non-incapacitating)	166 Crashes (10%)
	Type C Severity (pain)	566 Crashes (34%)
	Property damage only	912 Crashes (54%)
Top Intersection Crash Locations	82 nd Avenue of Roses and SE Division	149 Crashes (8.87%)
	82 nd Avenue of Roses and NE Glisan	99 Crashes (5.9%)
	82 nd Avenue of Roses and E Burnside	88 Crashes (5.2%)
	82 nd Avenue of Roses and SE Powell	85 Crashes (5.0%)
	82 nd Avenue of Roses and E Stark	69 Crashes (4%)
	82 nd Avenue of Roses and SE Washington	65 Crashes (4%)



Crash Summary Data Southern Section SE Powell to City Limits at SE Clatsop (MP 4.8 – MP 7.23)		
Corridor Section Length	2.53 Miles	
Total Crashes	1420 Crashes	
Crash Breakdown by Location	Intersection crashes	737 Crashes (52%)
	Straight roadway crashes	468 Crashes (33%)
	Alley crashes	194 Crashes (14%)
Crash Breakdown by Type	Rear end	570 Crashes (40%)
	Turning movement	470 Crashes (33%)
	Angle	157 Crashes (11%)
	Pedestrian	55 Crashes (2%)
Injury Types	Fatal	7 FataIs
	Type A Severity (incapacitating)	32 Crashes (2%)
	Type B Severity (non-incapacitating)	176 Crashes (10%)
	Type C Severity (pain)	436 Crashes (34%)
	Property damage only	773 Crashes (54%)
Top Intersection Crash Locations	82 nd Avenue of Roses and SE Foster	161 Crashes (11.33%)
	82 nd Avenue of Roses and SE Holgate	99 Crashes (7%)
	82 nd Avenue of Roses and SE Duke	97 Crashes (6.8%) (1 fatal)
	82 nd Avenue of Roses and SE Woodstock	66 Crashes (4.65.%)
	82 nd Avenue of Roses and SE Flavel	54 Crashes (3.80%) (1 fatal)

EXISTING CONDITIONS – SUMMARY OF ISSUES RAISED VIA PUBLIC INVOLVEMENT PROCESS

The City of Portland Office of Transportation asked residents living at or near the 82nd Avenue of Roses to respond to a High Crash Corridor Safety Project Survey. A total of 203 surveys were received and recorded and most answered all of the questions. The respondents indicated they live in the following zip code regions:



Percentage of Respondents	Zip Code	Number of Respondents
Less than 1%	97009	1
Less than 1%	97045	1
1.10%	97202	2
Less than 1%	97205	1
9.39%	97206	17
1.66%	97211	3
27.07%	97213	49
9.39%	97215	17
3.87%	97216	7

Percentage of Respondents	Zip Code	Number of Respondents
Less than 1%	97217	1
Less than 1%	97218	1
27.62%	97220	50
1.66%	97230	3
1.66%	97231	3
Less than 1%	97232	1
1.10%	97239	2
11.60%	97266	21
Less than 1%	97322	1

According to the High Crash Corridor Safety Project Survey, the following information is correct for individuals that responded to specific transportation related questions:

- The majority of respondents (84.2%) have concerns about traffic safety that limit their ability or willingness to walk, bike, or take transit along the 82nd Avenue of Roses.
- Less than half of respondents (43.3%) express safety concerns about taking public transit along or across the 82nd Avenue of Roses.
- Seven out of 10 respondents (70.4%) stated that they do feel safe driving along the 82nd Avenue of Roses.
- Less than one quarter of respondents (24.1%) feel safe walking along or across the 82nd Avenue of Roses.
- One respondent reported feeling safe bicycling along the 82nd Avenue of Roses; 15 respondents reported feeling safe bicycling while crossing the 82nd Avenue of Roses.

The top ten traffic safety concerns expressed by survey respondents are:

Ranking	Traffic Safety Concerns	Category
1	Pedestrian safety	Pedestrian Safety
2	Vehicles speeding (tie with 2 nd place)	Driver Violation
3	Pedestrians jaywalking especially at the 82 nd Avenue of Roses/ Jonesmore/ Halsey transit station (tie with 3 rd place)	Pedestrian Violation
4	Too much traffic and congestion	Ped/Bike/Driver Safety
5	Red light runners (tie with 6 th place)	Driver Violation
6	Overall bike safety (tie with 5 th place)	Bicycle Safety
7	Bicycle access	Bicycle Safety
8	Madison High School area	Pedestrian Safety
9	Vehicles making left turns	Driver Violation
10	82 nd Avenue of Roses at Siskiyou big box development traffic concerns	Ped/Bike/Driver Safety



Ranking	Traffic Safety Issues	Category
1	Speed reduction: PPB patrol/enforcement, traffic slowing devices, speed reader boards	Driver Violation
2	Engineering enhancements for pedestrian safety: more marked crossings, pedestrian islands, curb extensions, lighted sidewalks, increased curb height, etc.	Pedestrian Safety
3	Land use issues (tie with item #4): "big box" development, change in land use, neighborhood friendly ideas such as parks, community gardens, dog parks, etc., Smart Growth of retail/encourage small businesses, increase green areas, fewer businesses, new development that is small business friendly such as no car dealerships or strip clubs	Ped/Bike/Driver Safety
4	New construction: overpass or underpass (tie with item #3)	Pedestrian Safety
5	Traffic diversion or restriction and access management: implement access management, create frontage roads, move traffic off 82 nd Avenue of Roses, etc.	Ped/Bike/Driver Safety
6	Red light runner concerns: add red light running cameras	Driver Violation
7	Bike issues: bike lanes / bike path	Bicycle Safety
8	Police enforcement: more PPB pedestrian enforcement w/ fines for jaywalking (tie with #7)	Pedestrian Violation
9	Signal changes: lights timed to allow traffic to flow during high traffic times, fewer traffic lights, new light at transit mall, etc.	Driver Safety
10	Crime concerns: remove prostitution, clean up of crime and perception of crime	Ped/Bike/Driver Safety



SAFETY ACTION PLAN MATRIX

The safety action plan matrix on the following pages details the “Three E” approach that the project has adopted, and identifies the various safety tools the project will use to improve transportation safety along the 82nd Avenue of Roses High Crash Corridor.

The matrix identifies the major transportation safety issues along the corridor. It also identifies the appropriate safety tools required to remedy each issue, whether education-based, engineering-based, or enforcement-based.

The matrix also attempts to capture any longer-term solutions to the issues identified that are out of the scope of the project. The “Long Term Actions/Other” column captures ideas for future consideration, if they are either outside the realm of this project’s two year timeframe, or outside the realm of this project’s funding budget.

PROJECT FUNDING IDENTIFIED IN THE MATRIX

Funding for the project will come primarily from the City of Portland Office of Transportation’s One-Time General Funds monies (OTGF), federal Safe Communities Grant funds managed by the Oregon Department of Transportation and awarded to the City for transportation safety projects, and from funding secured by the Oregon Department of Transportation, TriMet, and the Portland Police Bureau.

EXPLANATION OF FUNDING STATUS TERMS USED IN THE SAFETY ACTION PLAN MATRIX

“**Funding identified**” means the funding has been secured and will be or is currently being used to support the specified engineering, education, and/or enforcement action item.

“**Funding proposed**” means the specified engineering, education, and/or enforcement action item has been listed as a possible project to receive funding from the “Safe, Sound and Green Streets Project” funded by the proposed street maintenance and safety fee.

“**Funding not identified**” means the specified engineering, education, and/or enforcement action item does not have any identified funding source.

PROJECT MONITORING

Key benchmarks that will be used to monitor the measures of effectiveness of the project include:

- Data indicating yearly changes in crash rates for all modes.
- Extensive surveying to analyze whether more people are walking along the corridor, or walking and bicycling across the corridor.
- Possible pre and post evaluation of the effectiveness of the pedestrian median islands.

82ND AVENUE OF ROSES HIGH CRASH CORRIDOR SAFETY ACTION PLAN MATRIX



ITEM #	MODE	SAFETY ISSUE	POTENTIAL NEAR TERM ACTIONS (completed within 1-2 years)			LONG TERM ACTIONS/ OPTIONS	
			ENGINEERING	EDUCATION	ENFORCEMENT		
1	Pedestrian Bike Transit	<p>Crossing at Unsignalized Intersections</p> <ul style="list-style-type: none"> Crossing distance, traffic speed and volume, sight distances Distances to improved locations 	<p>A. Install six pedestrian median islands at the following proposed* locations**:</p> <ul style="list-style-type: none"> NE Wygant NE Brazee NE Pacific SE Main SE Cooper SE Francis (see Next Steps) <p>Alternate Location:</p> <ul style="list-style-type: none"> SE Harrison <p>(* all locations and designs require ODOT approval) (**up to 6 locations will be selected) (PDOT, ODOT)</p>	<p>B. Implement the "I Brake for People" pedestrian safety campaign. (PDOT, ODOT, TriMet) (See Appendix X)</p>	<p>C. Increase enforcement for violation of Oregon crosswalk laws. Focus areas to include designated SAFE (Strategic and Focused Enforcement) areas:</p> <ol style="list-style-type: none"> NE Prescott to SE Pacific NE Glisan to SE Washington SE Division to SE Clatsop (PPB) 	<p>A. Funding identified (PDOT/ODOT) B. Funding identified (PDOT/ODOT) C. Funding identified (PDOT/ODOT)</p> <p>Next Steps: SE Francis Pedestrian Median Island-Eastport Plaza has requested a study to determine the possibility of a traffic signal at this location; complete traffic analysis for ODOT required at this location; PDOT/ODOT to withhold installation of pedestrian median island at SE Francis until the end of the 2nd project year or until completion of traffic analysis. (PDOT/ODOT)</p>	<ul style="list-style-type: none"> Other pedestrian improvements may be required through development review. (PDOT, ODOT, BDS)
2	Pedestrian Transit	<p>Access to Transit</p> <ul style="list-style-type: none"> Proximity to safe crossing locations 	<p>A. Pedestrian median islands. (see #1 A above) B. Consider relocating bus stops near improved crossings. (TriMet) C. Jonesmore/Halsey bus and MAX transit stop issues being addressed through the Office of Neighborhood Involvement "Crime Prevention Through Environmental Design" ("CPTED") project. Proposed improvements include: 1) installation of lighting on the MAX platform, 2) curb extensions on 82nd Avenue of Roses, 3) relocation of the bus stop for bus #77 on Jonesmore to encourage 350 riders to use a marked crosswalk on Jonesmore, 4) installation of blinking lights with pedestrian crossing signs. (see Appendix XV)</p>	<p>D. Support an education program that teaches transit riders about crossing safely. Note: All proposed public education campaigns to be coordinated and strategically launched. (PDOT, ODOT, TriMet)</p>	<p>A. Funding identified B. Funding not identified C. Funding identified for short term solutions D. Funding not identified</p> <p>Next Steps: D. Design the program</p>	<ul style="list-style-type: none"> Eastside MAX station area planning process will identify access improvements to light rail. (PDOT, ODOT, BOP) Conduct long-term corridor streetscape plan to identify improvements related to all elements of the road's design, including pedestrian access to transit improvements. 	

82ND AVENUE OF ROSES HIGH CRASH CORRIDOR SAFETY ACTION PLAN MATRIX



ITEM #	MODE	SAFETY ISSUE	POTENTIAL NEAR TERM ACTIONS (completed within 1-2 years)		LONG TERM ACTIONS/ OPTIONS
			ENGINEERING	EDUCATION	
3	Pedestrian Bike	Children and Seniors <ul style="list-style-type: none"> Proximity to safe crossing locations Knowledge of safe routes 	A. Examine pedestrian signal timing and possibly extend, subject to ODOT approval. (PDOT)	B. Conduct "Portland Walks – Be Safe!" trainings at facilities serving seniors. (PDOT, Elders in Action, TriMet) (See Appendix XII) C. Implement Safer Routes to Schools Program at Vestal and Kelly Elementary Schools. (PDOT) (See Appendix XIII) D. Conduct Young Driver Improvement / Graduated Drivers Licensing classes for young drivers and their parents. (PDOT) (Appendix XVII)	<ul style="list-style-type: none"> Support the addition of audible, countdown, or other pedestrian signal enhancements as part of any future signal upgrades. (PDOT)
			A. Install 59 curb ramps, locations and design subject to ODOT approval (see Safety Action Plan text document for specific locations). (PDOT, ODOT)		<ul style="list-style-type: none"> Conduct long-term corridor streetscape plan to identify improvements related to all elements of the road's design, including all remaining sidewalk deficiencies. (PDOT, ODOT)
4	Pedestrian Bike Transit	ADA <ul style="list-style-type: none"> Missing or substandard curb ramps Sidewalk obstructions, poor wheelchair clearance 			<ul style="list-style-type: none"> Conduct long-term corridor streetscape plan to identify land use and transportation improvements related to all modes and elements of the road's design, including access management (PDOT, Bureau of Planning, ODOT), apply for a TGM Grant in 2009. This plan will supplement 82nd Avenue of Roses Corridor Design Strategy. (PDOT, ODOT) Support sidewalk improvements to be funded by Lents URA identified by Lents Station Area Plan planning process. (PDOT) Widen sidewalks incrementally as properties go through the development review and permit process; Transportation System Plan and Pedestrian Design Guide recommend 12' widths, 15' widths in Lents Pedestrian District and the Pedestrian District near light rail. (PDOT and private property owners)
			A. Add sidewalks where missing. (PDOT, ODOT) West side of 82nd Avenue of Roses 1. Killingsworth to Alberta 2. Alberta to Wygant 3. Wygant to Going St 4. Going St to Prescott 5. Duke to Bybee 6. Bybee to Ogden East side of 82nd Avenue of Roses 1. Alberta to Humbolt 2. Humbolt to Wygant 3. Wygant to Going Pl 4. Going Pl. to Prescott 5. Glenwood to Bybee 6. Bybee to Knapp 7. Lambert to Crystal Springs B. Remove unnecessary signs and poles that obstruct the sidewalk. (BOM)	A. Funding identified for 52 curb ramps (PDOT) A. Funding not identified for 7 curb ramps (ODOT) Next Steps: A. ODOT funding anticipated after July 2009	<ul style="list-style-type: none"> Conduct long-term corridor streetscape plan to identify land use and transportation improvements related to all modes and elements of the road's design, including access management (PDOT, Bureau of Planning, ODOT), apply for a TGM Grant in 2009. This plan will supplement 82nd Avenue of Roses Corridor Design Strategy in 2008. (PDOT, ODOT)
5	Pedestrian Bike Transit	Sidewalk Environment <ul style="list-style-type: none"> Substandard sidewalk widths, obstructions Conflicts with driveways 			<ul style="list-style-type: none"> Conduct long-term corridor streetscape plan to identify land use and transportation improvements related to all modes and elements of the road's design, including access management (PDOT, Bureau of Planning, ODOT), apply for a TGM Grant in 2009. This plan will supplement 82nd Avenue of Roses Corridor Design Strategy in 2008. (PDOT, ODOT) Support sidewalk improvements to be funded by Lents URA identified by Lents Station Area Plan planning process. (PDOT) Widen sidewalks incrementally as properties go through the development review and permit process; Transportation System Plan and Pedestrian Design Guide recommend 12' widths, 15' widths in Lents Pedestrian District and the Pedestrian District near light rail. (PDOT and private property owners)
			A. Add sidewalks where missing. (PDOT, ODOT) West side of 82nd Avenue of Roses 1. Killingsworth to Alberta 2. Alberta to Wygant 3. Wygant to Going St 4. Going St to Prescott 5. Duke to Bybee 6. Bybee to Ogden East side of 82nd Avenue of Roses 1. Alberta to Humbolt 2. Humbolt to Wygant 3. Wygant to Going Pl 4. Going Pl. to Prescott 5. Glenwood to Bybee 6. Bybee to Knapp 7. Lambert to Crystal Springs B. Remove unnecessary signs and poles that obstruct the sidewalk. (BOM)	A. Funding identified for 901 ft of sidewalk (PDOT) A. Funding not identified for 2038 ft of sidewalk (ODOT) B. Funding not identified (PDOT) C. Funding identified (PDOT) Next Steps: A. ODOT funding anticipated after July 2009	<ul style="list-style-type: none"> Conduct long-term corridor streetscape plan to identify land use and transportation improvements related to all modes and elements of the road's design, including access management (PDOT, Bureau of Planning, ODOT), apply for a TGM Grant in 2009. This plan will supplement 82nd Avenue of Roses Corridor Design Strategy in 2008. (PDOT, ODOT) Support sidewalk improvements to be funded by Lents URA identified by Lents Station Area Plan planning process. (PDOT) Widen sidewalks incrementally as properties go through the development review and permit process; Transportation System Plan and Pedestrian Design Guide recommend 12' widths, 15' widths in Lents Pedestrian District and the Pedestrian District near light rail. (PDOT and private property owners)

82ND AVENUE OF ROSES HIGH CRASH CORRIDOR SAFETY ACTION PLAN MATRIX



ITEM #	MODE	SAFETY ISSUE	POTENTIAL NEAR TERM ACTIONS (completed within 1-2 years)			FUNDING STATUS/ NEXT STEPS	LONG TERM ACTIONS/ OPTIONS
			ENGINEERING	EDUCATION	ENFORCEMENT		
6	Vehicle	High Crash Locations <ul style="list-style-type: none"> Red-light running Left turns T-bone crashes 	<p>A. Identify improvements at the following high crash intersections. (PDOT, ODOT)</p> <p>Priority locations:</p> <ol style="list-style-type: none"> SE Foster SE Division SE Holgate <p>Secondary location:</p> <ol style="list-style-type: none"> SE Duke 	<p>B. Encourage violators to attend "Share The Road" safety classes. (Legacy Emanuel Hospital, Multnomah County Courts, PDOT) (See Appendix X)</p>	<p>C. Increase enforcement at specific focus areas as staffing allows. (PPB)</p> <p>D. Consider installation of red-light cameras at high crash intersections listed within the top 40, see Safety Action Plan appendix. (PDOT)</p>	<p>A. Funding identified for items 1-3, planning and construction (PDOT)</p> <p>A. Funding proposed for item 4, planning only (PDOT)</p> <p>B. Funding identified (Legacy Emanuel Hospital, Multnomah County Courts, PDOT)</p> <p>C. Funding identified (PPB)</p> <p>D. Funding not identified (PDOT)</p>	<ul style="list-style-type: none"> Conduct long-term corridor Streetscape Plan to identify additional safety improvements (PDOT, ODOT), apply for TGM grant (PDOT)
7	Vehicle	Aggressive Driving <ul style="list-style-type: none"> Excessive vehicle speeds Rear-end crash/tailgating Red-light running 	<p>A. Consider installation of speed reader boards. (PDOT)</p> <p>B. Consider conducting a vehicle speed study. (PDOT, ODOT)</p>	<p>C. Implement a media campaign about stopping distance. Note: All proposed public education campaigns to be coordinated and strategically launched. (PDOT, ODOT)</p> <p>D. Encourage violators to attend "Share The Road" safety classes. (Legacy Emanuel Hospital, Multnomah County Courts, PDOT) (See Appendix X)</p>	<p>E. Enforcement of aggressive driving (speed, lack of attention, improper lane change). (PPB)</p> <p>F. Launch media campaign about enforcement of aggressive driving. Note: All proposed public education campaigns to be coordinated and strategically launched. (PPB, PDOT)</p> <p>G. Consider installation of red light cameras at high crash intersections listed within the top 40, see Safety Action Plan appendix. (PDOT)</p>	<p>A. Funding not identified (PDOT)</p> <p>B. Funding identified (PDOT)</p> <p>C. Funding not identified (PDOT, ODOT, PPB)</p> <p>D. Funding identified (Legacy Emanuel Hospital, Multnomah County Courts, PDOT)</p> <p>E. Funding proposed (PPB)</p> <p>F. Funding proposed (PPB, PDOT)</p> <p>G. Funding not identified (PDOT)</p>	<p>Next Steps:</p> <p>A. Confirm appropriate areas to receive speed reader boards. (PDOT, ODOT)</p> <p>B. Collect speed data and evaluate. (PDOT)</p>
8	Vehicle	Wrong-Way Driving <ul style="list-style-type: none"> 82nd Avenue of Roses and Stark/Washington 	<p>A. Enhanced signage (PDOT)</p>			<p>A. Funding not identified (PDOT)</p>	

82ND AVENUE OF ROSES HIGH CRASH CORRIDOR SAFETY ACTION PLAN MATRIX



ITEM #	MODE	SAFETY ISSUE	POTENTIAL NEAR TERM ACTIONS (completed within 1-2 years)			LONG TERM ACTIONS/ OPTIONS
			ENGINEERING	EDUCATION	ENFORCEMENT	
9	Vehicle	Access Management • High volume of unpredictable turn movements in and out of driveways	A. While in development review, apply access management principles and standards of OAR 734-051 to new development. (PDOT)			Next Steps: • ODOT and PDOT complete an 82nd Avenue of Roses Corridor Design Strategy in 2008. • Conduct long-term corridor streetscape plan to identify land use and transportation improvements related to all modes and elements of the road's design, including access management (PDOT; Bureau of Planning ODOT), apply for TGM grant in 2009. This plan will supplement 82nd Avenue of Roses Corridor Design Strategy (PDOT, ODOT) • Apply for Special Transportation Area designation. (PDOT, ODOT)
10	Bike	Crossings • Crossing distance, traffic speed and volume, sight distances	A. See # 1A above, design in coordination with bike routes (PDOT)			A. Funding identified (PDOT)
11	Bike	Connections to Existing Bicycle Facilities	A. Improve bike routes/network signage (PDOT)			A. Funding not identified (PDOT) Next Steps: A. Coordinate with bikeway signage program (PDOT)
12	Bike	Safety for Riding Along & Across 82nd Avenue of Roses • Lack of parallel bike routes	A. See #4A above B. Consider new parallel routes or bike lanes/bikeway on 82nd Avenue of Roses in Bike Master Plan planning process. (PDOT)	C. Support wrong way riding media campaign. Note: All proposed public education campaigns to be coordinated and strategically launched. (PDOT)	D. Increase enforcement of bicycle riding laws.	• Encourage improvements in Portland's Updated Bicycle Master Plan for bike routes that intersect the 82nd Avenue of Roses in coordination with 82nd Avenue of Roses Corridor Design Strategy and streetscape plan. (PDOT, ODOT) (See Appendix XIV) • Consider bike lane or parallel bike route options as part of a long-term corridor streetscape plan to identify improvements related to all road elements, transportation mode and land use in coordination with the Bike Master Plan and 82nd Avenue of Roses Corridor Design Strategy. (PDOT, ODOT)

Acronym Key

BDS City of Portland Bureau of Development Services
 BOM City of Portland Bureau of Maintenance
 BOP City of Portland Bureau of Planning

OAR Oregon Administrative Rules
 ODOT Oregon Department of Transportation
 PPB City of Portland Police Bureau

PDOT City of Portland Office of Transportation
 TGM Transportation Growth Management
 URA Urban Renewal Area